Georgia-Pacific

DensDeck®

Prime Roof Board with EONIC™ TECHNOLOGY

City of Puyallup
Development & Permitting Services
ISSUED PERMIT
Building | Planning | Engineering | Public Works | Fire | Traffic

PRRF20260671

Technical Service Hotline 1.800.225.6119 or
www.densdeck.com

Manufacturer

Georgia-Pacific Gypsum
133 Peachtree Street
Atlanta, GA 30303

Georgia-Pacific Canada
2180 Meadowvale Boulevard, Suite 200
Mississauga, ON L5N 5S3

Technical Service Hotline: 1-800-225-6119

Description

DensDeck® Prime Roof Board has been enhanced to provide a broader compatibility and higher performance with roofing adhesives. Face mat enhancements allow adhesives to be applied more uniformly and consistently. In adhered, single ply membrane testing, enhanced DensDeck Prime demonstrated an average of 24% better bond than the original products, when using solvent based adhesives. (Average based on 60 sq.ft./gal coverage rates.)* Choose DensDeck Prime Roof Boards for adhered and self-adhered "peel & stick" roofing systems, as well as hot mopped, cold mastic and torch-applied modified bitumen roofs. Enhanced DensDeck Prime Roof Boards create a stronger and more economical installation by reducing the amounts of mastic or adhesive used and potentially eliminates the field primer. Consult with membrane manufacturer for actual priming requirements.

DensDeck Prime Roof Boards are the first and only fiberglass mat gypsum roof boards with a 90-day weather exposure limited warranty when applied vertically on a parapet wall.** (Limited to 1/2″ and 5/8″ products only.)

Primary Uses

Roof system manufacturers and designers have found DensDeck Prime Roof Board to be compatible with many types of roofing systems, including: modified asphalt, single-ply, metal systems, recover board, as well as an overlayment for polyisocyanurate and polystyrene insulation. DensDeck Prime Roof Board can also be used as a form board for poured gypsum concrete deck in roof applications as well as a substrate for spray foam roofing systems. 1/2″ (12.7 mm) and 5/8″ (15.9 mm) DensDeck Prime Roof Board may also be used in vertical applications as a backer board or liner for the roof side of parapet walls.

DensDeck Prime Roof Board may allow the bonding of cold mastic modified bitumen and torching directly to the surface. *Consult with the system manufacturer for recommendations on this application.*

DensDeck Prime Roof Board is the preferred substrate for vapor retarders.

Standards and Code Approvals

DensDeck Prime Roof Boards are manufactured to meet ASTM C1177 and have the following approvals:

- Florida Product Approved
- Miami-Dade County Product Control Approved

Recommendations and Limitations

DensDeck Prime Roof Boards are manufactured to act with a properly designed roof system following good roofing practices. The actual use of DensDeck Prime Roof Board as a roofing component in any system or assembly is the responsibility of the roofing system's design authority. Consult with the appropriate system manufacturer and/or design authority for system and assembly specifications and instructions on applying other products to DensDeck Prime Roof Board. Georgia-Pacific does not warrant and is not responsible for any systems or assemblies utilizing DensDeck Prime Roof Board or any component in such systems or assemblies other than DensDeck Prime Roof Board.

The need for a separator sheet between the DensDeck Prime Roof Board and the roofing membrane must be determined by the roof membrane manufacturer or roofing system designer.

* Testing was done in accordance with FM approvals 4470, Appendix C: Small Scale Tests, Membrane Delamination Tests for Roofing Membranes and Substrates Using Tensile Loading.

** For complete warranty details, visit www.DensDeck.com. (Limited to 1/2″ and 5/8″ products only.)

Confirm any priming requirements with the membrane manufacturer. When applying solvent-based adhesives or primers, allow sufficient time for the solvent to flash off to avoid damage to roofing components.

DensDeck Prime Roof Boards should not be subjected to abnormal or excessive loads or foot traffic, such as, but not limited to, use on plaza decks or under steel-wheeled equipment that may fracture or damage the panels. Provide suitable roofing system protection when required.

When using DensDeck Prime Roof Boards for hot-mopped applications, Georgia-Pacific recommends maximum asphalt application temperatures of 425°F (218°C) to 450°F (232°C). Application temperatures above these recommended temperatures may adversely affect roof system performance. Consult and follow the roofing system manufacturer's specifications for full mopping applications and temperature requirements.

When using DensDeck Prime Roof Board as a substrate for torch applications, ensure that the product is dry and that the proper torching technique is used. Limit the heat to the DensDeck Prime Roof Board. Maintain a majority of the torch flame directly on the roll.

Conditions beyond the control of Georgia-Pacific, such as weather conditions, dew, leaks, application temperatures and techniques may cause adverse effects with roofing systems.

Handling and Use–CAUTION

This product contains fiberglass facings which may cause skin irritation. Dust and fibers produced during the handling and installation of the product may cause skin, eye and respiratory tract irritation. Avoid breathing dust and minimize contact with skin and eyes. Wear long sleeve shirts, long pants and eye protection. Always maintain adequate ventilation. Use a dust mask or NIOSH/MSHA approved respirator as appropriate in dusty or poorly ventilated areas.

Moisture Management

DensDeck Prime Roof Boards, like other components used in roofing systems, must be protected from exposure to moisture before, during and after installation.

Remove the plastic packaging from all DensDeck Prime Roof Board immediately upon receipt of delivery. Failure to remove the plastic packaging may result in entrapment of condensation or moisture. DensDeck Prime Roof Board stored outside must be stored level and off the ground and protected by a breathable waterproof covering. Provide means for air circulation around and under stored bundles of DensDeck Prime Roof Board. DensDeck Prime Roof Board must be covered the same day as installed.

Avoid application of DensDeck Prime Roof Boards during rain, heavy fog and any other conditions that may deposit moisture on the surface, and avoid the overuse of non-vented, direct-fired heaters during winter months. When roofing systems are installed on new poured concrete or light weight concrete decks or when re-roofing over an existing concrete deck, a vapor barrier should be installed above the concrete to retard the migration of water from the concrete into the roof assembly. Always consult the roofing system manufacturer or design authority for specific instructions for applying other products to DensDeck Prime Roof Boards.

Moisture vapor movement by convection must be eliminated, and the flow of water by gravity through imperfections in the roof system must be controlled. After a leak has occurred, no condensation on the upper surface of the system should be tolerated, and the water introduced by the leak must be dissipated to the building interior in a minimum amount of time.

Although DensDeck Prime Roof Boards are engineered with fiberglass facings and high density gypsum cores, the presence of free moisture can have a detrimental effect on the performance of the product and the installation of roofing membranes. For example, hot asphalt applications can blister; torched modified bitumen may not properly bond; and adhesives for single ply membranes may not dry properly.

continued

Submittal Approvals

Job Name _____

Contractor _____

Date _____

Stamps / Signatures

Moisture accumulation may also significantly decrease wind uplift and vertical pull resistance in the system or assembly. DensDeck® Prime Roof Boards containing excessive free moisture content may need to be evaluated for structural stability to assure wind uplift performance.

Fire Resistance Classifications

DensDeck Prime Roof Boards are excellent fire barriers over combustible and noncombustible roof decks, including steel decks.

UL 790 Classification. DensDeck Prime Roof Boards have been classified by Underwriters Laboratories LLC (UL) for use as a fire barrier over combustible and noncombustible decks in accordance with the ANSI/UL 790 test standard. The UL classification includes a comprehensive Class A, B or C rating. For additional information concerning the UL 790 classification, consult the UL Certification Directory.

UL 1256 Classification. DensDeck Prime Roof Boards have also been classified by UL in roof deck constructions for internal (under deck) fire exposure in accordance with the ANSI/UL 1256 Steiner Tunnel test. For additional information concerning the UL 1256 classification, consult the UL Certification Directory.

FM Class 1 Approvals. DensDeck Prime Roof Boards are included in numerous roofing assemblies with a Factory Mutual (FM) Class 1 fire rating. 1/4″ (6.4 mm) DensDeck Prime Roof Boards have passed testing under the FM Calorimeter Standard 4450 and have been approved by FM as such for insulated steel deck roofs when installed according to the conditions identified by FM. For more information concerning FM Approvals and FM Class 1 assemblies with DensDeck Prime Roof Boards, consult FM or RoofNav®.

Type X. 5/8″ (15.9 mm) DensDeck® Prime Fireguard® Roof Boards are manufactured to meet the "Type X" requirements of ASTM C1177 for increased fire resistance beyond regular gypsum board.

UL Fire Resistance Ratings. 5/8″ (15.9 mm) DensDeck Prime Fireguard Roof Boards are designated as **Type DD** by UL and included in assembly designs investigated by UL for hourly fire resistance ratings. 5/8″ (15.9 mm) DensDeck Prime Fireguard Roof Boards may also replace any unclassified 5/8″ (15.9 mm) gypsum board in an assembly in the UL Fire Resistance Directory under the prefix "P".

Flame Spread and Smoke Developed. When tested in accordance with ASTM E84, DensDeck Prime Roof Boards had Flame Spread 0, Smoke Developed 0.

Wind Uplift

DensDeck Prime Roof Boards are included in numerous assemblies evaluated by FM or other independent laboratories for wind uplift performance. For information concerning such assemblies, please visit www.roofnav.com.

Physical Properties

Properties	1/4″ (6.4 mm)	1/2″ (12.7mm)	5/8″ (15.9 mm)
Thickness, nominal	1/4″ (6.4 mm) ± 1/16″ (1.6 mm)	1/2″ (12.7 mm) ± 1/32″ (.8 mm)	5/8″ (15.9 mm) ± 1/32″ (.8 mm)
Width, standard	4′ (1219 mm) ± 1/8″ (3 mm)	4′ (1219 mm) ± 1/8″ (3 mm)	4′ (1219 mm) ± 1/8″ (3 mm)
Length, standard	4′ (1219 mm) and 8′ (2438 mm) ± 1/4″ (6.4 mm)	4′ (1219 mm) and 8′ (2438 mm) ± 1/4″ (6.4 mm)	4′ (1219 mm) and 8′ (2438 mm) ± 1/4″ (6.4 mm)
Weight, nominal, lbs./sq. ft. (Kg/m^2)	1.2 (5.9)	2.0 (9.8)	2.5 (12.2)
Surfacing	Fiberglass mat with non-asphaltic coating	Fiberglass mat with non-asphaltic coating	Fiberglass mat with non-asphaltic coating
Flexural Strength[1], parallel, lbf. min. (N)	≥40 (178)	≥80 (356)	≥100 (444)
Flute Spanability[2]	2-5/8″ (66.7 mm)	5″ (127 mm)	8″ (203 mm)
Permeance[3], Perms (ng/Pa•S•m^2)	>30 (>1710)	>23 (>1300)	>17 (>970)
R Value[4], ft^2•°F•hr/BTU (m^2•K/W)	.28	.56	.67
Linear Variation with Change in Temp., in/in °F (mm/mm/C°)	8.5 x 10^{-6} (15.3 x 10^{-6})	8.5 x 10^{-6} (15.3 x 10^{-6})	8.5 x 10^{-6} (15.3 x 10^{-6})
Linear Variation with Change in Moisture	6.25 x 10^{-6}	6.25 x 10^{-6}	6.25 x 10^{-6}
Water Absorption[5], % max	5	5	5
Compressive Strength[6], psi nominal	900	900	900
Surface Water Absorption, grams, nominal	1.0	1.0	1.0
Flame Spread, Smoke Developed (ASTM E84)	0/0	0/0	0/0
Bending Radius	4′ (1219 mm)	6′ (1829 mm)	8′ (2438 mm)

1. Tested in accordance with ASTM C473 method B.
2. Tested in accordance with ASTM E661.
3. Tested in accordance with ASTM E96 (dry cup method).
4. Tested in accordance with ASTM C518 (heat flow meter).
5. Specified values per ASTM C1177.
6. Tested in accordance with ASTM C473.

Georgia-Pacific Gypsum

U.S.A. Georgia-Pacific Gypsum LLC
Georgia-Pacific Gypsum II LLC
Canada Georgia-Pacific Canada LP

SALES INFORMATION AND ORDER PLACEMENT

U.S.A. West: **1-800-824-7503**
Midwest: **1-800-876-4746**
South Central: **1-800-231-6060**
Southeast: **1-800-327-2344**
Northeast: **1-800-947-4497**

CANADA Canada Toll Free: **1-800-387-6823**
Quebec Toll Free: **1-800-361-0486**

TECHNICAL INFORMATION

U.S.A. and Canada: **1-800-225-6119,** www.gpgypsum.com

SAFETY DATA SHEET

1. Identification

Product identifier **Glass Mat Faced Gypsum Panels**

Product list Product List A
DensArmor Plus® Interior Panel
DensArmor Plus® Fireguard® Abuse-Resistant Panels
DensArmor Plus® Fireguard® Impact-Resistant Panels
DensArmor Plus® Fireguard® Interior Panels
DensDeck® Prime Roof Board
DensDeck® Roof Board
DensDeck® Prime Fireguard® Roof Board
DensDeck® Fireguard® Roof Board
DensDeck® StormX™ Prime Roof Board
DensElement™ Sheathing
DensGlass® Fireguard® Sheathing
DensGlass® Shaftliner
DensGlass® Sheathing
DensShield® Fireguard® Tile Backer
DensShield® Tile Backer
....
Product List B
DensArmor Plus® Fireguard C® Interior Panels
....

Other means of identification

Product code GP-71C

Recommended use Products accommodate a wide range of wall, floor, ceiling and roof applications.

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Company name Georgia-Pacific Gypsum LLC

Address 133 Peachtree Street, NE
Atlanta, GA 30303

Telephone Technical Information 800.225.6119
(M)SDS Request 404.652.5119

E-mail Not available.

Emergency phone number Chemtrec - Emergency 800.424.9300

2. Hazard(s) identification

Emergency overview This product is not hazardous in the form in which it is shipped by the manufacturer but may become hazardous by downstream activities such as cutting, sanding, or otherwise working with this product that generate large amount of dusts. Those hazards associated with large amount of dusts are described below.

Physical hazards Not classified.

Health hazards Eye irritation Category 2B

Environmental hazards Not classified.

OSHA defined hazards Not classified.

Label elements

Hazard symbol None.

Signal word Warning

Hazard statement Causes eye irritation.

Precautionary statement

Prevention Wash thoroughly after handling. Observe good industrial hygiene practices.

Response	Wash hands after handling. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
Storage	Store away from acids.
Disposal	Dispose of contents/container in accordance with applicable regulations.
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	None.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
CALCIUM SULFATE DIHYDRATE		10101-41-4	80 - 100
VERMICULITE**		1318-00-9	0 - 10
CONTINUOUS FILAMENT GLASS FIBER		65997-17-3	1 - 5
CRYSTALLINE SILICA (QUARTZ)*		14808-60-7	0.1 - 1

Composition comments

** Found in products in List B, Section 1 of this SDS.

Gypsum (calcium sulfate, dihydrate) and vermiculite contain naturally occurring crystalline silica (quartz) which is listed as a lung carcinogen. See Section 8 for exposure information.

*The weight percent for crystalline silica represents total crystalline silica and not the respirable fraction. Testing conducted by Georgia-Pacific did not detect respirable crystalline silica during activities associated with the normal use of this product; however, jobsite air monitoring should be conducted to determine actual exposure when permissible exposure limits may be exceeded.

4. First-aid measures

Inhalation	If dust from the material is inhaled, remove the affected person immediately to fresh air. Call a physician if symptoms develop or persist.
Skin contact	For skin contact, wash immediately with soap and water. Get medical attention if irritation develops and persists.
Eye contact	Do not rub the eyes. Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
Ingestion	Rinse mouth. May result in obstruction and irritation if ingested. Get medical attention.
Most important symptoms/effects, acute and delayed	Irritation of eyes. Exposed individuals may experience eye tearing, redness, and discomfort.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media	None known.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	Firefighters should wear full protective clothing including self contained breathing apparatus.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Avoid inhalation of dust from the spilled material. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits. Use personal protection recommended in Section 8. Keep unnecessary personnel away.
Methods and materials for containment and cleaning up	Minimize dust generation. Sweep up or gather material and place in an appropriate container for disposal. Utilize wet methods, if appropriate, to minimize dust. For waste disposal, see section 13 of the SDS.
Environmental precautions	Keep out of drains, sewers, ditches, and waterways.

7. Handling and storage

Precautions for safe handling	Provide appropriate exhaust ventilation at places where dust is formed. Minimize dust generation and accumulation. Do not breathe dust. Do not get this material in contact with eyes. Do not taste or swallow. Avoid prolonged exposure. Observe good industrial hygiene practices. Use only in well-ventilated areas. Wear appropriate NIOSH/MSHA approved dust mask or filtering facepiece if dust is generated. Do not eat or drink while using the product. Wash hands before eating, drinking, or smoking.
Conditions for safe storage, including any incompatibilities	Store level and keep dry. Dewpoint or other conditions causing the presence of moisture can damage the product during storage. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
CALCIUM SULFATE DIHYDRATE (CAS 10101-41-4)	PEL	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.
CRYSTALLINE SILICA (QUARTZ)* (CAS 14808-60-7)	PEL	0.05 mg/m3	Respirable dust.

US. OSHA Table Z-3 (29 CFR 1910.1000)

Components	Type	Value	Form
VERMICULITE** (CAS 1318-00-9)	TWA	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.

ACGIH

Components	Type	Value	Form
CALCIUM SULFATE DIHYDRATE (CAS 10101-41-4)	TWA	3 mg/m3	Respirable Particles.
CONTINUOUS FILAMENT GLASS FIBER (CAS 65997-17-3)	TWA	5 mg/m3	Inhalable fraction.
VERMICULITE** (CAS 1318-00-9)	TWA	3 mg/m3	Respirable particles.

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
CALCIUM SULFATE DIHYDRATE (CAS 10101-41-4)	TWA	10 mg/m3	Inhalable fraction.
CONTINUOUS FILAMENT GLASS FIBER (CAS 65997-17-3)	TWA	1 fibers/cm3	Fiber.
CRYSTALLINE SILICA (QUARTZ)* (CAS 14808-60-7)	TWA	0.025 mg/m3	Respirable fraction.
VERMICULITE** (CAS 1318-00-9)	TWA	10 mg/m3	Inhalable particles.

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
CALCIUM SULFATE DIHYDRATE (CAS 10101-41-4)	TWA	5 mg/m3	Respirable.
		10 mg/m3	Total
CONTINUOUS FILAMENT GLASS FIBER (CAS 65997-17-3)	TWA	3 fibers/cm3	Fibrous dust.
		5 mg/m3	Fiber, total
CRYSTALLINE SILICA (QUARTZ)* (CAS 14808-60-7)	TWA	0.05 mg/m3	Respirable dust.

Biological limit values No biological exposure limits noted for the ingredient(s).

Exposure guidelines Occupational exposure to nuisance dust (total and respirable) and respirable crystalline silica should be monitored and controlled.

*Testing conducted by Georgia-Pacific did not detect respirable crystalline silica during activities associated with the normal use of this product; however, jobsite air monitoring should be conducted to determine actual exposure when permissible exposure limits may be exceeded.

Appropriate engineering controls Score and snap method recommended. When using product, provide local and general exhaust ventilation to keep airborne dust concentrations below exposure limits. Use wet methods, if appropriate, to reduce the generation of dust. Ventilation should be sufficient to effectively remove and prevent buildup of any dusts or fumes that may be generated during handling or thermal processing. If engineering measures are not sufficient to maintain concentrations of dust particulates below the Occupational Exposure Limit (OEL), suitable respiratory protection must be worn.

Individual protection measures, such as personal protective equipment

Eye/face protection Safety glasses or goggles are recommended when using this product. Ensure compliance with OSHA's PPE standard (29 CFR 1910.132 and .133) for eye and face protection. Eye wash fountain is recommended.

Skin protection

Hand protection For prolonged or repeated skin contact use suitable protective gloves.

Other Impervious protective clothing and gloves recommended to prevent drying or irritation of skin. Ensure compliance with OSHA's PPE standards (29 CFR 1910.132 (general) and 138 (hand protection)). Safety shower/eye wash fountain is recommended in the workplace area (29 CFR 1910.151 (c)). Impervious protective clothing and gloves recommended to prevent drying or irritation of skin. Safety shower/eye wash fountain is recommended in the workplace area.

Respiratory protection A NIOSH approved dust mask or filtering facepiece is recommended in poorly ventilated areas or when permissible exposure limits may be exceeded. Respirators should be selected by and used under the direction of a trained health and safety professional following requirements found in OSHA's respirator standard (29 CFR 1910.134) and ANSI's standard for respiratory protection (Z88.2).

Thermal hazards Not applicable.

General hygiene considerations Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Keep away from food and drink.

9. Physical and chemical properties

Appearance Gypsum boards

Physical state Solid.

Form Solid

Color Facing color varies

Odor Low odor

Odor threshold Not available.

pH 6 - 8

Melting point/freezing point Not applicable.

Initial boiling point and boiling range	Not applicable.
Flash point	Not applicable.
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not applicable.
Flammability limit - upper (%)	Not applicable.
Explosive limit - lower (%)	Not applicable.
Explosive limit - upper (%)	Not applicable.
Vapor pressure	Not applicable.
Vapor density	Not applicable.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	0.2 % @ 22°C
Partition coefficient (n-octanol/water)	Not applicable.
Auto-ignition temperature	Not applicable.
Decomposition temperature	Not available.
Viscosity	Not applicable.
Other information	
Flash point class	Not flammable
Specific gravity	2.2 - 2.4

10. Stability and reactivity

Reactivity	Contact with strong acids produces carbon dioxide.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Contact with incompatible materials. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air).
Incompatible materials	Strong acids.
Hazardous decomposition products	May include and are not limited to: calcium oxide and sulfur dioxide.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Inhalation of dusts may cause respiratory irritation.
Skin contact	Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis.
Eye contact	Dust in the eyes will cause irritation.
Ingestion	Not applicable under normal conditions of use. May cause gastrointestinal irritation if ingested.
Symptoms related to the physical, chemical and toxicological characteristics	Irritation of eyes. Exposed individuals may experience eye tearing, redness, and discomfort.

Information on toxicological effects

Acute toxicity

Product	Species	Test Results
Glass Mat Faced Gypsum Panels		
Acute		
Oral		
ATEmix		1728 mg/kg

Components	Species	Test Results
CALCIUM SULFATE DIHYDRATE (CAS 10101-41-4)		
Acute		
Oral		
LD50	Rat	> 1581 mg/kg

Skin corrosion/irritation Prolonged skin contact may cause temporary irritation.

Serious eye damage/eye irritation Dust in the eyes will cause irritation.

Respiratory or skin sensitization

Respiratory sensitization Not likely to cause respiratory sensitization.

Skin sensitization This product is not expected to cause skin sensitization.

Germ cell mutagenicity Not classified.

Carcinogenicity Not expected to be hazardous by OSHA/WHMIS criteria.

Exposure to respirable crystalline silica in the form of quartz or cristobalite from occupational sources is listed by IARC and NTP as a lung carcinogen. Prolonged exposure to respirable crystalline silica has been known to cause silicosis, a lung disease, which may be disabling. While there may be a factor of individual susceptibility to a given exposure to a respirable silica dust, the risk of contracting silicosis and the severity of the disease is clearly related to the amount of respirable crystalline silica exposure and the length of time (usually years) of exposure.

IARC Monographs. Overall Evaluation of Carcinogenicity

CRYSTALLINE SILICA (QUARTZ)* (CAS 14808-60-7) 1 Carcinogenic to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)

CRYSTALLINE SILICA (QUARTZ)* (CAS 14808-60-7) Cancer

US. National Toxicology Program (NTP) Report on Carcinogens

CRYSTALLINE SILICA (QUARTZ)* (CAS 14808-60-7) Known To Be Human Carcinogen.

Reproductive toxicity Not classified.

Specific target organ toxicity - single exposure Not classified.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard Not classified.

Chronic effects Not hazardous under normal conditions of use.

Further information *Testing conducted by Georgia-Pacific did not detect respirable crystalline silica during activities associated with the normal use of this product; however, jobsite air monitoring should be conducted to determine actual exposure when permissible exposure limits may be exceeded.

12. Ecological information

Ecotoxicity Not considered to be harmful to aquatic life.

Components		Species	Test Results
CALCIUM SULFATE DIHYDRATE (CAS 10101-41-4)			
Aquatic			
Acute			
Fish	LC50	Fathead minnow (Pimephales promelas)	> 1970 mg/l, 96 hours
CONTINUOUS FILAMENT GLASS FIBER (CAS 65997-17-3)			
Aquatic			
Acute			
Fish	LC50	Fish	> 1000 mg/l, 96 hours
CRYSTALLINE SILICA (QUARTZ)* (CAS 14808-60-7)			
Aquatic			
Acute			
Fish	LC50	Zebra danio (Danio rerio)	> 10000 mg/l, 96 Hours OECD SIDS

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential No data available.

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the product meets RCRA criteria for hazardous waste. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products Dispose of in accordance with local regulations.

Contaminated packaging Not available.

14. Transport information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

15. Regulatory information

US federal regulations This product is not hazardous in the form in which it is sold and shipped by the manufacturer. However, the large amount of dusts generated by downstream activities such as cutting, sanding, or otherwise working with this product is considered hazardous and is regulated under the Hazard Communication Standard 29 CFR 1910.1200.

Toxic Substances Control Act (TSCA) All components of the mixture are designated as "active" on or exempt from the TSCA 8(b) inventory.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)

CRYSTALLINE SILICA (QUARTZ)* (CAS 14808-60-7)	Cancer lung effects immune system effects kidney effects

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical Yes

Classified hazard categories Serious eye damage or eye irritation

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations

California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

CONTINUOUS FILAMENT GLASS FIBER (CAS 65997-17-3)
CRYSTALLINE SILICA (QUARTZ)* (CAS 14808-60-7)

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date March-13-2015

Revision date July-29-2020

Version # 07

HMIS® ratings Health: 1
Flammability: 0
Physical hazard: 0

NFPA ratings Health: 1
Flammability: 0
Instability: 0

Disclaimer This SDS is intended to quickly provide useful information to the user(s) of this material or product. It is not intended to serve as a comprehensive discussion of all possible risks or hazards, and it assumes a reasonable use of the product. The information contained in this SDS is believed to be accurate as of the date of preparation of this SDS and has been compiled from sources believed to be reliable. It is offered for your consideration, investigation and verification. The user or handler (or their employer) should consider the specific conditions in which this material will be used, handled, or stored and determine what specific safety or other precautions are required. Employers should ensure that their employees, agents, contractors, and customers who will use the product receive adequate warnings and safe handling procedures, including a current SDS. Product users or handlers (or their employer) who are unsure of what specific precautions are required should consult their employer, product supplier, or safety or health professionals before handling or working with this product. Please notify us immediately if you believe this SDS or other safety and health information about this product is inaccurate or incomplete.

Revision information Product and Company Identification: Product Codes

siplast

Modified Bitumen Roll Roofing Membrane
Safety Data Sheet

Section 1 - Product and Company Identification

Manufacturer:

Siplast, Inc.
14911 Quorum Dr., Suite 600
Dallas, TX 75254

Telephone: 800-922-8800
Internet Address: www.siplast.com
CHEMTREC: 800-424-9300

Trade Names:

Paradiene 20
Paradiene 20 HT
Paradiene 20 HV
Paradiene 20 EG
Paradiene 20 PR
Paradiene 20 TG
Paradiene 20 HT TG
Paradiene 20 HT TS
Paradiene 20 HV TG
Paradiene 20 EG TG
Paradiene 20 PR TG
Paradiene 20 TS
Paradiene 20 EG TS
Paradiene 20 TS SA
Paradiene 20 SA
Paradiene 20 HT SA
Paradiene 20 EG SA
Pro Base
Pro Base TG
Pro Base TS
Pro Base TS SA
Pro Base SA
Pro Base HT
Pro Base HT TG
Pro Base EG
Pro Base EG TG
Pro Base EG SA
Pro Base HT TS
Irex 40
Paradiene 30 FR
Paradiene 30 FR TG
Paradiene 30 FR BW
Paradiene 30 FR TG BW
Paradiene 30 HT
Paradiene 30 FR SA
Paradiene 30 FR SA BW
Paradiene 30 FR AW
Paradiene 30 FR TG BW
Paradiene 40 FR
Paradiene 40 FR BW
Paradiene 40 FR TG
Paradiene 40 FR TG BW
Parafor 30
Parafor 30 BW
Parafor 30 TG
Parafor 30 TG BW
Parafor 30 SA
Parafor 30 SA BW
Parafor 50 LT
Parafor 50 LT BW
Parafor 50 TG
Parafor 50 TG BW
Parabase Plus
Parabase Plus P
Paratread
Teranap 1M Film
Teranap 1M Sand
Teranap 1M GS
Veral Aluminum
Veral Spectra

Use: These products are designed for use in roofing systems where two or more plies of modified bitumen are desired.

Section 2 - Hazards Identification

As defined in the OSHA Hazard Communication Standard, 29 CFR 1910.1200, the products listed below are considered articles and do not require an SDS. In addition, articles are not included in the scope of the Globally Harmonization System (GHS). As such, the GHS labeling elements are not included on this SDS. All components listed for this product are bound within the product. When handled as intended and under normal conditions of use, there is no evidence that any of the ingredients are released in amounts that pose a significant health risk. Although these products are not subject to the OSHA Standard or GHS labeling elements, Siplast would like to disclose as much health and safety information as possible to ensure that this product is handled and used properly. This SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and be made available for employees and other users of this product. In addition, the recommendations for handling and use of these products should be included in worker training programs.

ADDITIONAL HAZARD IDENTIFICATION INFORMATION:

PRIMARY ROUTE OF EXPOSURE: Occasional nuisance dust, Inhalation

SIGNS & SYMPTOMS OF EXPOSURE

EYES:	May cause irritation to the eyes.
SKIN:	May cause irritation to the skin.
INGESTION:	This product is not intended to be ingested. If ingested, it may cause temporary irritation to the gastrointestinal (digestive) tract.
INHALATION:	May cause irritation to the respiratory tract.
ACUTE HEALTH HAZARDS:	NIOSH has found that studies of workers exposed to asphalt fumes have repeatedly found irritation of the serous membranes of the conjunctivae (eye irritation) and the mucous membranes of the upper respiratory tract (nasal and throat irritation).
CHRONIC HEALTH HAZARDS:	Studies in humans have found that exposure to respirable crystalline silica (quartz) can cause silicosis, a fibrosis (scarring) of the lungs. Silicosis is a serious and irreversible disease; it may be progressive even after exposure has ceased; it can lead to disability and death. Human studies also have found that silicosis is a risk factor for tuberculosis, and that occupational exposure to respirable crystalline silica is associated with chronic obstructive pulmonary disease, including bronchitis and emphysema. Some studies show excess numbers of cases of scleroderma, connective tissue disorders, lupus, rheumatoid arthritis, chronic kidney diseases and end-stage kidney disease in workers exposed to respirable crystalline silica.
CARCINOGENICITY:	IARC has determined that occupational exposure to oxidized asphalt and its emissions is probably carcinogenic to humans (Group 2A). IARC concluded that available data from cancer studies in humans points to an association between exposures to oxidized asphalts during roofing and lung cancer and tumors in the upper aero-digestive tract. In addition, IARC found sufficient evidence of carcinogenicity in experimental animals for extracts and fume condensates of oxidized asphalts. NIOSH has concluded that the collective data from human, animal, genotoxicity and exposure studies provide sufficient evidence that roofing asphalt fumes are a potential occupational carcinogen. Occupational exposure to respirable crystalline silica is classified as a known carcinogen in humans. IARC has determined that respirable crystalline silica is carcinogenic to humans (Group 1), based on findings of sufficient evidence of carcinogenicity in both humans and experimental animals. NTP has classified respirable crystalline silica as a known human carcinogen based on sufficient evidence of carcinogenicity from studies in humans indicating a causal relationship between occupational exposure to respirable crystalline silica and increased lung cancer rates. NIOSH has determined that respirable crystalline silica is a potential occupational carcinogen. IARC has determined that occupational exposure to Titanium Dioxide is possibly carcinogenic to humans (Group 2B). IARC concluded lung tumors were observed in rats following high dose exposure by inhalation and in female rats exposed by intra-tracheal instillation. Other studies have shown no tumors in rats following inhalation exposure and no tumors in mice or rats following oral exposure.

Section 3 - Composition/Information on Ingredients

CAS #	Component	Percent
8052-42-4	Asphalt	20-70
64742-93-4	Asphalt, oxidized	0 -10*
13463-67-7	Titanium dioxide (Ingredient of CR products only)	2-10
Not Available	Mineral granules (Ceramic-coated granite; 35% crystalline silica, non-respirable)	0-35
1317-65-3	Calcium carbonate	0-35
12007-56-6	Calcium borate (Colemanite) (Products with FR suffix contain colemanite for fire resistance)	0-35
16389-88-1	Dolomite (CaMg(CO3)2)	0-35
9003-55-8	Styrene-Butadiene polymer	4-10
25038-59-9	Polyester fiber	2-10
Not Available	Glass fiber mat	2-10
Not Available	Continuous filament glass fiber	2-10
Not Available	Glass fiber mat with polyester scrim	2-10
Not Available	Polyester mat	2-10
Not Available	Polyester mat with glass scrim	2-10
14808-60-7	Crystalline silica (sand) (adhered to product and is >99.9% too large to become airborne or to be respirable)	0-10
7429-90-5	Aluminum foil (Veral) has an aluminum foil surface)	0-5
9002-88-4	Polypropylene or Polyolefin Film	0-6
64742-11-6	Extracts, petroleum, heavy naphthenic	>1
64741-53-3	Distillates, petroleum, heavy naphthenic	>1

Component Information

* Present in. Veral. Occupational exposure to asphalt, oxidized is not expected to occur due to product form and intended application.

Occupational exposure to titanium dioxide is not expected to occur due to product form and intended use. Exposure limit is given for reference only.

General Product Description

These products consist of a modified bitumen sheet incorporating the features of a fiber glass mat and/or polyester composite mat with a blend of SBS (Styrene-Butadiene-Styrene) rubber and high quality asphalt. Product may also contain fire retardant additives.

Veral is aluminum foil surfaced.

Parabase products are mineral surfaced, asphalt coated, fiber glass cap sheets for use in built-up roofing systems.

Section 4 - First Aid Measures

First Aid: Inhalation

Remove to fresh air. If symptoms persist contact a physician.

First Aid: Skin

Wash exposed skin with soap and water. If irritation develops or persists, seek medical attention.

First Aid: Ingestion

Product is not intended to be ingested or eaten. If this product is ingested, do not induce vomiting and seek medical attention immediately.

First Aid: Eyes

Flush eyes with large amounts of water until irritation subsides. If irritation persists, seek medical attention.

Section 5 - Fire Fighting Measures

Flash Point: > 500ºF
Upper Flammable Limit (UFL): Not determined
Auto Ignition: 460ºC/860ºF
Rate of Burning: Not determined
Method Used: COC
Lower Flammable Limit (LFL): Not determined
Flammability Classification: Not determined

General Fire Hazards

There is no potential for spontaneous fire or explosion.

Extinguishing Media

Carbon dioxide (CO_2), dry chemical.

Fire Fighting Equipment/Instructions

No special procedures are expected to be necessary for this product. Normal firefighting procedures should be followed to avoid inhalation of smoke and gases.

Section 6 - Accidental Release Measures

Clean-Up Procedures

Pick up large pieces. Vacuum dusts.

Section 7 - Handling and Storage

Handling Procedures

Use protective equipment as described in Section 8 of this safety data sheet when handling uncontained material. Handle in accordance with good industrial hygiene and safety practices.

Storage Procedures

Warehouse storage should be in accordance with package directions, if any. Material should be kept clean, dry, and in original packaging.

Section 8 - Exposure Controls / Personal Protection

Exposure Guidelines

A: General Product Information

The Occupational Safety and Health Administration (OSHA) has not adopted specific occupational exposure standards for fiber glass. Fiber glass is treated as a nuisance dust and is regulated by OSHA as a particulate not otherwise regulated (total dust) shown in CFR 1910.1000 Table Z-3.
Respirable fraction 5 mg/m^3
Total dust 15 mg/m^3

.

B: Component Exposure Limits

Asphalt (8052-42-4)

ACGIH: 0.5 mg/m³TWA (fume, inhalable fraction, as benzene soluble aerosol)

Titanium dioxide (Ingredient of CR products only) (13463-67-7)

OSHA: 15 mg/m³ TWA (total dust); 10 mg/m³ TWA (total dust)
ACGIH: 10 mg/m³ TWA

Calcium carbonate (1317-65-3)

OSHA: 15 mg/m³ TWA (total dust); 5 mg/m³ TWA (respirable fraction)

Crystalline silica (sand) (adhered to product and is >99.9% too large to become airborne or to be respirable) (14808- 60-7)

OSHA: 0.1 mg/m³ TWA (respirable dust)
((250)/(%SiO2 + 5) mppcf TWA (respirable)); ((10)/(%SiO2 + 2) mg/m³ TWA (respirable));
((30)/(%SiO2 + 2) mg/m³ TWA (total dust))
ACGIH: 0.025 mg/m³ TWA (respirable fraction)

Aluminum foil (Veral Al has an aluminum foil surface) (7429-90-5)

OSHA: 15 mg/m³ TWA (total dust); 5 mg/m³ TWA (respirable fraction)
ACGIH: 1 mg/m³ TWA (respirable fraction)

PERSONAL PROTECTIVE EQUIPMENT

Personal Protective Equipment: Eyes/Face

Safety glasses with side shields or chemical goggles are recommended.

Personal Protective Equipment: Skin

Leather or cotton gloves should be worn to protect against mechanical abrasion.

Personal Protective Equipment: Respiratory

None required.

Personal Protective Equipment: General

Protective equipment should be provided as necessary to prevent irritation of the throat, eyes, and skin, and to keep exposures below the applicable exposure limits identified in Section 8.

Section 9 - Physical & Chemical Properties

Appearance:	Dark mat with granule or white coated surface	**Odor:**	Asphalt odor
Physical State:	solid	**pH:**	Not applicable
Vapor Pressure:	Not applicable	**Vapor Density:**	Not applicable
Boiling Point:	>370ºC/>700ºF	**Melting Point:**	>95ºC/>200ºF
Solubility (H_2O):	Nil	**Specific Gravity:**	Variable
Freezing Point:	Not determined	**Evaporation Rate:**	Not applicable
Viscosity:	Not applicable	**Percent Volatile:**	0
VOC:	Not determined		

Section 10 - Stability & Reactivity Information

Stability

These products are not reactive.

Hazardous Decomposition

May form carbon dioxide and carbon monoxide.

Hazardous Polymerization

Will not occur.

Section 11 - Toxicological Information

Acute Toxicity

A: General Product Information

Vapors from this product may cause eye, respiratory and skin irritation,

B: Component Analysis - LD50/LC50

Asphalt (8052-42-4)
Oral LD50 Rat: >5000 mg/kg; Dermal LD50 Rabbit:>2000 mg/kg

Titanium dioxide (Ingredient of CR products only) (13463-67-7)
Oral LD50 Rat: >10000 mg/kg

Calcium borate (Colemanite) (Products with FR suffix contain colemanite for fire resistance) (12007-56-6)
Oral LD50 Rat: 5600 mg/kg

Crystalline silica (sand) (adhered to product and is >99.9% too large to become airborne or to be respirable) (14808- 60-7)
Oral LD50 Rat: 500 mg/kg

Polypropylene or Polyolefin Film (9002-88-4)
Inhalation LC50 Mouse: 12 g/m3/30M

Distillates, petroleum, heavy naphthenic (64741-53-3)
Oral LD50 Rat: >5000 mg/kg; Dermal LD50 Rabbit:>2000 mg/kg

Extracts, petroleum, heavy naphthenic (64742-11-6)
Oral LD50 Rat: >5000 mg/kg; Dermal LD50 Rabbit:>2000 mg/kg

Component Carcinogenicity

Asphalt (8052-42-4)
ACGIH: A4 - Not Classifiable as a Human Carcinogen (fume, coal tar-free)
IARC: Group 3 - Not Classifiable (IARC Supplement 7 [1987], Monograph 35[1985] (steam-refined cracking-residue and air-refined))

Oxidized bitumens (64742-93-4)
IARC: Group 2A - Probably Carcinogenic to Humans

Titanium dioxide (Ingredient of CR products only) (13463-67-7)
ACGIH: A4 - Not Classifiable as a Human Carcinogen
IARC: Group 2B - Possibly Carcinogenic to Humans (IARC Monograph 93 [in preparation], Monograph 47 [1989])

Styrene-Butadiene polymer (9003-55-8)
IARC: Group 3 - Not Classifiable (IARC Supplement 7 [1987], Monograph 19 [1979])

Continuous filament glass fiber (Not Available)
ACGIH: A4 - Not Classifiable as a Human Carcinogen (listed under Synthetic Vitreous Fibers)
IARC: Group 3 - Not Classifiable (IARC Monograph 81 [2002] (listed under Man-made mineral fibres), Monograph 43 [1988]))

Crystalline silica (sand) (adhered to product and is >99.9% too large to become airborne or to be respirable) (14808- 60-7)
ACGIH: A2 - Suspected Human Carcinogen
NTP: Known Human Carcinogen (Select Carcinogen)
IARC: Group 1 - Known Human Carcinogen (IARC Monograph 68 [1997] (listed under Crystalline silica inhaled in the form of quartz or cristobalite from occupationalsources))

Aluminum foil (Veral has an aluminum foil surface) (7429-90-5)
ACGIH: A4 - Not Classifiable as a Human Carcinogen

Polypropylene or Polyolefin Film (9002-88-4)
IARC: Group 3 - Not Classifiable (IARC Supplement 7 [1987], Monograph 19 [1979])

Chronic Toxicity

Asphalt (asphalt CAS # 8052-42-4): In 1985/87, IARC (International Agency for Research on Cancer) concluded the following:
(a) Bitumens are not classifiable as to their carcinogenicity to humans (Group 3).

Oxidized bitumens (oxidized asphalt) #64742-93-4: In 2011, the International Agency for Research on Cancer (IARC) announced its conclusion that "occupational exposures to oxidized bitumens and their emissions during roofing" are Group 2A (probably Carcinogenic to Humans). This finding pertains specifically to occupational exposures to oxidized asphalt, which is another name for bitumen, and their emissions during roofing. Occupational exposure to asphalt, oxidized is not expected to occur due to product form and intended use.

Continuous Filament Glass Fiber: No chronic health effects are known to be associated with exposure to continuous filament fiber glass. Results from epidemiologic studies have not shown any increases in respiratory disease or cancer. The International Agency for Research on Cancer (IARC) has classified continuous filament fiber glass as a Group 3 substance, not classifiable as to its carcinogenicity to humans. Because of the large diameter of continuous filament fibers, these products are not considered respirable.

Crystalline silica is considered a hazard by inhalation. The International Agency for Research on Cancer (IARC) has classified crystalline silica as a Group 1 substance, carcinogenic to humans. This classification is based on the findings of laboratory animal studies (inhalation and implantation) and epidemiology studies that were considered sufficient for carcinogenicity.

Several studies have been conducted to determine the risk of cancer to workers exposed to dusts which contain crystalline silica. However, these studies did not consider other factors or elements that workers may be exposed to. Therefore, the causes of the excess deaths due to cancer could not be precisely determined. Further studies are being conducted to determine the risk of cancer when working with crystalline silica products. Excessive exposure to crystalline silica can cause silicosis, a non-cancerous lung disease.

Section 12 - Ecological Information

Ecotoxicity

A: General Product Information

No data available for this product.

B: Component Analysis - Ecotoxicity - Aquatic Toxicity

Extracts, petroleum, heavy naphthenic (64742-11-6)
48 Hr EC50 Daphnia magna: 1.4 mg/L

Section 13 - Disposal Considerations

US EPA Waste Number & Descriptions

A: General Product Information

This product is not expected to be a hazardous waste when it is disposed of according to the U.S. Environmental Protection Agency (EPA) under Resource Conservation and Recovery Act (RCRA) regulations. Product characterization after use is recommended to ensure proper disposal under federal and/or state requirements.

B: Component Waste Numbers

No EPA Waste Numbers are applicable for this product's components.

Disposal Instructions

Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations.

Section 14 - Transport Information

International Transport Regulations

These products are not classified as dangerous goods according to international transport regulations.

Section 15 - Regulatory Information

US Federal Regulations

A: General Product Information

SARA 311 Status. The following SARA 311 designations apply to this product: Immediate (acute) health hazard.

B: Component Analysis

This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65) and/or CERCLA (40 CFR 302.4).

Aluminum foil (Veral has an aluminum foil surface) (7429-90-5)

SARA 313: 1.0 % de minimis concentration (dust or fume only)

State Regulations

A: General Product Information

The glass fibers in this product are not known to be regulated.
Other state regulations may apply. Check individual state requirements.

B: Component Analysis - State

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS #	CA	FL	MA	MN	NJ	PA
Asphalt	8052-	Yes	No	Yes	Yes	Yes	Yes
Asphalt, oxidized	64742-	No	No	No	No	Yes	No
Titanium dioxide (Ingredient of CR products only)	13463-	No	No	Yes	Yes	Yes	Yes
Calcium carbonate	1317-	No	No	Yes	Yes	Yes	Yes
Crystalline silica (sand) (adhered to product and is >99.9% too large to become airborne or to be respirable)	14808-60-7	No	No	Yes	Yes	Yes	Yes
Aluminum foil (Veral has an aluminum foil surface)	7429-	Yes	No	Yes	Yes	Yes	Yes
Distillates, petroleum, heavy naphthenic	64741-	No	No	Yes	No	No	No
Extracts, petroleum, heavy naphthenic	64742-	No	No	Yes	No	No	No

The following statement(s) are provided under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): WARNING! This product contains a chemical known to the state of California to cause cancer.

Asphalt fumes may contain trace amounts of the following California Proposition 65 Listed Substances as known to the state of California to cause cancer or reproductive effects: Poly nuclear aromatic hydrocarbons (benz(a)anthracene, benzo(b)fluoranthene, benzo(j)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene).

TSCA Status

This product and its components are listed on the TSCA 8(b) inventory.

None of the components listed in this product are listed on the TSCA Export Notification 12(b) list.

International Regulations

A: General Product Information

These products are considered articles under both U.S. and international product regulations and as such, these products do not require registration or notification on the various country-specific inventories.

B: Component Analysis - WHMIS IDL

The following components are identified under the Canadian Hazardous Products Act Ingredient Disclosure List:

Component	CAS #	Minimum Concentration
Continuous filament glass fiber	Not Available	1 % (related to Fibrous glass)
Crystalline silica (sand) (adhered to product and is >99.9% too large to become airborne or to be respirable)	14808-60-7	1 %
Aluminum foil (Veral has an aluminum foil surface)	7429-90-5	1 %

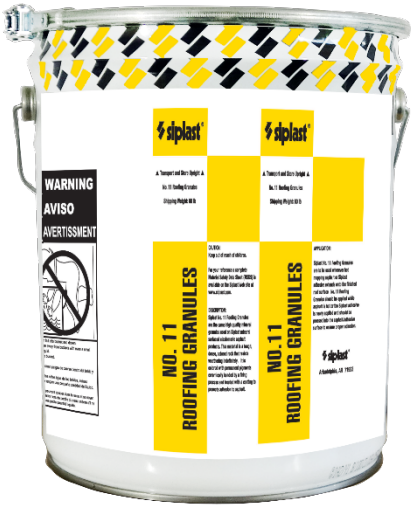
WHMIS Classification

This is not a WHMIS controlled product. This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations. This SDS contains all the information required by the Controlled Products Regulations.

Section 16 - Other Information

Other Information

The information herein is presented in good faith and believed to be accurate as of the effective date given. However, no warranty, expressed or implied, is given. It is the buyer's responsibility to ensure that its activities comply with Federal, State or provincial, and local laws.



NO. 11 ROOFING GRANULES

Commercial Product Data Sheet

Siplast No. 11 Roofing Granules are mineral granules coated with a pigmented ceramic coating. Siplast No. 11 Roofing Granules are supplied in colors to match Siplast granule-surfaced SBS sheets.

Contact Siplast for information on approved product uses.

USES:
SURFACE TREATMENT

Standard Color	#A-720 Bone White (Special Colors Available)
Unit	5 gal Pail (19 L)
Size (SGI – No. 11)	100% - 8 Mesh Tyler (2.36 mm) Sieve 95% + 35 Mesh Tyler (425) Sieve
Bulk Density	90 – 115 lbs/ft^3 (1,441 kg/m^3)

PRODUCT INFORMATION

Application

Refer to the applicable Siplast Technical Guide for detailed application information.

Storage and Handling

All Siplast roofing products should be stored upright on a cool, dry surface. Care should be taken that containers are not dropped and container seals are not broken prior to use. All roofing products should be stored in a dry place out of direct exposure to the elements and kept away from excessive heat, fire or open flames.

See product packaging and the Safety Data Sheet for specific information on the safe handling of this product.

Packaging

Pallet: 36 in x 48 in (91 cm x 122 cm) wooden pallet
Pails Per Pallet: 36
Pallets Per Truckload: 22
Shipping Weight Per Pail: 65 lb (29.5 kg)

Siplast 14911 Quorum Dr., Suite 600 Dallas, TX 75254
201 Bewicke Ave., Suite 208 North Vancouver, BC, Canada V7M 3M7
Customer Service in North America 1.800.922.8800 www.siplast.com

Safety Data Sheet

SECTION 1: Identification

1.1. Product identifier
No. 11 Roofing Granules

Product Identification Numbers
98-0111-1341-6, 98-0111-1762-3, 98-0111-1995-9

1.2. Recommended use and restrictions on use

Recommended use
Granules for coating roofing shingles.

1.3. Supplier's details

SUPPLIER NAME:	Siplast, Inc.
ADDRESS:	1111 Highway 67 South, Arkadelphia, AR 71923
Telephone:	800-922-8800

1.4. Emergency telephone number
CHEMTREC: 800-424-9300 (N. America) / 800-527-3887 (International)

SECTION 2: Hazard identification

2.1. Hazard classification
Carcinogenicity: Category 1A.

2.2. Label elements
Signal word
Danger

Symbols
Health Hazard |

Pictograms

Hazard Statements
May cause cancer.

Precautionary Statements

Prevention:
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.

Response:
IF exposed or concerned: Get medical advice/attention.

Storage:
Store locked up.

Disposal:
Dispose of contents/container in accordance with applicable local/regional/national/international regulations.

SECTION 3: Composition/information on ingredients

Ingredient	C.A.S. No.	% by Wt
Pulaskite (composition varies naturally, typically contains feldspars, pyroxene, amphibole, nepheline, analcime, biotite, magnetite and ilmenite)	Mixture	95 - 98
Quartz (a component of Pulaskite)	14808-60-7	< 1
Ceramic	66402-68-4	2 - 4
Titanium Dioxide	13463-67-7	0.1 - 0.9
Oil	68187-51-9	< 0.2

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:
Remove person to fresh air. If you feel unwell, get medical attention.

Skin Contact:
Wash with soap and water. If signs/symptoms develop, get medical attention.

Eye Contact:
Flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms persist, get medical attention.

If Swallowed:
Rinse mouth. If you feel unwell, get medical attention.

4.2. Most important symptoms and effects, both acute and delayed
See Section 11.1. Information on toxicological effects.

4.3. Indication of any immediate medical attention and special treatment required
Not applicable

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media
Non-combustible. Use a fire fighting agent suitable for surrounding fire.

5.2. Special hazards arising from the substance or mixture
None inherent in this product.

5.3. Special protective actions for fire-fighters
No special protective actions for fire-fighters are anticipated.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Ventilate the area with fresh air.

6.2. Environmental precautions
Avoid release to the environment.

6.3. Methods and material for containment and cleaning up
Collect as much of the spilled material as possible. Use wet sweeping compound or water to avoid dusting. Sweep up.

Place in a closed container approved for transportation by appropriate authorities. Clean up residue. Seal the container. Dispose of collected material as soon as possible in accordance with applicable local/regional/national/international regulations.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Do not handle until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Use personal protective equipment (gloves, respirators, etc.) as required. Granules are not respirable. Dust generated during handling may contain respirable material. 3M does not recommend material handling methods that could damage the coating or base mineral. In particular, roofing granules should not be conveyed pneumatically, via screw conveyors, or used as a sand blasting media. These uses can cause coating and base mineral attrition which may lead to increased levels of dust generation. For industrial or professional use only.

7.2. Conditions for safe storage including any incompatibilities

No special storage requirements.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

Ingredient	C.A.S. No.	Agency	Limit type	Additional Comments
Titanium Dioxide	13463-67-7	ACGIH	TWA:10 mg/m3	A4: Not class. as human carcin
Titanium Dioxide	13463-67-7	OSHA	TWA(as total dust):15 mg/m3	
Quartz (a component of Pulaskite)	14808-60-7	ACGIH	TWA(respirable fraction):0.025 mg/m3	A2: Suspected human carcin.
Quartz (a component of Pulaskite)	14808-60-7	OSHA	TWA Table Z-1(respirable):0.05 mg/m3;TWA Table Z-3(respirable):0.1 mg/m3	
Paraffin oil	68187-51-9	OSHA	TWA(as mist):5 mg/m3	
PETROLEUM DISTILLATES	68187-51-9	OSHA	TWA:2000 mg/m3(500 ppm)	

ACGIH : American Conference of Governmental Industrial Hygienists
AIHA : American Industrial Hygiene Association
CMRG : Chemical Manufacturer's Recommended Guidelines
OSHA : United States Department of Labor - Occupational Safety and Health Administration
TWA: Time-Weighted-Average
STEL: Short Term Exposure Limit
CEIL: Ceiling

8.2. Exposure controls

8.2.1. Engineering controls

Provide local exhaust ventilation at transfer points. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapors/spray. If ventilation is not adequate, use respiratory protection equipment.

8.2.2. Personal protective equipment (PPE)

Eye/face protection

Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:
Safety Glasses with side shields

Skin/hand protection
No chemical protective gloves are required.

Respiratory protection

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:
Half facepiece or full facepiece air-purifying respirator suitable for particulates

For questions about suitability for a specific application, consult with your respirator manufacturer.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

General Physical Form:	Solid
Specific Physical Form:	Granules
Odor, Color, Grade:	White colors, slightly oily odor, typical particle size 0.84-2.0 mm
Odor threshold	*Not Applicable*
pH	[*Details:*CONDITIONS: SL BASIC]*Not Applicable*
Melting point	*Not Applicable*
Boiling Point	*Not Applicable*
Flash Point	No flash point
Evaporation rate	*Not Applicable*
Flammability (solid, gas)	Not Classified
Flammable Limits(LEL)	*Not Applicable*
Flammable Limits(UEL)	*Not Applicable*
Vapor Pressure	*Not Applicable*
Vapor Density	*Not Applicable*
Specific Gravity	2.6 - 2.7 [*Ref Std:*WATER=1]
Solubility In Water	*Not Applicable*
Solubility- non-water	*Not Applicable*
Partition coefficient: n-octanol/ water	*Not Applicable*
Autoignition temperature	*Not Applicable*
Decomposition temperature	*Not Applicable*
Viscosity	*Not Applicable*
Percent volatile	Nil

SECTION 10: Stability and reactivity

10.1. Reactivity
This material is considered to be non reactive under normal use conditions.

10.2. Chemical stability
Stable.

10.3. Possibility of hazardous reactions
Hazardous polymerization will not occur.

10.4. Conditions to avoid
None known.

10.5. Incompatible materials
None known.

10.6. Hazardous decomposition products

Substance	Condition
None known.	

SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labeling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

11.1. Information on Toxicological effects

Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

Inhalation:
Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

May cause additional health effects (see below).

Skin Contact:
Mechanical Skin irritation: Signs/symptoms may include abrasion, redness, pain, and itching.

Eye Contact:
Mechanical eye irritation: Signs/symptoms may include pain, redness, tearing and corneal abrasion.

Ingestion:
May be harmful if swallowed.
Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

Additional Health Effects:

Carcinogenicity:
Contains a chemical or chemicals which can cause cancer.

Ingredient	CAS No.	Class Description	Regulation
SILICA, CRYS AIRRESP	14808-60-7	Known human carcinogen	National Toxicology Program Carcinogens
Quartz (a component of Pulaskite)	14808-60-7	Grp. 1: Carcinogenic to humans	International Agency for Research on Cancer
Titanium Dioxide	13463-67-7	Grp. 2B: Possible human carc.	International Agency for Research on Cancer

Toxicological Data
If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

Acute Toxicity

Name	Route	Species	Value
Overall product	Ingestion		No data available; calculated ATE2,000 - 5,000 mg/kg
Pulaskite (composition varies naturally, typically contains feldspars, pyroxene, amphibole, nepheline, analcime, biotite, magnetite and ilmenite)	Dermal		LD50 estimated to be 2,000 - 5,000 mg/kg
Pulaskite (composition varies naturally, typically contains feldspars, pyroxene, amphibole, nepheline, analcime, biotite, magnetite and ilmenite)	Ingestion		LD50 estimated to be 2,000 - 5,000 mg/kg
Ceramic	Dermal		LD50 estimated to be > 5,000 mg/kg

Ceramic	Ingestion		LD50 estimated to be 2,000 - 5,000 mg/kg
Quartz (a component of Pulaskite)	Dermal		LD50 estimated to be > 5,000 mg/kg
Quartz (a component of Pulaskite)	Ingestion		LD50 estimated to be > 5,000 mg/kg
Titanium Dioxide	Dermal	Rabbit	LD50 > 10,000 mg/kg
Titanium Dioxide	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 6.82 mg/l
Titanium Dioxide	Ingestion	Rat	LD50 > 10,000 mg/kg
Oil	Dermal	Rabbit	LD50 > 2,000 mg/kg
Oil	Ingestion	Rat	LD50 > 5,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Pulaskite (composition varies naturally, typically contains feldspars, pyroxene, amphibole, nepheline, analcime, biotite, magnetite and ilmenite)	Professional judgement	No significant irritation
Ceramic	Rabbit	No significant irritation
Quartz (a component of Pulaskite)	Professional judgement	No significant irritation
Titanium Dioxide	Rabbit	No significant irritation
Oil	Rabbit	Minimal irritation

Serious Eye Damage/Irritation

Name	Species	Value
Ceramic	Rabbit	Mild irritant
Titanium Dioxide	Rabbit	No significant irritation
Oil	Rabbit	Mild irritant

Skin Sensitization

Name	Species	Value
Titanium Dioxide	Human and animal	Not classified
Oil	Guinea pig	Not classified

Respiratory Sensitization

For the component/components, either no data are currently available or the data are not sufficient for classification.

Germ Cell Mutagenicity

Name	Route	Value
Ceramic	In Vitro	Some positive data exist, but the data are not sufficient for classification
Quartz (a component of Pulaskite)	In Vitro	Some positive data exist, but the data are not sufficient for classification
Quartz (a component of Pulaskite)	In vivo	Some positive data exist, but the data are not sufficient for classification
Titanium Dioxide	In Vitro	Not mutagenic
Titanium Dioxide	In vivo	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
Ceramic	Inhalation	Multiple animal species	Some positive data exist, but the data are not sufficient for classification
Quartz (a component of Pulaskite)	Inhalation	Human and animal	Carcinogenic

Titanium Dioxide	Ingestion	Multiple animal species	Not carcinogenic
Titanium Dioxide	Inhalation	Rat	Carcinogenic
Oil	Ingestion	Rat	Not carcinogenic
Oil	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification

Reproductive Toxicity

Reproductive and/or Developmental Effects
For the component/components, either no data are currently available or the data are not sufficient for classification.

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Oil	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Ceramic	Inhalation	pulmonary fibrosis	Not classified	Multiple animal species	NOAEL not available	
Ceramic	Inhalation	respiratory system	Not classified	Human	NOAEL not available	occupational exposure
Quartz (a component of Pulaskite)	Inhalation	silicosis	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	occupational exposure
Titanium Dioxide	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 0.01 mg/l	2 years
Titanium Dioxide	Inhalation	pulmonary fibrosis	Not classified	Human	NOAEL Not available	occupational exposure

Aspiration Hazard
For the component/components, either no data are currently available or the data are not sufficient for classification.

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

SECTION 12: Ecological information

Ecotoxicological information

Please contact the address or phone number listed on the first page of the SDS for additional ecotoxicological information on this material and/or its components.

Chemical fate information

Please contact the address or phone number listed on the first page of the SDS for additional chemical fate information on this material and/or its components.

SECTION 13: Disposal considerations

13.1. Disposal methods
Dispose of contents/ container in accordance with the local/regional/national/international regulations.

Dispose of waste product in a permitted industrial waste facility.

EPA Hazardous Waste Number (RCRA): Not regulated

SECTION 14: Transport Information

For Transport Information, please call 1-800-364-3577 or 651-737-6501.

SECTION 15: Regulatory information

15.1. US Federal Regulations
Contact 3M for more information.

EPCRA 311/312 Hazard Classifications:

Physical Hazards
Not applicable

Health Hazards
Carcinogenicity

15.2. State Regulations
Contact 3M for more information.

California Proposition 65

Ingredient	C.A.S. No.	Listing
SILICA, CRYSTALLINE (AIRBORNE PARTICLES OF RESPIRABLE SIZE)	None	Carcinogen
Titanium Dioxide	13463-67-7	Carcinogen

15.3. Chemical Inventories
The components of this product are in compliance with the chemical notification requirements of TSCA. All required components of this product are listed on the active portion of the TSCA Inventory.

Contact 3M for more information.

15.4. International Regulations
Contact 3M for more information.

This SDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: Other information

NFPA Hazard Classification
Health: 1 **Flammability:** 0 **Instability:** 0 **Special Hazards:** None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

DISCLAIMER: The information in this Safety Data Sheet (SDS) is believed to be correct as of the date issued. SIPLAST MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTYOF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR COURSE OF PERFORMANCE OR USAGE OF TRADE. User is responsible for determining whether the Siplast is fit for a particular purpose and suitable foruser's method of use or application. Given the variety of factors that can affect the use and application of a Siplast product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluate the Siplast product to determine whether it is fit for a particular purpose and suitable for user's method of use or application.

Siplast provides information in electronic form as a service to its customers. Due to the remote possibility that electronic transfer may have resulted in errors, omissions or alterations in this information, Siplast makes no representations as to its completeness or accuracy.

PARADIENE® 20 EG TG

Commercial Product Data Sheet

Paradiene 20 EG TG is the modified bitumen base ply of the Siplast Paradiene 20 EG TG/30 TG System. Designed for use in homogeneous multi-layer modified bitumen roof membrane systems, Paradiene 20 EG TG consists of a fiberglass scrim/fiberglass mat impregnated and coated with high quality styrene-butadiene-styrene (SBS) modified bitumen blend and is surfaced with a silica parting agent. The back of the sheet is coated with a modified bitumen asphalt layer specifically formulated for torch application, is embossed with a grooved pattern, and is surfaced with a polyolefin burn-off film.

Contact Siplast for information on approved product uses.

USES:
BASE PLY

Standards	ASTM D6163 Type II, Grade S; CSA A123.23-15 Type A, Grade 3
Roll Length	Min: 33.5 ft (10.21 m)
Roll Width	Avg: 39.4 in (1.0 m)
Coverage	1.0 Square (100.7 ft²) (9.4 m²)
Coverage Weight Per Square	Min: 95 lb (4.7 kg/m²)
Laying Lines	3 in (76.2 mm) & 4 in (102 mm) Line Color: Blue
Top Surfacing	Mineral Parting Agent
Back Surfacing	Polyolefin Burn-off Film
Product Options	RoofTag

PRODUCT INFORMATION

Application

Refer to the Siplast Technical Guide for detailed application information and slope limitations. Paradiene 20 EG TG is lapped 3 inches (76.2 mm) side and end.

Storage and Handling

All Siplast roll roofing products should be stored on end on a clean, flat surface. Rolls should not be dropped on ends or edges or stored in a leaning position. Deformation resulting from these actions will make proper installation difficult. All roofing products should be stored in a dry place out of direct exposure to the elements and should not be double stacked. Material should be handled so that it remains dry prior to and during installation.

See product packaging and the Safety Data Sheet for specific information on the safe handling of this product.

Packaging

Pallet: 41 in x 48 in (104 cm x 122 cm) wooden pallet
Rolls Per Pallet: 23
Pallets Per Truckload (Typical): 18
Minimum Roll Weight: 96 lb (43.5 kg)
Max Pallet Weight (Typical): 2335 lb (1059 kg)

Listings, Approvals, & Certifications

c UL us LISTED · FM APPROVED · MIAMI-DADE COUNTY APPROVED · ICC ES

Classified by UL in accordance with ANSI/UL 790. Refer to UL Product iQ for specific assemblies.
FM Approved - Refer to RoofNav.com for specific assemblies.
Meets or Exceeds CSA A123.23.

Current copies of all Siplast Commercial Product Data Sheets & Safety Data Sheets are posted on our website at www.siplast.com
Rev Date 03/2024

PARADIENE® 20 EG TG

Physical and Mechanical Properties

siplast® With you every step of the way

U.S. TEST STANDARDS

Property (as Manufactured)		Values / Units	Test Method
Thickness (minimum)		134 mils (3.4 mm)	ASTM D5147 Section 6
Thickness (average)		138 mils (3.5 mm)	ASTM D5147 Section 6
*Peak Load	@ 73.4°F (23°C) (average)	80 lbf/inch (14.1 kN/m)	ASTM D5147 Section 7
	@ 0°F (-18°C) (average)	150 lbf/inch (26.5 kN/m)	
*Elongation @ Peak Load	@ 73.4°F (23°C) (average)	5%	ASTM D5147 Section 7
	@ 0°F (-18°C) (average)	4%	
*Ultimate Elongation @ 73.4°F (23°C) (average)		100%	ASTM D5147 Section 7
*Tear Strength (average)		120 lbf (0.54 kN)	ASTM D5147 Section 8
Water Absorption (maximum)		1%	ASTM D5147 Section 10
Dimensional Stability (maximum)		0.5%	ASTM D5147 Section 11
Low Temperature Flexibility (maximum)		-15°F (-26°C)	ASTM D5147 Section 12
Compound Stability (minimum)		250°F (121°C)	ASTM D5147 Section 16
Coating Thickness – Back Surface		≥40 mils (1 mm)	ASTM D5147 Section 17
Cyclic Fatigue		Paradiene 30 finish ply bonded to Paradiene 20 base ply, with an approved method of attachment, passes ASTM D5849 both as manufactured and after heat conditioning, according to ASTM D5147.	
		PRI VALIDATION PROGRAM — The above properties have been validated by PRI and are under continuous surveillance. The product has been validated to meet ASTM D6163-08, Type II, Grade S.	

CANADIAN TEST STANDARDS

Property (as Manufactured)		Units	CAS A123.23 Requirement	Test Method	Test Performance
Thickness (minimum)		mm (mils)	2.0 (80)	ASTM D5147	3.4 (134)
Selvage Thickness (minimum)		mm (mils)	2.0 (80)	ASTM D5147	2.5 (98)
Mass Per Unit Area (minimum)		kg/m^2 (lb/100 ft^2)	2.2 (45)	ASTM D5147	4.1 (84)
Back Surface Coating Thickness (minimum)		mm (mils)	1.0 (40)	ASTM D5147	1.0 (40)
*Strain Energy (Before After Heat Conditioning)	@ 23 ± 2°C (73.4 ± 3.6°F)	kN/m (lbf/in)	See Tested Value	CSA A123.23	>1.3 (>7.5)
	@ -18 ± 2°C (-4 ± 3.6°F)				>1.3 (>7.5)
*Peak Load (Before and After Heat Conditioning)	@ 23 ± 2°C (73.4 ± 3.6°F)	kN/m (lbf/in)	5.3 (30)	ASTM D5147	>17 (>97)
	@ -18 ± 2°C (-4 ± 3.6°F)		12.3 (70)		>26.5 (>151)
*Elongation @ Peak Load (Before and After Heat Conditioning)	@ 23 ± 2°C (73.4 ± 3.6°F)	%	2	ASTM D5147	>9
	@ -18 ± 2°C (-4 ± 3.6°F)		1		>6
*Ultimate Elongation (Before and After Heat Conditioning), @ 23 ± 2°C (73.4 ± 3.6°F)		%	3	ASTM D5147	>55
Dimensional Stability (maximum)		%	0.5	ASTM D5147	0.5
Low Temperature Flexibility (maximum)		°C (°F)	-18 (-0.4)	ASTM D5147	-26 (-15)
Low Temperature Weathered Flexibility (maximum)		°C (°F)	N/A	ASTM D5147	N/A
Compound Stability (minimum)		°C (°F)	91 (195)	ASTM D5147	91 (195)
Resistance to Puncture		g (oz)	N/A	ASTM D5147	N/A
Granule Loss		N/A	N/A	CSA A123.23	N/A

Data is based upon typical product performance and is subject to normal manufacturing and packaging tolerance and variation.

*The value reported is the lower of either MD or XD.

Siplast 14911 Quorum Dr., Suite 600 Dallas, TX 75254

201 Bewicke Ave., Suite 208 North Vancouver, BC, Canada V7M 3M7

Customer Service in North America 1.800.922.8800 www.siplast.com

PARADIENE® 30 FR TG

Commercial Product Data Sheet

Paradiene 30 FR TG is the modified bitumen finish ply of the Siplast Paradiene 20/30 FR TG System. Designed for use in homogeneous multi-layer modified bitumen roof membrane systems, Paradiene 30 FR TG consists of a lightweight random fibrous glass mat impregnated and coated with high quality styrene-butadiene-styrene (SBS) modified bitumen and surfaced with ceramic granules. The back of the sheet is coated with a modified bitumen asphalt layer specifically formulated for torch application, is embossed with a grooved pattern, and is surfaced with a polyolefin burn-off film.

Contact Siplast for information on approved product uses.

USES:
FINISH PLY

Standards	ASTM D6163 Type I, Grade G; CSA A123.23-15 Type A, Grade 1
Roll Length	Min: 25.25 ft (7.70 m)
Roll Width	Avg: 39.4 in (1.0 m)
Coverage	0.75 Square (75.8 ft²) (7.0 m²)
Coverage Weight Per Square	Min: 111 lb (5.4 kg/m²)
Selvage Width	Avg. 2.75 in (70 mm) Orange laying line is 3 in (76 mm) from the edge of the sheet.
Selvage Surfacing	Polyolefin Burn-off Film
Top Surfacing	No. 11 Ceramic Granules (Standard color finish is #A-720 White)
Back Surfacing	Polyolefin Burn-off Film
Product Options	RoofTag, Eco Activ Granules, Special Colors

PRODUCT INFORMATION

Application

Refer to the Siplast Technical Guide for detailed application information and slope limitations. Paradiene 30 FR TG is lapped 3 inches (76 mm) side and end.

Storage and Handling

All Siplast roll roofing products should be stored on end on a clean, flat surface. Rolls should not be dropped on ends or edges or stored in a leaning position. Deformation resulting from these actions will make proper installation difficult. All roofing products should be stored in a dry place out of direct exposure to the elements and should not be double stacked. Material should be handled so that it remains dry prior to and during installation.

See product packaging and the Safety Data Sheet for specific information on the safe handling of this product.

Packaging

Pallet: 41 in x 48 in (104 cm x 122 cm) wooden pallet
Rolls Per Pallet: 25
Pallets Per Truckload (Typical): 18
Minimum Roll Weight: 84 lb (38.1 kg)
Max Pallet Weight (Typical): 2475 lb (1123 kg)

Listings, Approvals, & Certifications

c UL us LISTED
FM APPROVED
MIAMI-DADE COUNTY APPROVED

Classified by UL in accordance with ANSI/UL 790. Refer to UL Product iQ for specific assemblies.
FM Approved - Refer to RoofNav.com for specific assemblies.
Meets or Exceeds CSA A123.23.

Current copies of all Siplast Commercial Product Data Sheets & Safety Data Sheets are posted on our website at www.siplast.com
Rev Date 03/2024

PARADIENE® 30 FR TG

Physical and Mechanical Properties

siplast® With you every step of the way

U.S. TEST STANDARDS

Property (as Manufactured)		Values / Units		Test Method
Thickness (average)		138 mils (3.5 mm)		ASTM D5147 Section 6
*Thickness at Selvage		118 mils (3.0 mm) avg.	114 mils (2.9 mm) min.	ASTM D5147 Section 6
**Peak Load	@ 73.4°F (23°C) (average)	30 lbf/inch (5.3 kN/m)		ASTM D5147 Section 7
	@ 0°F (-18°C) (average)	75 lbf/inch (13.2 kN/m)		
**Elongation @ Peak Load	@ 73.4°F (23°C) (average)	3%		ASTM D5147 Section 7
	@ 0°F (-18°C) (average)	3%		
**Ultimate Elongation @ 73.4°F (23°C) (average)		80%		ASTM D5147 Section 7
**Tear Strength (average)		40 lbf (0.18 kN)		ASTM D5147 Section 8
Water Absorption (maximum)		1%		ASTM D5147 Section 10
Dimensional Stability (maximum)		0.5%		ASTM D5147 Section 11
Low Temperature Flexibility (maximum)		-15°F (-26°C)		ASTM D5147 Section 12
Granule Embedment		1.5 grams per sample Max. avg. loss	2.0 grams per sample Max. individual loss	ASTM D5147 Section 15
Compound Stability (minimum)		250°F (121°C)		ASTM D5147 Section 16
Coating Thickness – Back Surface		≥40 mils (1 mm)		ASTM D5147 Section 17
Cyclic Fatigue		Paradiene 30 finish ply bonded to Paradiene 20 base ply, with an approved method of attachment, passes ASTM D5849 both as manufactured and after heat conditioning, according to ASTM D5147.		
		PRI VALIDATION PROGRAM	The above properties have been validated by PRI and are under continuous surveillance. The product has been validated to meet ASTM D6163-08, Type I, Grade G.	

CANADIAN TEST STANDARDS

Property (as Manufactured)		Units	CASA123.23 Requirement	Test Method	Test Performance
Thickness (minimum)		mm (mils)	2.4 (95)	ASTM D5147	3.3 (130)
*Selvage Thickness (minimum)		mm (mils)	2.0 (80)	ASTM D5147	2.4 (94)
Mass Per Unit Area (minimum)		kg/m² (lb/100 ft²)	3.2 (65)	ASTM D5147	4.8 (98)
Back Surface Coating Thickness (minimum)		mm (mils)	1.0 (40)	ASTM D5147	≥ 1.0 (≥ 40)
**Strain Energy (Before After Heat Conditioning)	@ 23 ± 2°C (73.4 ± 3.6°F)	kN/m (lbf/in)	See Tested Value	CSA A123.23	>0.5 (>2.9)
	@-18 ± 2°C (-0.4 ± 3.6°F)				>0.5 (>2.9)
**Peak Load (Before and After Heat Conditioning)	@ 23 ± 2°C (73.4 ± 3.6°F)	kN/m (lbf/in)	5.3 (30)	ASTM D5147	>6.6 (>38)
	@-18 ± 2°C (-0.4 ± 3.6°F)		12.3 (70)		>13 (>74)
**Elongation @ Peak Load (Before and After Heat Conditioning)	@ 23 ± 2°C (73.4 ± 3.6°F)	%	2	ASTM D5147	>3
	@-18 ± 2°C (-0.4 ± 3.6°F)		1		>4
**Ultimate Elongation (Before and After Heat Conditioning), @ 23 ± 2°C (73.4 ± 3.6°F)		%	3	ASTM D5147	>25
Dimensional Stability (maximum)		%	0.5	ASTM D5147	0.5
Low Temperature Flexibility (maximum)		°C (°F)	-18 (-0.4)	ASTM D5147	-26 (-15)
Low Temperature Weathered Flexibility (maximum)		°C (°F)	-12 (10)	ASTM D5147	-12 (10)
Compound Stability (minimum)		°C (°F)	91 (195)	ASTM D5147	91 (195)
Resistance to Puncture		N/A	N/A	CSA A123.23	N/A
Granule Loss		g (oz)	2.0 (0.07)	ASTM D5147	<2.0 (<0.07)

Data is based upon typical product performance and is subject to normal manufacturing and packaging tolerance and variation.
*Measured on the selvage edge excluding the granule surfacing.
**The value reported is the lower of either MD or XD.

Siplast 14911 Quorum Dr., Suite 600 Dallas, TX 75254
201 Bewicke Ave., Suite 208 North Vancouver, BC, Canada V7M 3M7
Customer Service in North America 1.800.922.8800 www.siplast.com

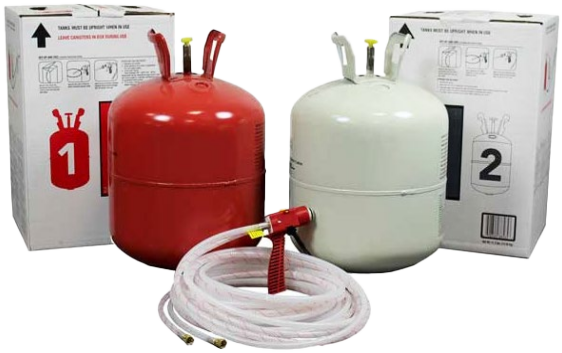
Siplast 14911 Quorum Dr., Suite 600
Dallas, TX 75254

201 Bewicke Ave., Suite 208
North Vancouver, BC, Canada V7M 3M7

Customer Service in North America
1.800.922.8800 www.siplast.com

PARAFAST® ADHESIVE T CANISTER

Commercial Product Data Sheet



The Parafast Adhesive T Canister is a quick curing, two-component, bead-applied polyurethane adhesive used to adhere approved rigid insulation panels and fleeceback thermoplastic membranes to substrates approved in advance by Siplast.

Contact Siplast for information on approved product uses.

USES:
INSULATION ADHESIVE
ROOF MEMBRANE ADHESIVE

Shelf Life	18 months
Temperature Limitations at Point of Application	Recommended Product Temperature: 70°F (32°C) Ambient & Substrate Temperature Range: 40°F – 100°F (4°C – 38°C)

PRODUCT INFORMATION

Application

Refer to the Siplast Para-Stik Insulation Adhesive & Parafast Adhesive Installers Guide for detailed application and yield/coverage information.

Storage and Handling

All Siplast adhesive products should be stored in a cool, dry location at temperatures between 55°F (13°C) and 85°F (30°C). Care should be taken that containers are not dropped and container seals are not broken prior to use. All roofing products should be stored in a dry place out of direct exposure to the elements and kept away from excessive heat, fire or open flames.

See product packaging and the Safety Data Sheet for specific information on the safe handling of this product.

Packaging

Pallet: 44 in x 48 in (112 cm x 122 cm) wooden pallet
Weight For Part 1 (Diisocyanate): 48 lb (21.8 kg)
Weight For Part 2 (Resin): 44 lb (19.6 kg); includes Disposable Hose/Gun Assembly & Related Parts

Units Per Pallet (Parts 1 and/or 2): 32

Listings, Approvals, & Certifications

c UL us LISTED

FM APPROVED

Siplast 14911 Quorum Dr., Suite 600 Dallas, TX 75254
201 Bewicke Ave., Suite 208 North Vancouver, BC, Canada V7M 3M7
Customer Service in North America 1.800.922.8800 www.siplast.com

SAFETY DATA SHEET

Rev. September 14 2022

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Parafast Adhesive T Canister, Part 1

Supplier: Siplast, Inc.
14911 Quorum Drive, Ste. 600
Dallas, TX 75254 USA
Phone: 1-800-922-8800
www.Siplast.com

24-hour Emergency Response Number:
Chemtrec: USA 800-424-9300
International 800-527-3887

Product Use(s): One component of a two-component polyurethane system

2. HAZARDS IDENTIFICATION

Classifications: Acute Toxicity, Inhalation: Hazard Category 4
Respiratory Sensitization: Hazard Category 1
Skin Sensitization: Hazard Category 1
Skin Irritation: Hazard Category 2
Eye Irritation: Hazard Category 2A
Specific Target Organ Toxicity, Single Exposure: Hazard Category 3
Specific Target Organ Toxicity, Repeated Exposure: Hazard Category 2
Gases Under Pressure: Compressed Gas
Physical Hazards Not Otherwise Classified: None
Health Hazards Not Otherwise Classified: None

Symbols: Health Hazard
Exclamation Point
Gas Cylinder

Signal Word: Danger

Hazard Statements: May be harmful if inhaled, and may cause allergy or asthma symptoms, breathing difficulties, and/or respiratory irritation.
May cause an allergic skin reaction.
May cause skin irritation and serious eye irritation.
May cause damage to the respiratory system and/or skin through prolonged or repeated exposure.
Contains gas under pressure; may explode if heated.

Precautionary Statements: Do not breathe mist, spray, or vapors.
Use only outdoors or in a well-ventilated area.
In case of inadequate ventilation wear proper respiratory protection.
Wear protective gloves and eye/face protection.
Wash hands and forearms thoroughly after handling.
Get medical advice/attention if you feel unwell.
Protect from sunlight. Store in a well-ventilated place.

IF INHALED: If breathing is difficult, remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms or if you feel unwell, call a doctor or Poison Control Center.

2. HAZARDS IDENTIFICATION (continued)

Precautionary Statements: (continued)

IF ON SKIN: Wash with plenty of water. Take off contaminated clothing and wash before reuse. Contaminated work clothing must not be allowed out of the workplace. If skin irritation or rash occurs, get medical advice/attention.

IF IN EYES: Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice/attention.

Store locked up in a well-ventilated place. Keep container tightly closed.
Dispose of contents/container in accordance with applicable regulations.
The acute toxicities of >50% of the product's ingredients are unknown.

EMERGENCY OVERVIEW

Overexposure to components of this product by inhalation may cause respiratory irritation, asthma-like symptoms, and/or respiratory sensitization.

Skin contact may cause irritation and/or allergy-like symptoms, and eye contact may cause severe irritation. Avoid skin and eye contact, using proper personal protective equipment as needed. See Section #7 for recommendations on proper handling and work practices, and Section #8 for recommendations on personal protective equipment.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient	CAS Number	Percentage	Impurities
4,4'-Methylenediphenyl Diisocyanate	101-68-8	25-50	None known
Diphenylmethane Diisocyanate, Isomers and Homologues	9016-87-9	>50	None known
1,1,1,2-Tetrafluoroethane	811-97-2	10-25	None known

4. FIRST AID MEASURES

Eyes: Hold eyes open and flush with lukewarm water for at least 15 minutes. Seek immediate medical assistance.

Skin: Remove contaminated clothing. Wash affected areas with soap and water for at least five minutes. If irritation persists or a rash occurs, seek medical attention. Launder or dry-clean clothing before reuse.

Ingestion: DO NOT induce vomiting. If the subject is conscious, wash mouth and give 2 or more cups of milk or water. Seek immediate medical assistance. Do not attempt to give anything by mouth to an unconscious or convulsive person.

Inhalation: If signs and symptoms of respiratory toxicity are observed, remove subject from area and seek immediate medical attention. Keep the subject warm and at rest. If necessary, administer oxygen or perform artificial respiration if necessary and qualified personnel are available to do so.

4. FIRST AID MEASURES (continued)

Guidance for Physician or Poison Control Center:	Inhalation exposure can irritate the respiratory tract and induce respiratory sensitization. Treatment of acute irritation and bronchial constriction should be done according to symptoms. Eye contact can cause moderate to severe irritation. Skin contact can cause moderate irritation, and may elicit an allergic response among susceptible individuals. Treat eye and skin irritation or injury according to symptoms. Extended medical treatment may be necessary for individuals exhibiting respiratory sensitization and/or skin disorders.

5. FIREFIGHTING MEASURES

Extinguishing Media:	Water spray, carbon dioxide, dry chemical or chemical foam. DO NOT use water jet.
Fire and Explosion Hazards:	The container may burst if exposed to elevated temperatures, spilling the contents. If present in a fire or explosion, potential decomposition byproducts include carbon monoxide, oxides of nitrogen, isocyanates, and hydrogen cyanide.
Firefighting Instructions:	If fighting a fire in which this product is present, wear a self-contained breathing apparatus with full-face piece operated in pressure-demand or other positive pressure mode.

6. ACCIDENTAL RELEASE MEASURES

Methods and Materials:	Absorb spilled material with a sorbent such as sawdust or calcium silicate hydrate. When absorbed, transfer to an impervious container. Neutralize with solution of 8-10% sodium carbonate and 2% liquid detergent in water (10:1 ratio of solution to product). Do not seal container, as CO_2 will be released. Neutralize in a well-ventilated area for at least 48 hours before sealing containers for disposal.
Personal Precautions:	Avoid contact with skin, eyes, and mucous membranes. Wear appropriate personal protective equipment (see Section #8) during cleanup and decontamination. Restrict unauthorized personnel during cleanup and disposal operations.
Environmental Precautions:	Prevent spills from entering sewers or contaminating soil.

7. HANDLING AND STORAGE

Handling Precautions:	Containers should be kept tightly closed to prevent contact with moisture and other chemicals. Do not reuse empty containers for any purpose. When handling the product, avoid contact with eyes, skin, and clothing, using protective equipment as needed. Do not use this product around children, and secure it away from children.

7. HANDLING AND STORAGE (continued)

Work and Hygiene Practices:	To prevent ingestion or contact following use of the product, wash hands and face before eating, drinking, applying cosmetics, or using tobacco. Remove contaminated clothing and protective equipment before entering eating/drinking areas.
Storage Precautions:	Keep containers tightly sealed during storage. Store in a dry, well-ventilated area away from sources of ignition and incompatible materials (see Section #10). Protect from heat and direct sunlight. Recommended temperature for storage is 55-85°F. (12.8-29.4°C.).

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Ingredients Exposure Limits:

Ingredient	OSHA PEL	ACGIH TLV
4,4'-Methylenediphenyl Diisocyanate	0.02 ppm "C"	0.005 ppm TWA
Diphenylmethane Diisocyanate, Isomers and Homologues	None	None
1,1,1,2-Tetrafluoroethane	None	None

Ingredients Biological Limits:

Ingredient	Biological Limit(s)
4,4'-Methylenediphenyl Diisocyanate	No ACGIH BEIs or other biological limits
Diphenylmethane Diisocyanate, Isomers and homologues	No ACGIH BEIs or other biological limits
1,1,1,2-Tetrafluoroethane	No ACGIH BEIs or other biological limits

Engineering Controls:	Use appropriate ventilation (dilution or local exhaust) whenever natural ventilation is restricted or inadequate to maintain concentrations of all components within their applicable standards.
Eye/Face Protection:	Wear eye protection adequate to prevent eye contact with the product. Plastic-frame spectacles with side shields, chemical goggles, or a face shield are recommended. Do not wear contact lenses when working with this product.
Skin Protection:	Wear protective gloves and clothing to prevent skin irritation or injury from contact with the product. Glove materials known to be effective against permeation by isocyanates include butyl rubber, nitrile rubber, and polychloroprene.
Respiratory Protection:	If an exposure level to a component exceeds an applicable standard, use a NIOSH-approved respirator of a class and configuration effective for protection from the component(s) generated. Where exposures exceed the OSHA *Permissible Exposure Limit* (*PEL*), an airline respirator or self-contained breathing apparatus (SCBA) is recommended. Consult OSHA regulations (29CFR1910.134) and/or American National Standard Z88.2 (ANSI, New York, NY 10036, USA) for guidance.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: cream-colored liquid
Odor: aromatic
Odor threshold: not determined
pH: not applicable
Melting point: not determined.
Freezing point: not determined
Boiling point: not determined
Boiling range: not applicable (aerosol)
Flash Point: not applicable (aerosol)
Autoignition Point: not determined
Flammability Class: not applicable (aerosol)
Lower Explosive Limit: not determined
Upper Explosive Limit: not determined
Vapor pressure: 5,716 hPa
Vapor density: not determined
Evaporation Rate: not determined
VOCs (per EPA Method 24): none
Relative density (H_2O): approx. 1.23
Solubility (H_2O): reactive
Oil-water partition coefficient: not determined
Decomposition temperature: not determined
Viscosity: not determined

10. STABILITY AND REACTIVITY

Stability:	Stable
Reactivity:	May react with water and incompatible materials
Hazardous Polymerization:	May occur at temperatures >392°F./200°C.
Risk of Dangerous Reactions:	None reasonably foreseeable
Incompatible Materials:	Water, alcohols, acids, alkalis, and amines
Potential Decomposition Byproducts:	Carbon monoxide, carbon dioxide, nitrogen oxides, isocyanates, and hydrogen cyanide

11. TOXICOLOGICAL INFORMATION

Ingredients Toxicology Data	LD_{50} Oral	LD_{50} Dermal	LC_{50}
4,4'-Methylenediphenyl Diisocyanate	>5,000 mg/kg (rat)	No data available	2.24 mg/l. for 1 hour (rat)
Diphenylmethane Diisocyanate, Isomers and Homologues	No data available	No data available	No data available
1,1,1,2-Tetrafluoroethane	No data available	No data available	>2,300 mg/l. (rat)

Primary Route(s) of Entry:	Inhalation; ingestion
Eye Hazards:	This product may cause moderate to severe eye irritation.
Skin Hazards:	This product may cause mild to moderate skin irritation and has the potential to cause skin sensitization among susceptible individuals.
Ingestion Hazards:	The product is nontoxic by ingestion, but ingestion may cause nausea, vomiting, and/or gastrointestinal irritation.
Inhalation Hazards:	Inhalation of toxicologically-significant quantities of ingredients is unlikely when the product is used in a well-ventilated area and in accordance with instructions.
Symptoms Related to Overexposure:	Inhalation overexposure to isocyanates may cause respiratory irritation, breathing difficulties, and asthma-like symptoms.

11. TOXICOLOGICAL INFORMATION (continued)

Delayed Effects from Long Term Overexposure:	Long-term inhalation overexposure to this product may result in respiratory sensitization, which may be irreversible.
Carcinogenicity:	A single inhalation study exposing rats to aerosolized polymeric 4,4'-Methylenediphenyl Diisocyanate identified a single malignant pulmonary tumor among sixty animals exposed at the highest exposure level. Observations of pulmonary fibrosis and other pathological anomalies in the test animals precluded definitive determination as to the cause(s) of the tumor. Epidemiological studies of humans occupationally exposed to the isocyanates in this product have found no strong association or consistent pattern with respect to carcinogenicity.
Germ Cell Mutagenicity:	No ingredients have been determined to be germ cell mutagens.
Reproductive Toxicity:	No ingredients have been determined to be damaging to fertility or to the unborn child.
Acute Toxicity Estimates:	LD_{50} (oral): no data available LD_{50} (dermal): no data available LC_{50}: no data available
Interactive Effects of Components:	No data available

12. ECOLOGICAL INFORMATION

4,4'-Methylene-diphenyl Diisocyanate	Aquatic Toxicity to Fish: LC_{50} >1,000 mg/l. for 96 h. (zebra fish) Aquatic Toxicity to Invertebrates: EC_{50} >1,000 mg/l. for 24 h. (daphnia) Aquatic Toxicity to Plants: EC_{50} >1,640 mg/l. for 72 h. (algae) Aquatic Toxicity to Microorganisms: EC_{50} >100 mg/l. for 3 h. (bacteria) Toxicity to Terrestrial Organisms: EC_{No} = 1,000 mg/kg for 14 d. (worms) No data available for Persistence and Degradability, Bioaccumulation Potential, or Mobility in Soil.
Diphenylmethane Diisocyanate, Isomers and homologues	No data available for Aquatic Toxicity to Fish, Invertebrates, Plants, or Microorganisms, Toxicity to Terrestrial Organisms, Persistence and Degradability, Bioaccumulation Potential, or Mobility in Soil.
1,1,1,2-Tetrafluoroethane	Aquatic Toxicity to Fish: LC_{50} = 450 mg/l. for 96 h. (rainbow trout) Aquatic Toxicity to Invertebrates: EC_{50} = 950 mg/l. for 48 h. (daphnia) Aquatic Toxicity to Plants: EC_{50} = 118 mg/l. for 72 h. (algae) No data available for Aquatic Toxicity to Microorganisms, Toxicity to Terrestrial Organisms, Persistence and Degradability, Bioaccumulation Potential, or Mobility in Soil.
Ozone Depletion Potential:	This product neither contains nor is manufactured with any ingredients known to deplete the ozone layer.

13. DISPOSAL CONSIDERATIONS

Do not discharge waste product into sanitary or storm sewers or allow it to contaminate soil. Empty containers should be decontaminated prior to disposal. Consult applicable Federal, State/Provincial, and local regulations.

14. TRANSPORTATION INFORMATION

Proper Shipping Name: Chemical Under Pressure, n.o.s.
(contains fluorinated hydrocarbon, nitrogen)
Identification Number: UN3500
Hazard Class: 2.2
Packing Group: not applicable

15. REGULATORY INFORMATION

United States Regulatory Information

TSCA Information:	All ingredients of this product are listed in the TSCA Registry.
SARA Hazard Classes:	Acute Health Hazard, Chronic Health Hazard, Reactivity Hazard
EPCRA Section 313 Notification:	This product contains these ingredients in concentrations ≥1% (for carcinogens ≥0.1%) regulated under Section 313 of the *Emergency Planning and Community Right-To-Know Act* of 1986 or 40 CFR 372: 1. 4,4'-Methylenediphenyl Diisocyanate (CASRN 101-68-8) 2. Diphenylmethane Diisocyanate, Isomers and Homologues (CASRN 9016-87-9)
CERCLA Information:	Under requirements of the *Comprehensive Environmental Response, Compensation, and Liability Act* (CERCLA), 4,4'-Methylene Bisphenyl Isocyanate (CASRN 101-68-8) has a *Reportable Quantity* of 5,000 lbs. Any spill or release above this *RQ* must be reported to the National Response Center (800-424-8802).

Canadian Regulatory Information

All ingredients in this product are listed in the Domestic Substances List (DSL) or the Nondomestic Substances List (NDSL).

This product has been classified in accordance with Canada's *Hazardous Products Regulations* (SOR/DORS/2015-15).

16. OTHER INFORMATION

	Health	Flammability	Physical Hazard	PPE
Hazardous Materials Information System (HMIS III) Ratings (Legend):	2* (moderate hazard, "*" indicating potential for chronic effects)	0 (minimal hazard)	1 (slight hazard)	See Note

16. OTHER INFORMATION (continued)

Note regarding PPE: Siplast, Inc. recommends use of protective eyewear and skin protection (Personal Protection Index "B") as standard PPE for the anticipated conditions of use of this product. However, HMIS recommends that its ratings be used only in conjunction with a fully implemented HMIS program, and that specific PPE codes should be created by the user, who is familiar with the actual conditions under which the product is used. We cannot anticipate every condition of the product's use, and it is the user's responsibility to evaluate the hazards pertinent to its specific operations, and to determine the specific PPE required.

National Fire Protection Association (NFPA) Ratings:	Health	Flammability	Reactivity
	2	0	1

Revision Information: Publication Date: September 14, 2022
Section(s) Revised: 9

DISCLAIMER

Our products and the information contained herein are supplied on the condition that the persons receiving same will make their own determination as to suitability for their purposes prior to use. In no event will Siplast be responsible for damages of any nature whatsoever resulting from the use of or reliance upon information from this sheet or the products to which the information refers. Siplast does not warrant the accuracy or timeliness of the information in this sheet and has no liability for any errors or omissions in these materials. **The information contained in this SDS was provided by a third party to Siplast.**

This sheet is provided on an "as is" basis. No representations or warranties, either express or implied, of fitness for a particular purpose or of any other nature are made hereunder with respect to the information provided or the products to which the information refers.

SAFETY DATA SHEET

Rev. September 14 2022

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Parafast Adhesive T Canister, Part 2

Supplier: Siplast, Inc.
14911 Quorum Drive, Ste. 600
Dallas, TX 75254 USA
Phone: 1-800-922-8800
www.Siplast.com

24-hour Emergency Response Number:
Chemtrec: USA 800-424-9300
International 800-527-3887

Product Use(s): One component of a two-component polyurethane system

2. HAZARDS IDENTIFICATION

Classifications: Eye Irritation: Hazard Category 2B
Specific Target Organ Toxicity, Repeated Exposure: Hazard Category 2
Gases Under Pressure: Compressed Gas
Physical Hazards Not Otherwise Classified: None
Health Hazards Not Otherwise Classified: None

Symbols: Health Hazard
Gas Cylinder

Signal Word: Warning

Hazard Statements: Causes eye irritation.
May cause damage to the kidneys and/or gastrointestinal system through prolonged or repeated exposure.
Contains gas under pressure; may explode if heated.

Precautionary Statements: Do not breathe mist, spray, or vapors.
Wash hands and forearms thoroughly after handling.
Get medical advice/attention if you feel unwell.
Protect from sunlight. Store in a well-ventilated place.

IF IN EYES: Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice/attention.

Dispose of contents/container in accordance with applicable regulations.

EMERGENCY OVERVIEW

Eye contact with this product may cause irritation. Chronic ingestion may damage the kidneys and/or gastrointestinal system. There are no known serious health effects from inhalation or skin contact. See Section #7 for recommendations on proper handling and work practices, and Section #8 for recommendations on personal protective equipment.

This product is formulated to be mixed with another component (Parafast Adhesive T Canister, Part 1) that, if handled improperly, may cause potentially serious health effects such as respiratory irritation, asthma-like symptoms, and/or respiratory sensitization. Do not handle or mix the two components together until you have read and understood that information in the *Safety Data Sheets* for both components.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient	CAS Number	Percentage	Impurities
Diethylene Glycol	111-46-6	<15	None known
Dipropylene Glycol	25265-71-8	<15	None known
1,1,1,2-Tetrafluoroethane	811-97-2	10-15	None known

4. FIRST AID MEASURES

Eyes: Hold eyes open and flush with lukewarm water for at least 15 minutes. Seek immediate medical assistance.

Skin: Remove contaminated clothing. Wash affected areas with soap and water for at least five minutes. If irritation occurs or persists, seek medical attention. Launder or dry-clean clothing before reuse.

Ingestion: DO NOT induce vomiting. If the subject is conscious, wash mouth and give 2 or more cups of milk or water. Seek immediate medical assistance. Do not attempt to give anything by mouth to an unconscious or convulsive person.

Inhalation: If signs and symptoms of respiratory toxicity are observed, remove subject from area and seek immediate medical attention. Keep the subject warm and at rest. If necessary, administer oxygen or perform artificial respiration if necessary and qualified personnel are available to do so.

Guidance for Physician or Poison Control Center: None of the components of this product are acutely toxic by ingestion or inhalation. Eye contact can cause mild to moderate irritation. Skin contact can cause mild irritation. Ingestion is unlikely to occur in industrial use, but if ingestion occurs it may cause nausea, vomiting, and gastrointestinal irritation. Chronic ingestion can cause kidney injury.

5. FIREFIGHTING MEASURES

Extinguishing Media: Water spray, carbon dioxide, dry chemical or chemical foam. DO NOT use water jet.

Fire and Explosion Hazards: The container may burst if exposed to elevated temperatures, spilling the contents. This product may ignite if exposed to sources of ignition at temperatures above its flash point. If present in a fire or explosion, potential thermal decomposition byproducts include carbon monoxide, smoke, and irritant decomposition byproducts.

Firefighting Instructions: If fighting a fire in which this product is present, wear a self-contained breathing apparatus with full-face piece operated in pressure-demand or other positive pressure mode.

6. ACCIDENTAL RELEASE MEASURES

Methods and Materials: Absorb spilled material with a sorbent such as sawdust, vermiculite, or calcium silicate hydrate. When absorbed, transfer to an impervious container.

Personal Precautions: Avoid contact with skin, eyes, and mucous membranes. Wear appropriate personal protective equipment (see Section #8) during cleanup and decontamination.

Environmental Precautions: Prevent spills from entering sewers or contaminating soil.

7. HANDLING AND STORAGE

Handling Precautions: Containers should be kept tightly closed to prevent contact with moisture and other chemicals. Do not reuse empty containers for any purpose. When handling the product, avoid contact with eyes, skin, and clothing, using protective equipment as needed. Do not use this product around children and secure it away from children.

Work and Hygiene Practices: To prevent ingestion or contact following use of the product, wash hands and face before eating, drinking, applying cosmetics, or using tobacco. Remove contaminated clothing and protective equipment before entering eating/drinking areas.

Storage Precautions: Store containers tightly sealed in a dry, well-ventilated, area away from incompatible materials (see Section #10). Recommended temperature range for storage is 55-85°F. (12.8-29.4°C.).

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Ingredients Exposure Limits:

Ingredient	OSHA PEL	ACGIH TLV
Diethylene Glycol	None	None
Dipropylene Glycol	None	None
1,1,1,2-Tetrafluoroethane	None	None

Ingredients Biological Limits:

Ingredient	Biological Limit(s)
Diethylene Glycol	No ACGIH BEIs or other biological limits
Dipropylene Glycol	No ACGIH BEIs or other biological limits
1,1,1,2-Tetrafluoroethane	No ACGIH BEIs or other biological limits

Engineering Controls: Use appropriate ventilation (dilution or local exhaust) whenever this product is used in conjunction with Parafast Adhesive T Canister, Part 1 in conditions where natural ventilation is restricted.

Eye/Face Protection: Wear eye protection adequate to prevent eye contact with the product. Plastic-frame spectacles with side shields, chemical goggles, or a face shield are recommended. Do not wear contact lenses when working with this product.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION (continued)

Skin Protection:	Wear protective gloves and clothing to prevent skin irritation or injury from contact with the product. Glove materials known to be effective against permeation by this product include butyl rubber, nitrile rubber, and polyvinyl alcohol.
Respiratory Protection:	If an exposure level to a component exceeds an applicable standard, use a NIOSH-approved respirator of a class and configuration effective for protection from the component(s) generated. Consult OSHA regulations (29CFR1910.134) and/or American National Standard Z88.2 (ANSI, New York, NY 10036, USA) for guidance.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: red viscous liquid
Odor: mildly sweet
Odor threshold: not determined
pH: not determined
Melting point: not determined
Freezing point: not determined
Boiling point: not determined
Boiling range: not applicable (aerosol)
Flash Point: not applicable (aerosol)
Autoignition Point: not determined
Flammability Class: not applicable (aerosol)

Lower Explosive Limit: not determined
Upper Explosive Limit: not determined
Vapor pressure: >200 psi
Vapor density: not determined
Evaporation Rate: not determined
VOCs: not determined
Relative density (H_2O): approx. 1.03
Solubility (H_2O): partial
Oil-water partition coefficient: not determined
Decomposition temperature: not determined
Viscosity: not determined

10. STABILITY AND REACTIVITY

Stability:	Stable
Reactivity:	Polymerizes with isocyanate-containing substances
Hazardous Polymerization:	Will not occur
Risk of Dangerous Reactions:	None reasonably foreseeable
Incompatible Materials:	Oxidizing agents
Potential Decomposition Byproducts:	Carbon monoxide, carbon dioxide, smoke, and irritant decomposition byproducts

11. TOXICOLOGICAL INFORMATION

Ingredients Toxicology Data	LD_{50} Oral	LD_{50} Dermal	LC_{50}
Diethylene Glycol	14,850 mg/kg (rat)	11,890 mg/kg (hamster)	No data available
Dipropylene Glycol	12,565 mg/kg (rat)	>20,000 mg/kg (rabbit)	No data available
1,1,1,2-Tetrafluoroethane	No data available	No data available	>2,300 mg/l. (rat)

Primary Route(s) of Entry: Inhalation; ingestion

11. TOXICOLOGICAL INFORMATION (continued)

Eye Hazards:	This product may cause mild to moderate eye irritation.
Skin Hazards:	This product may cause mild skin irritation. Irritation may be more pronounced on abraded skin.
Ingestion Hazards:	The product is nontoxic by ingestion, but ingestion may cause nausea, vomiting, and/or gastrointestinal irritation.
Inhalation Hazards:	Inhalation of toxicologically-significant quantities of ingredients is unlikely when the product is used in a well-ventilated area and in accordance with instructions.
Symptoms Related to Overexposure:	Inhalation overexposure may cause respiratory irritation.
Delayed Effects from Long Term Overexposure:	Long-term chronic ingestion may damage the kidneys and the gastrointestinal system.
Carcinogenicity:	No ingredients are classified as potential or confirmed human carcinogens by OSHA, NTP, or IARC.
Germ Cell Mutagenicity:	No ingredients have been determined to be germ cell mutagens.
Reproductive Toxicity:	No ingredients have been determined to be damaging to fertility or to the unborn child.
Acute Toxicity Estimates:	LD_{50} (oral): >10,000 mg/kg LD_{50} (dermal): >10,000 mg/kg LC_{50}: no data available
Interactive Effects of Components:	No data available

12. ECOLOGICAL INFORMATION

Diethylene Glycol	No data available for Aquatic Toxicity to Fish, Invertebrates, Plants, or Microorganisms, Toxicity to Terrestrial Organisms, Persistence and Degradability, Bioaccumulation Potential, or Mobility in Soil.
Dipropylene Glycol	No data available for Aquatic Toxicity to Fish, Invertebrates, Plants, or Microorganisms, Toxicity to Terrestrial Organisms, Persistence and Degradability, Bioaccumulation Potential, or Mobility in Soil.
1,1,1,2-Tetrafluoroethane	Aquatic Toxicity to Fish: LC_{50} = 450 mg/l. for 96 h. (rainbow trout) Aquatic Toxicity to Invertebrates: EC_{50} = 950 mg/l. for 48 h. (daphnia) Aquatic Toxicity to Plants: EC_{50} = 118 mg/l. for 72 h. (algae) No data available for Aquatic Toxicity to Microorganisms, Toxicity to Terrestrial Organisms, Persistence and Degradability, Bioaccumulation Potential, or Mobility in Soil.
Ozone Depletion Potential:	This product neither contains nor is manufactured with any ingredients known to deplete the ozone layer.

13. DISPOSAL CONSIDERATIONS

Do not discharge waste product into sanitary or storm sewers or allow it to contaminate soil. Empty containers should be decontaminated prior to disposal. Consult applicable Federal, State/Provincial, and local regulations.

14. TRANSPORTATION INFORMATION

Proper Shipping Name: Chemical Under Pressure, n.o.s.
(contains fluorinated hydrocarbon, nitrogen)
Identification Number: UN3500
Hazard Class: 2.2
Packing Group: not applicable

15. REGULATORY INFORMATION

United States Regulatory Information

TSCA Information:	All ingredients of this product are listed in the TSCA Registry.
SARA Hazard Classes:	Acute Health Hazard, Chronic Health Hazard
EPCRA Section 313 Notification:	This product contains no ingredients in concentrations ≥1% (≥0.1% for carcinogens) regulated under Section 313 of the *Emergency Planning and Community Right-To-Know Act* of 1986 or 40 CFR 372.

Canadian Regulatory Information

All ingredients in this product are listed in the Domestic Substances List (DSL) or the Nondomestic Substances List (NDSL).

This product has been classified in accordance with Canada's *Hazardous Products Regulations* (SOR/DORS/2015-15).

16. OTHER INFORMATION

Hazardous Materials Information System (HMIS III) Ratings (Legend):	Health	Flammability	Physical Hazard	PPE
	1 (slight hazard)	1 (slight hazard)	0 (minimal hazard)	See Note

Note regarding PPE: Siplast, Inc. recommends use of protective eyewear and skin protection (Personal Protection Index "B") as standard PPE for the anticipated conditions of use of this product. However, HMIS recommends that its ratings be used only in conjunction with a fully implemented HMIS program, and that specific PPE codes should be created by the user, who is familiar with the actual conditions under which the product is used. We cannot anticipate every condition of the product's use, and it is the user's responsibility to evaluate the hazards pertinent to its specific operations, and to determine the specific PPE required.

16. OTHER INFORMATION (continued)

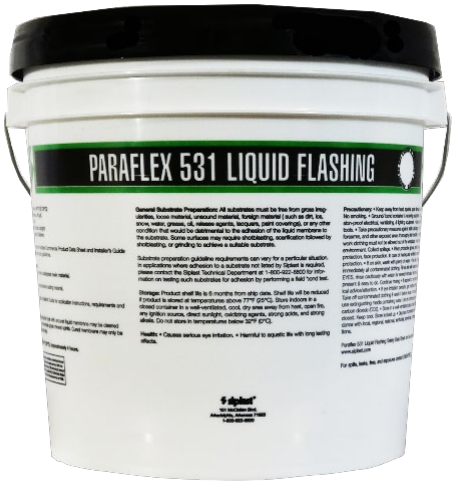
	Health	Flammability	Reactivity
National Fire Protection Association (NFPA) Ratings:	1	1	0

Revision Information: Publication Date: September 14, 2022

DISCLAIMER

Our products and the information contained herein are supplied on the condition that the persons receiving same will make their own determination as to suitability for their purposes prior to use. In no event will Siplast be responsible for damages of any nature whatsoever resulting from the use of or reliance upon information from this sheet or the products to which the information refers. Siplast does not warrant the accuracy or timeliness of the information in this sheet and has no liability for any errors or omissions in these materials. **The information contained in this SDS was provided by a third party to Siplast.**

This sheet is provided on an "as is" basis. No representations or warranties, either express or implied, of fitness for a particular purpose or of any other nature are made hereunder with respect to the information provided or the products to which the information refers.



PARAFLEX® 531 LIQUID FLASHING

Commercial Product Data Sheet

Paraflex 531 Liquid Flashing is a liquid-applied flexible membrane resin using silane-terminated polymer (STP) chemistry. Paraflex 531 Liquid Flashing is used in conjunction with Pro Fleece to field-construct Paraflex 531 Flashing Membrane.

Contact Siplast for specific information on approved product uses and substrates.

USES:
LIQUID-APPLIED FLASHING

Colors	Medium Gray White
Conditions at Time of Application*	**Ambient Temperature:** Minimum 55ºF (13ºC) **Substrate Temperature:** Minimum 40ºF (5ºC)
Typical Set/Cure Time at 70°F (21°C) 50% RH	**Dry to Touch:** 30 minutes **Rainproof:** 90 minutes **Stress Resistant:** 6 hours **Full Cure:** 72 hours
VOC Content	< 25 g/L

*Do not apply if substrate temperature is within 5ºF (-15ºC) of the dew point.

PRODUCT INFORMATION

Application

Refer to applicable Siplast Technical or Installers Guide for detailed application information, including application/coverage rates.

Storage and Handling

Store indoors in the factory-sealed container in a dry area having an ambient temperature between 40°F and 90°F (5°C to 32°C). Ensure that the lid is well secured/sealed to prevent moisture intrusion. A skin may form on the top surface of the product in previously opened pails. If a skin is present, peel from the surface, set aside, and allow to fully cure and dispose of properly. A milky, liquid component may rise to the surface of pail during storage. Mix liquid components thoroughly before use. Shelf life is 6 months if stored under the conditions noted above. Storage under higher temperature conditions may reduce shelf life.

See product packaging and the Safety Data Sheet for specific information on the safe handling of this product.

Packaging

Packaging: 2 gallon resealable plastic pails
Units Per Pallet: 80

Listings, Approvals, & Certifications

c UL us LISTED

Current copies of all Siplast Commercial Product Data Sheets & Safety Data Sheets are posted on our website at www.siplast.com
Rev Date 3/2023

PARAFLEX® 531 LIQUID FLASHING

Physical and Mechanical Properties

siplast® With you every step of the way

PHYSICAL AND MECHANICAL PROPERTIES

Property (as installed)	Values/Units	Test Method
Membrane Thickness	90 mils (2.3 mm)	ASTM D5147 Section 6
Peak Load @73°F	55 lbf/in	ASTM D412 Section 7
Elongation @ Peak Load	35%	ASTM D412 Section 7
Shore A Hardness	80	ASTM D2240
Low Temperature Flexibility	(-40°F [-40°C])	ASTM D5147 Section 12
Dimensional Stability (maximum movement)	0.15%	ASTM D5147 Section 11
Tear Strength	60 lbf	ASTM D5147 Section 8
Water Vapor Transmission	0.47 perms	ASTM E96
Values in this table are based on testing/evaluation of 90-mil (2.3 mm) Paraflex 531 Liquid Flashing reinforced with Pro Fleece.		

Siplast 14911 Quorum Dr., Suite 600 Dallas, TX 75254

201 Bewicke Ave., Suite 208 North Vancouver, BC, Canada V7M 3M7

Customer Service in North America 1.800.922.8800 www.siplast.com

PARAFLEX LIQUID MEMBRANE
PARAFLEX 531 LIQUID FLASHING

SECTION1: IDENTIFICATION

1.1. Product Identifier

Product Name: Paraflex Liquid Membrane and Paraflex 531 Liquid Flashing

1.2. Intended Use of the Product

Use of the substance/mixture: Coating

1.3. Name, Address, and Telephone of the Responsible Party

Company

Siplast, Inc.
14911 Quorum Drive, Ste. 600
Dallas, TX 75254
T 800-922-8800

Emergency Number: CHEMTREC [DAY OR NIGHT] 1-800-424-9300, Outside USA and Canada: 1-703-741-5970

SECTION 2: HAZARDS IDENTIFICATION

Physical Hazards Not classified.
Health Hazards Not classified.
Environmental Hazards Not Classified.

OSHA Defined Hazards
Label Elements None.
Hazard Symbol
Signal Word None.
Hazard Statement None.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substance

Not applicable

3.2. Mixture

Name	Product Identifier	%	GHS-US Classification
Proprietary prepolymer	(CAS No) Proprietary	15 - 50	Flam. Liq. 4, H227
Limestone	(CAS No) 1317-65-3	10 - 35	Not classified
Titanium dioxide	(CAS No) 13463-67-7	1 - 35	Not classified
Zinc oxide	(CAS No) 1314-13-2	< 2.5	Aquatic Acute 1, H400 Aquatic Chronic 1,H410
Proprietary prepolymer 2	(CAS No) Proprietary	0.5 - 2	Flam. Liq.3,H226 Acute Tox. 4 (Inhalation:vapor), H332
Methyl alcohol	(CAS No) 67-56-1	< 1.1	Flam. Liq. 2, H225 Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation:vapor), H331 STOT SE 1, H370
UV Absorber	(CAS No) Proprietary	0.2 - 1	STOT RE 2, H373 Aquatic Chronic 4, H413
Proprietary adhesion promoter	(CAS No) Proprietary	0.2 - 1	Skin Irrit. 2, H315 Eye Dam. 1, H318
Silica, amorphous	(CAS No) 7631-86-9	0.05 - 1	Not classified

Name	Product Identifier	%	GHS-US classification
Proprietary silane	(CAS No) Proprietary	< 0.15	Flam. Liq.3,H226 SkinIrrit.2,H315
Quartz	(CAS No) 14808-60-7	0.02 - 0.13	Carc. 1A, H350 STOT SE 3, H335 STOT RE 1, H372
Proprietary catalyst	(CAS No) Proprietary	0.02 - 0.09	Acute Tox. 3 (Oral), H301 Skin Corr. 1C, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 Muta. 2, H341 Repr. 1B, H360 STOT SE 1, H370 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

Full text of H-phrases: see section 16

The specific chemical identity and/or exact percentage of composition has been withheld as a trade secret within the meaning of the OSHA Hazard Communication Standard [29 CFR 1910.1200]. In the event of an emergency, chemical identities and exact percentages of the proprietary ingredients may need to be disclosed to emergency personnel upon request.

SECTION 4: FIRST AID MEASURES

4.1. Description of First Aid Measures

First-aid Measures General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid Measures After Inhalation: When symptoms occur: go into open air and ventilate suspected area. Obtain medical attention if breathing difficulty persists.

First-aid Measures After Skin Contact: Remove contaminated clothing. Drench affected area with water for at least 15 minutes. Obtain medical attention if irritation develops or persists.

First-aid Measures After Eye Contact: Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention.

First-aid Measures After Ingestion: Rinse mouth. Do NOT induce vomiting. Obtain medical attention.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/Injuries: Causes serious eye irritation. May cause damage to organs (liver, kidney) through prolonged or repeated exposure (oral).0

Symptoms/Injuries After Inhalation: Prolonged exposure may cause irritation.

Symptoms/Injuries After Skin Contact: Prolonged exposure may cause skin irritation.

Symptoms/Injuries After Eye Contact: Causes serious eye irritation. Contact causes severe irritation with redness and swelling of the conjunctiva.

Symptoms/Injuries After Ingestion: Ingestion may cause adverse effects.

Chronic Symptoms: May cause damage to organs (kidney, liver) through prolonged or repeated exposure (oral).

4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed

If exposed or concerned, get medical advice and attention. If medical advice is needed, have product container or label at hand.

SECTION5:FIRE-FIGHTING MEASURES

5.1. Extinguishing Media

Suitable Extinguishing Media: Dry chemical powder, alcohol-resistant foam, carbon dioxide (CO_2). Water may be ineffective but water should be used to keep fire-exposed container cool.

Unsuitable Extinguishing Media: Do not use a heavy water stream. A heavy water stream may spread burning liquid.

5.2. Special Hazards Arising From the Substance or Mixture

Fire Hazard: Flammable liquid and vapor.

Explosion Hazard: May form flammable or explosive vapor-air mixture.

Reactivity: Reacts violently with strong oxidizers. Increased risk of fire or explosion.

5.3. Advice for Firefighters

Precautionary Measures Fire: Exercise caution when fighting any chemical fire.

Firefighting Instructions: Use water spray or fog for cooling exposed containers. Do not breathe fumes from fires or vapors from decomposition. In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.
Other Information: Do not allow run-off from firefighting to enter drains or water courses.

SECTION 6: ACCIDENTAL RELEASEMEASURES

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Avoid all contact with skin, eyes, or clothing. Avoid breathing (vapor, mist, spray). Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. Nonsmoking. Use special care to avoid static electric charges.

6.1.1. For Non-emergency Personnel

Protective Equipment: Use appropriate personal protection equipment(PPE).
Emergency Procedures: Evacuate unnecessary personnel. Stop leak if safe to do so.

6.1.2. For Emergency Responders

Protective Equipment: Equip cleanup crew with proper protection.
Emergency Procedures: Ventilate area. Eliminate ignition sources. Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit.

6.2. Environmental Precautions

Prevent entry to sewers and public waters. Avoid release to the environment. Collect spillage.

6.3. Methods and Material for Containment and Cleaning Up

For Containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. As an immediate precautionary measure, isolate spill or leak area in all directions.
Methods for Cleaning Up: Clean up spills immediately and dispose of waste safely. Absorb and/or contain spill with inert material. Transfer spilled material to a suitable container for disposal. Do not take up in combustible material such as: saw dust or cellulosic material. Use only non-sparking tools. Contact competent authorities after a spill.

6.4. Reference to Other Sections

See Heading 8. Exposure controls and personal protection. See Section 13, Disposal Considerations.

SECTION 7: HANDLING ANDSTORAGE

7.1. Precautions for Safe Handling

Additional Hazards When Processed: Handle empty containers with care because residual vapors are flammable.

Precautions for Safe Handling: Do not handle until all safety precautions have been read and understood. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Avoid contact with skin, eyes and clothing. Avoid breathing vapors, mist, and spray. Take precautionary measures against static discharge. Use only non-sparking tools.
Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures.

7.2. Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Comply with applicable regulations. Take action to prevent static discharges. Ground and bond container and receiving equipment. Use explosion-proof electrical, ventilating, and lighting equipment.
Storage Conditions: Keep container tightly closed. Store in a dry, cool and well-ventilated place. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials. Keep in fireproof place.
Incompatible Products: Strong acids, strong bases, strong oxidizers.

7.3. Specific End Use(s)

Coating

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control Parameters

For substances listed in section 3 that are not listed here, there are no established exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), AIHA (WEEL), NIOSH (REL), or OSHA (PEL).

Titanium dioxide (13463-67-7)		
USA ACGIH	ACGIH TWA (mg/m³)	10 mg/m³
USA ACGIH	ACGIH chemical category	Not Classifiable as a Human Carcinogen
USA IDLH	US IDLH (mg/m³)	5000 mg/m³
USA OSHA	OSHA PEL (TWA) (mg/m³)	15 mg/m³ (total dust)
Silica, amorphous (7631-86-9)		
USA NIOSH	NIOSH REL (TWA) (mg/m³)	6 mg/m³

USA IDLH	US IDLH (mg/m³)	3000 mg/m³
Zinc oxide (1314-13-2)		
USA ACGIH	ACGIH TWA (mg/m³)	2 mg/m³ (respirable fraction)
USA ACGIH	ACGIH STEL (mg/m³)	10 mg/m³ (respirable fraction)
USA NIOSH	NIOSH REL (TWA) (mg/m³)	5 mg/m³ (dust and fume)
USA NIOSH	NIOSH REL (STEL) (mg/m³)	10 mg/m³ (fume)
USA NIOSH	NIOSH REL (ceiling) (mg/m³)	15 mg/m³ (dust)
USA IDLH	US IDLH (mg/m³)	500 mg/m³
USA OSHA	OSHA PEL (TWA) (mg/m³)	5 mg/m³ (fume) 15 mg/m³ (total dust) 5 mg/m³ (respirable fraction)
Limestone (1317-65-3)		
USA NIOSH	NIOSH REL (TWA) (mg/m³)	10 mg/m³ (total dust) 5 mg/m³ (respirable dust)
USA OSHA	OSHA PEL (TWA) (mg/m³)	15 mg/m³ (total dust) 5 mg/m³ (respirable fraction)
Quartz (14808-60-7)		
USA ACGIH	ACGIH TWA (mg/m³)	0.025 mg/m³ (respirable fraction)
USA ACGIH	ACGIH chemical category	A2 - Suspected Human Carcinogen
USA NIOSH	NIOSH REL (TWA) (mg/m³)	0.05 mg/m³ (respirable dust)
USA IDLH	US IDLH (mg/m³)	50 mg/m³ (respirable dust)
USA OSHA	OSHA PEL (STEL) (mg/m³)	250 mppcf/%SiO2+5, 10mg/m³/%SiO2+2
Methyl alcohol (67-56-1)		
USA ACGIH	ACGIH TWA (ppm)	200 ppm
USA ACGIH	ACGIH STEL (ppm)	250 ppm
USA ACGIH	ACGIH chemical category	Skin- potential significant contribution to overall exposure by the cutaneous route
USA ACGIH	Biological Exposure Indices (BEI)	15 mg/l (Medium: urine - Time: end of shift - Parameter: Methanol (background, nonspecific)
USA NIOSH	NIOSH REL (TWA) (mg/m³)	260 mg/m³
USA NIOSH	NIOSH REL (TWA) (ppm)	200 ppm
USA NIOSH	NIOSH REL (STEL) (mg/m³)	325 mg/m³
USA NIOSH	NIOSH REL (STEL) (ppm)	250 ppm
USA IDLH	US IDLH (ppm)	6000 ppm
USA OSHA	OSHA PEL (TWA) (mg/m³)	260 mg/m³
USA OSHA	OSHA PEL (TWA) (ppm)	200 ppm

8.2. Exposure Controls

Appropriate Engineering Controls : Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Gas detectors should be used when flammable gases or vapors may be released. Proper grounding procedures to avoid static electricity should be followed. Use explosion-proof equipment. Ensure all national/local regulations are observed.

Personal Protective Equipment : Gloves. Protective clothing. Protective goggles.

Materials for Protective Clothing : Chemically resistant materials and fabrics. Wear fire/flame resistant/retardant clothing.

Hand Protection : Wear protective gloves.

Eye Protection : Chemical safety goggles.

Skin and Body Protection : Wear suitable protective clothing.

Respiratory Protection	: If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn. In case of inadequate ventilation, oxygen deficient atmosphere, or where exposure levels are not known wear approved respiratory protection.
Environmental Exposure Controls	: Avoid release to the environment.
Other Information	: When using, do not eat, drink or smoke.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on Basic Physical and Chemical Properties

Physical State	: Liquid
Appearance	: White viscous liquid
Odor	: No data available
Odor Threshold	: No data available
pH	: No data available
Evaporation Rate	: No data available
Melting Point	: No data available
Freezing Point	: No data available
Boiling Point	: No data available
Flash Point	: 55 °C (131 °F)
Auto-ignition Temperature	: No data available
Decomposition Temperature	: No data available
Flammability (solid, gas)	: No data available
Vapor Pressure	: No data available
Relative Vapor Density at 20 °C	: No data available
Relative Density	: No data available
Solubility	: No data available
Partition Coefficient: N-Octanol/Water	: No data available
Viscosity	: 3000 - 8000 cPs
Explosive Properties	: Risk of explosion if heated under confinement. Vapors may form explosive mixtures with air.
VOC Content	Less than 25 g/L

9.2. Other Information No additional information available

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity: Reacts violently with strong oxidizers. Increased risk of fire or explosion.

10.2. Chemical Stability: Flammable liquid and vapor. May form flammable or explosive vapor-air mixture.

10.3. Possibility of Hazardous Reactions: Hazardous polymerization will not occur.

10.4. Conditions to Avoid: Direct sunlight, extremely high or low temperatures, heat, hot surfaces, sparks, open flames, incompatible materials, and other ignition sources.

10.5. Incompatible Materials: Strong acids, strong bases, strong oxidizers.

10.6. Hazardous Decomposition Products: Thermal decomposition generates: Carbon oxides (CO, CO2). Nitrogen oxides. Metal oxides. Hydrolyzes in water to form methanol. Methanol is toxic and causes damage to the central nervous system and optic nerve. May decompose above 150 °C (>300° F) releasing formaldehyde vapors.

SECTION 11: TOXICOLOGICALINFORMATION

11.1. Information On Toxicological

Effects Acute Toxicity: Not classified

Proprietary prepolymer 2 (Proprietary)	
LD50 Oral Rat	7340 µl/kg
LC50 Inhalation Rat	11 mg/l/4h
UV Absorber (Proprietary)	

LD50 Oral Rat	> 2325 mg/kg
Titanium dioxide (13463-67-7)	
LD50 Oral Rat	> 10000 mg/kg
Silica, amorphous (7631-86-9)	
LD50 Oral Rat	> 5000 mg/kg
LD50 Dermal Rabbit	> 2000 mg/kg
LC50 Inhalation Rat	> 2.2 mg/l (Exposure time: 1 h)
Zinc oxide (1314-13-2)	
LD50 Oral Rat	> 5000 mg/kg
LD50 Dermal Rat	> 2000 mg/kg
Quartz (14808-60-7)	
LD50 Oral Rat	> 5000 mg/kg
LD50 Dermal Rat	> 5000 mg/kg
Methyl alcohol (67-56-1)	
LD50 Oral Rat	6200 mg/kg
LC50 Inhalation Rat	3 mg/l/4h
LC50 Inhalation Rat	22500 ppm (Exposure time: 8 h)
ATE (Oral)	100.00 mg/kg body weight
ATE (Dermal)	300.00 mg/kg body weight
Proprietary catalyst (Proprietary)	
LD50 Oral Rat	175 mg/kg
LD50 Dermal Rat	> 2000 mg/kg
LD50 Dermal Rabbit	630 mg/kg
LC50 Inhalation Rat	0.075 mg/l/4h

Skin Corrosion/Irritation: Not classified

Serious Eye Damage/Irritation: Causes serious eye irritation.

Respiratory or Skin Sensitization: Not classified

Germ Cell Mutagenicity: Not classified

Carcinogenicity: Not classified.

Titanium dioxide (13463-67-7)	
IARC group	2B
OSHA Hazard Communication Carcinogen List	In OSHA Hazard Communication Carcinogen list.
Silica, amorphous (7631-86-9)	
IARC group	3
Quartz (14808-60-7)	
IARC group	1
National Toxicology Program (NTP) Status	Known Human Carcinogens.
OSHA Hazard Communication Carcinogen List	In OSHA Hazard Communication Carcinogen list.

Reproductive Toxicity: Not classified

Specific Target Organ Toxicity (Single Exposure): Not classified.

Specific Target Organ Toxicity(Repeated Exposure): May cause damage to organs through prolonged or repeated exposure.

Aspiration Hazard: Not classified

Symptoms/Injuries After Inhalation: Prolonged exposure may cause irritation.

Symptoms/Injuries After Skin Contact: Prolonged exposure may cause skin irritation.

Symptoms/Injuries After Eye Contact: Causes serious eye irritation. Contact causes severe irritation with redness and swelling of the conjunctiva.

Symptoms/Injuries After Ingestion: Ingestion may cause adverse effects.

Chronic Symptoms: May cause damage to organs (kidney, liver) through prolonged or repeated exposure (oral).

SECTION12:ECOLOGICALINFORMATION

12.1. Toxicity

Ecology - General : Harmful to aquatic life. Harmful to aquatic life with long lasting effects.

Silica, amorphous (7631-86-9)	
LC50 Fish 1	5000 mg/l (Exposure time: 96 h - Species: Brachydanio rerio [static])
EC50 Daphnia 1	7600 mg/l (Exposure time: 48 h - Species: Ceriodaphnia dubia)

Zinc oxide (1314-13-2)	
LC50 Fish 1	780 µg/l (Exposure time: 96 h - Species: Pimephales promelas)
EC50 Daphnia 1	0.122 mg/l
NOEC chronic fish	0.026 mg/l (Species: Jordanella floridae)
Methyl alcohol (67-56-1)	
LC50 Fish 1	28200 mg/l (Exposure time: 96 h- Species: Pimephales promelas [flow-through])
EC50 Daphnia 1	1340 mg/l
LC 50 Fish 2	> 100 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
Proprietary catalyst (Proprietary)	
EC50 Daphnia 1	< 463 µg/l (Exposure time: 48 h - Species: Daphnia magna)

12.2. Persistence and Degradability

Enviroflex White	
Persistence and Degradability	May cause long-term adverse effects in the environment.

12.3. Bioaccumulative Potential

Enviroflex White	
Bioaccumulative Potential	Not established.
Silica, amorphous (7631-86-9)	
BCF fish 1	(no bioaccumulation expected)
Methyl alcohol (67-56-1)	
BCF fish 1	< 10
Log Pow	-0.77

12.4. Mobility in Soil No additional information available

12.5. Other Adverse Effects

Other Information: Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste Disposal Recommendations: Dispose of contents/container in accordance with local, regional, national, and international regulations.

Additional Information: Handle empty containers with care because residual vapors are flammable.

Ecology – Waste Materials: Avoid release to the environment. This material is hazardous to the aquatic environment. Keep out of sewers and waterways.

SECTION 14: TRANSPORT INFORMATION

This product does not sustain combustion in Test L.2 of Part III, Section 32 of the UN Recommendation on the Transportation of Dangerous Goods, Manual of Tests and Criteria, and is therefore not regulated as a flammable liquid for transportation.

14.1. In Accordance with DOT Not regulated for transport

14.2. In Accordance with IMDG Not regulated for transport

14.3. In Accordance with IATA Not regulated for transport

SECTION 15: REGULATORYINFORMATION

15.1 US Federal Regulations

Enviroflex White	
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Delayed (chronic) health hazard
Proprietary prepolymer 2 (Proprietary)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
UV Absorber (Proprietary)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Titanium dioxide (13463-67-7)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
SARA Section 311/312 Hazard Classes	Delayed (chronic) health hazard
Silica, amorphous (7631-86-9)	

Listed on the United States TSCA (Toxic Substances Control Act) inventory
Zinc oxide (1314-13-2)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Limestone (1317-65-3)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Quartz (14808-60-7)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Delayed (chronic) health hazard

Proprietary adhesion promoter (Proprietary)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Proprietary silane (Proprietary)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Methyl alcohol (67-56-1)
Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313

SARA Section 311/312 Hazard Classes	Delayed (chronic) health hazard Immediate (acute) health hazard Fire hazard
SARA Section 313 - Emission Reporting	1.0 %

Proprietary catalyst (Proprietary)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2 US State Regulations

Proprietary prepolymer (Proprietary)	
U.S. - California - Proposition 65 - Developmental Toxicity	WARNING: This product contains chemicals known to the State of California to cause birth defects.
U.S. - California - Proposition 65 - Reproductive Toxicity - Female	WARNING: This product contains chemicals known to the State of California to cause (Female) reproductive harm.
U.S. - California - Proposition 65 - Reproductive Toxicity - Male	WARNING: This product contains chemicals known to the State of California to cause (Male) reproductive harm.
Titanium dioxide (13463-67-7)	
U.S. - California - Proposition 65 - Carcinogens List	WARNING: This product contains chemicals known to the State of California to cause cancer.
Quartz (14808-60-7)	
U.S. - California - Proposition 65 - Carcinogens List	WARNING: This product contains chemicals known to the State of California to cause cancer.
Methyl alcohol (67-56-1)	
U.S. - California - Proposition 65 - Developmental Toxicity	WARNING: This product contains chemicals known to the State of California to cause birth defects.

Titanium dioxide (13463-67-7)
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List
Silica, amorphous (7631-86-9)
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List
Zinc oxide (1314-13-2)
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List U.S. - Pennsylvania - RTK (Right to Know) List
Limestone (1317-65-3)
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List

Quartz (14808-60-7)
U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List
Methyl alcohol (67-56-1)
U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List
U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LASTREVISION

Revision Date : 5/30/2018

Other Information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

GHS Full Text Phrases:

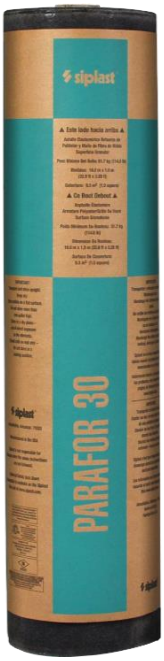
Acute Tox. 3 (Dermal)	Acute toxicity (dermal) Category 3
Acute Tox. 3 (Inhalation:vapor)	Acute toxicity (inhalation: vapor) Category 3
Acute Tox. 3 (Oral)	Acute toxicity (oral) Category 3
Acute Tox. 4 (Inhalation:vapor)	Acute toxicity (inhalation: vapor) Category 4
Aquatic Acute 1	Hazardous to the aquatic environment - Acute Hazard Category 1
Aquatic Acute 3	Hazardous to the aquatic environment - Acute Hazard Category 3
Aquatic Chronic 1	Hazardous to the aquatic environment - Chronic Hazard Category 1
Aquatic Chronic 3	Hazardous to the aquatic environment - Chronic Hazard Category 3
Aquatic Chronic 4	Hazardous to the aquatic environment - Chronic Hazard Category 4
Carc. 1A	Carcinogenicity Category 1A
Eye Dam. 1	Serious eye damage/eye irritation Category 1
Eye Irrit. 2A	Serious eye damage/eye irritation Category 2A
Flam. Liq. 2	Flammable liquids Category 2
Flam. Liq. 3	Flammable liquids Category 3
Flam. Liq. 4	Flammable liquids Category 4
Muta. 2	Germ cell mutagenicity Category 2
Repr. 1B	Reproductive toxicity Category 1B
Skin Corr. 1C	Skin corrosion/irritation Category 1C
Skin Irrit. 2	Skin corrosion/irritation Category 2
Skin Sens. 1	Skin sensitization Category 1
STOT RE 1	Specific target organ toxicity (repeated exposure) Category 1
STOT RE 2	Specific target organ toxicity (repeated exposure) Category 2
STOT SE 1	Specific target organ toxicity (single exposure) Category 1
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H227	Combustible liquid
H301	Toxic if swallowed
H311	Toxic in contact with skin
H314	Causes severe skin burns and eye damage
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H318	Causes serious eye damage
H319	Causes serious eye irritation
H331	Toxic if inhaled
H332	Harmful if inhaled
H335	May cause respiratory irritation
H341	Suspected of causing genetic defects
H350	May cause cancer

GHS Full Text Phrases (cont'd):

H360	May damage fertility or the unborn child
H370	Causes damage to organs
H372	Causes damage to organs through prolonged or repeated exposure
H373	May cause damage to organs through prolonged or repeated exposure
H400	Very toxic to aquatic life
H402	Harmful to aquatic life
H410	Very toxic to aquatic life with long lasting effects
H412	Harmful to aquatic life with long lasting effects
H413	May cause long lasting harmful effects to aquatic life

Disclaimer This information relates to the specific material designated and may not be valid for such material used on combination with any other materials or in any process. Such information is to the best of our knowledge and belief accurate and reliable as of the date compiled. However, no representation, warranty or guarantee, expressed or implied, is made as to its accuracy, reliability, or completeness. Siplast cannot anticipate all conditions under which this information and product, or the products of other manufacturers in combination with this product, may be used. It is the user's responsibility to satisfy himself as to the suitability and completeness of such information for his particular use. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release. We do not accept liability for any loss or damage that may occur from the use of this information. Nothing herein shall be construed as a recommendation for uses which infringe valid patents or as extending a license of valid patents.

Revision Information: Update Hazard and Precautionary Statements
Revision 4
10/20/2022



PARAFOR® 30

Commercial Product Data Sheet

Parafor 30 is the modified bitumen finish ply and flashing sheet. Designed for use in homogeneous multi-layer modified bitumen roof membrane systems, Parafor 30 consists of a fiberglass scrim/polyester mat composite impregnated and coated with high quality styrene-butadiene-styrene (SBS) modified bitumen and is surfaced with ceramic granules.

Contact Siplast for information on approved product uses.

USES:
FINISH PLY
FLASHING SHEET

Standards	ASTM D6162 Type I, Grade G; CSA A123.23-15 Type C, Grade 1
Roll Length	Min: 32.8 ft (10.0 m)
Roll Width	Avg: 39.4 in (1.0 m)
Coverage	1.0 Square (97.9 ft²) (9.1 m²)
Coverage Weight Per Square	Min: 116 lb (5.6 kg/m²)
Selvage Width	Avg. 2.75 in (70 mm) Blue laying line is 3 in (76.2 mm) from the edge of the sheet.
Selvage Surfacing	Mineral Parting Agent
Top Surfacing	No. 11 Ceramic Granules (Standard color finish is A-720 White)
Back Surfacing	Mineral Parting Agent
Product Options	RoofTag, Eco Activ Granules, Special Colors

PRODUCT INFORMATION

Application

Refer to the Siplast Technical Guide for detailed application information and slope limitations. Parafor 30 is lapped 3 inches 3 in (76.2 mm) at sides and 6 inches (152 mm) at ends.

Storage and Handling

All Siplast roll roofing products should be stored on end on a clean, flat surface. Rolls should not be dropped on ends or edges or stored in a leaning position. Deformation resulting from these actions will make proper installation difficult. All roofing products should be stored in a dry place out of direct exposure to the elements and should not be double stacked. Material should be handled so that it remains dry prior to and during installation.

See product packaging and the Safety Data Sheet for specific information on the safe handling of this product.

Packaging

Pallet: 41 in x 48 in (104 cm x 122 cm) wooden pallet
Rolls Per Pallet: 20
Pallets Per Truckload: 18
Minimum Roll Weight: 114 lb (51.7 kg)
Max Pallet Weight (Typical): 2440 lb (1106.8 kg)

Listings, Approvals, & Certifications

c UL us LISTED
FM APPROVED
MIAMI-DADE COUNTY APPROVED

Classified by UL in accordance with ANSI/UL 790. Refer to UL Product iQ for specific assemblies.
FM Approved - Refer to RoofNav.com for specific assemblies.
Meets or Exceeds CSA A123.23.

Current copies of all Siplast Commercial Product Data Sheets & Safety Data Sheets are posted on our website at www.siplast.com
Rev Date 7/2024

PARAFOR® 30
Physical and Mechanical Properties

siplast® With you every step of the way

U.S. TEST STANDARDS

Property (as Manufactured)		Values / Units		Test Method
Thickness (average)		165 mils (4.2 mm)		ASTM D5147 Section 6
Thickness at Selvage		122 mils (3.1 mm) avg.	118 mils (3.0 mm) min.	ASTM D5147 Section 6
*Peak Load	@ 73.4°F (23°C) (average)	80 lbf/inch (14.0 kN/m)		ASTM D5147 Section 7
	@ 0°F (-18°C) (average)	125 lbf/inch (21.9 kN/m)		
*Elongation @ Peak Load	@ 73.4°F (23°C) (average)	40%		ASTM D5147 Section 7
	@ 0°F (-18°C) (average)	40%		
*Ultimate Elongation @ 73.4°F (23°C) (average)		65%		ASTM D5147 Section 7
*Tear Strength (average)		100 lbf (0.45 kN)		ASTM D5147 Section 8
Water Absorption (maximum)		1%		ASTM D5147 Section 10
Dimensional Stability (maximum)		0.5%		ASTM D5147 Section 11
Low Temperature Flexibility (maximum)		-15°F (-26°C)		ASTM D5147 Section 12
Granule Embedment		1.5 grams per sample Max. avg. loss	2.0 grams per sample Max. individual loss	ASTM D5147 Section 15
Compound Stability (minimum)		250°F (121°C)		ASTM D5147 Section 16
Cyclic Fatigue		Parafor 30 bonded to Paradiene 20, with an approved method of attachment, passes ASTM D5849 both as manufactured and after heat conditioning according to ASTM D5147.		
		PRI VALIDATION PROGRAM	The above properties have been validated by PRI and are under continuous follow-up to ensure compliance. The product has been validated to meet ASTM D6162-08, Type II, Grade G.	

CANADIAN TEST STANDARDS

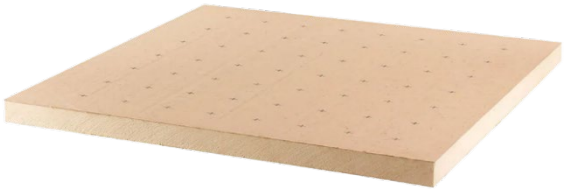
Property (as Manufactured)		Units	CSA A123.23 Requirement	Test Method	Test Performance
Thickness (minimum)		mm (mils)	2.8 (110)	ASTM D5147	4.0 (157)
Selvage Thickness (minimum)		mm (mils)	1.8 (70)	ASTM D5147	3.0 (118)
Mass Per Unit Area (minimum)		kg/m² (lb/100 ft²)	2.9 (60)	ASTM D5147	5.7 (116)
Back Surface Coating Thickness (minimum)		mm (mils)	1.0 (40)	ASTM D5147	1.0 (40)
*Strain Energy (Before After Heat Conditioning)	@ 23 ± 2°C (73.4 ± 3.6°F)	kN/m (lbf/in)	5.5 (31)	CSA A123.23	≥5.5 (≥31)
	@ -18 ± 2°C (-4 ± 3.6°F)		3.0 (17)		≥3.0 (≥17)
*Peak Load (Before and After Heat Conditioning)	@ 23 ± 2°C (73.4 ± 3.6°F)	kN/m (lbf/in)	See Tested Value	ASTM D5147	>13.5 (>77)
	@ -18 ± 2°C (-4 ± 3.6°F)				>21 (>120)
*Elongation @ Peak Load (Before and After Heat Conditioning)	@ 23 ± 2°C (73.4 ± 3.6°F)	%	See Tested Value	ASTM D5147	>39
	@ -18 ± 2°C (-4 ± 3.6°F)				>38
*Ultimate Elongation, (Before and After Heat Conditioning), @ 23 ± 2°C (73.4 ± 3.6°F)		%	See Tested Value	ASTM D5147	>90
Dimensional Stability (maximum)		%	0.5	ASTM D5147	0.5
Low Temperature Flexibility (maximum)		°C (°F)	-18 (-0.4)	ASTM D5147	-26 (-15)
Low Temperature Weathered Flexibility (maximum)		°C (°F)	-12 (10)	ASTM D5147	-12 (10)
Compound Stability (minimum)		°C (°F)	91 (195)	ASTM D5147	121 (250)
Resistance to Puncture		N/A	Pass	CSA A123.23	Pass
Granule Loss		g (oz)	2.0 (0.07)	ASTM D5147	1.5

Data is based upon typical product performance and is subject to normal manufacturing and packaging tolerance and variation.
Test methods and tolerances: ASTM D5147 and ASTM D146 (product weight only)
*The value reported is the lower of either MD or XD.

Siplast 14911 Quorum Dr., Suite 600 Dallas, TX 75254
201 Bewicke Ave., Suite 208 North Vancouver, BC, Canada V7M 3M7
Customer Service in North America 1.800.922.8800 www.siplast.com

PARATHERM® G & PARATHERM® W POLYISOCYANURATE

Commercial Product Data Sheet



Paratherm® G & Paratherm® W is a rigid roof insulation board comprised of a closed cell polyisocyanurate foam core bonded on each side to a fiber-reinforced organic felt facer.

Contact Siplast for information on approved product uses.

USES:
RIGID INSULATION

Standards	ASTM C1289 Type II Class 1, Grade 2 (20 psi) & Grade 3 (25 psi)
Panel Dimensions	4 ft x 8 ft (1.22 m x 2.43 m) 4 ft x 4 ft (1.22 m x 1.22m)
Thickness*	1 in – 4 in (2.54 cm - 10.16 cm)

* See separate data sheet for tapered panels.

PRODUCT INFORMATION

Application

Refer to the applicable Siplast Technical Guide for detailed application information.

For optimal thermal and roof system performance, Siplast recommends using multiple layers of polyisocyanurate with staggered joints.

Storage and Handling

Material should be carefully coordinated with the schedule for roofing operations to minimize job site storage time. Upon delivery, the factory packaging should be removed or slit on all four sides to allow for ventilation and to prevent the accumulation of condensation. Interior storage offering dry, well-ventilated conditions should be considered when the product is to be stored for more than 14 days prior to installation. When short-term job site storage is necessary, Paratherm should be stored flat on raised pallets or platforms at least 4 inches above the ground. Pallets should be stored on a finished surface rather than on dirt or grass to avoid upward transpiration of moisture. Pallets should be covered with a breathable, waterproof covering in all cases.

See product packaging and the Safety Data Sheet for specific information on the safe handling of this product.

Packaging

Factory packaging includes plastic wrap, plastic bag, or both.

Listings, Approvals, & Certifications

c UL us LISTED · FM APPROVED · GREENGUARD GOLD · PIMA QualityMark

Current copies of all Siplast Commercial Product Data Sheets & Safety Data Sheets are posted on our website at www.siplast.com
Rev Date 3/2023

PARATHERM® G & PARATHERM® W POLYISOCYANURATE

Physical and Mechanical Properties

siplast® With you every step of the way

Property (As Manufactured)	Value/Units	Test Method
Compressive Strength*	Grade 2 (20 psi), min. Grade 3 (25 psi), min.	ASTM D1621
Dimensional Stability**	< 2%, max.	ASTM D2126
Tensile Strength	≥ 500 psi (24 kPA), min.	ASTM D1623
Flexural Strength	40 psi (275 kPA), min.	ASTM C203
Water Absorption	< 1.5%, max.	ASTM C209
Service Temperature	-100° - 250°F (-73.3° - 121.2°C)	N/A
Moisture Vapor Transmission	< 1.5 perm, max.	ASTM E96 (Procedure A)
Flame Spread Index	< 75***	ASTM E84 / UL 723
Smoke Developed Index	< 200**	ASTM E84 / UL 723

* Foam core.
** Stated dimensional stability tolerance: Board thickness shall not diminish by more than 2% max.
*** This numerical rating is not intended to reflect hazards presented by these or any other material under actual fire conditions.

TYPICAL PHYSICAL & MECHANICAL PROPERTY DATA		
Nominal Thickness	R-Value*	Flute Span (max.)
1.0 in (25 mm)	5.7	2-5/8" (66.7 mm)
1.2 in (30 mm)	6.8	2-5/8" (66.7 mm)
1.5 in (38 mm)	8.6	4-3/8" (111 mm)
1.75 in (46 mm)	10.0	4-3/8" (111 mm)
2.0 in (51 mm)	11.4	4-3/8" (111 mm)
2.3 in (58 mm)	13.2	4-3/8" (111 mm)
2.5 in (64 mm)	14.4	4-3/8" (111 mm)
2.6 in (66 mm)	15.0	4-3/8" (111 mm)
2.8 in (71 mm)	16.2	4-3/8" (111 mm)
The following are not recommended for use in a single layer application.		
3.0 in (76 mm)	17.4	4-3/8" (111 mm)
3.2 in (81 mm)	18.6	4-3/8" (111 mm)
3.5 in (89 mm)	20.5	4-3/8" (111 mm)
3.7 in (94 mm)	21.7	4-3/8" (111 mm)
3.8 in (97 mm)	22.3	4-3/8" (111 mm)
4.0 in (102 mm)	23.6	4-3/8" (111 mm)

* Long-Term Thermal Resistance Values (LTTR) provide a 15-year, time weighted average in accordance with CAN/ULC-S770. Information on other thicknesses available upon request.

Contact Siplast for typical physical and mechanical property data for panels not listed in the chart above.

Siplast 14911 Quorum Dr., Suite 600 Dallas, TX 75254
201 Bewicke Ave., Suite 208 North Vancouver, BC, Canada V7M 3M7
Customer Service in North America 1.800.922.8800 www.siplast.com

PARATHERM® TAPERED & PARATHERM® W TAPERED POLYISOCYANURATE

Commercial Product Data Sheet

Paratherm® tapered panels are sloped rigid roof insulation boards comprised of a closed cell polyisocyanurate foam core bonded on each side to a fiber-reinforced organic felt facer.

Contact Siplast for information on approved product uses.

USES:
RIGID INSULATION

Standards	ASTM C1289 Type II Class 1, Grade 2 (20 psi) & Grade 3 (25 psi)
Panel Dimensions	4 ft x 4 ft (1.22 m x 1.22m)
Thickness/Taper*	Fill: 1 in – 4 in (2.54 cm - 10.2 cm) Slope: 1/8" (1.6 mm) 1/4" (6.3 mm) 1/2" (12.7 mm)

*Available in 1/16", 3/16", or 3/8" per foot slope upon request.

PRODUCT INFORMATION

Application

Refer to the applicable Siplast Technical Guide for detailed application information.

For optimal thermal and roof system performance, Siplast recommends using multiple layers of polyisocyanurate with staggered joints.

Storage and Handling

Material should be carefully coordinated with the schedule for roofing operations to minimize job site storage time. Upon delivery, the factory packaging should be removed or slit on all four sides to allow for ventilation and to prevent the accumulation of condensation. Interior storage offering dry, well-ventilated conditions should be considered when the product is to be stored for more than 14 days prior to installation. When short-term job site storage is necessary, Paratherm should be stored flat on raised pallets or platforms at least 4 inches above the ground. Pallets should be stored on a finished surface rather than on dirt or grass to avoid upward transpiration of moisture. Pallets should be covered with a breathable, waterproof covering in all cases.

See product packaging and the Safety Data Sheet for specific information on the safe handling of this product.

Packaging

Factory packaging includes plastic wrap, plastic bag, or both.

Listings, Approvals, & Certifications

c UL us LISTED · FM APPROVED · GREENGUARD GOLD · PIMA QualityMark

Current copies of all Siplast Commercial Product Data Sheets & Safety Data Sheets are posted on our website at www.siplast.com
Rev Date 3/2023

PARATHERM® TAPERED & PARATHERM® W TAPERED POLYISOCYANURATE

Physical and Mechanical Properties

siplast® With you every step of the way

Property (As Manufactured)	Value/Units	Test Method
Compressive Strength*	Grade 2 (20 psi), min. Grade 3 (25 psi), min.	ASTM D1621
Dimensional Stability**	< 2%, max.	ASTM D2126
Tensile Strength	≥ 500 psi (24 kPA), min.	ASTM D1623
Flexural Strength	40 psi (275 kPA), min.	ASTM C203
Water Absorption	< 1.5%, max.	ASTM C209
Service Temperature	-100° - 250°F (-73.3° - 121.2°C)	N/A
Moisture Vapor Transmission	< 1.5 perm, max.	ASTM E96 (Procedure A)
Flame Spread Index	< 75***	ASTM E84 / UL 723
Smoke Developed Index	< 200**	ASTM E84 / UL 723

* Foam core.
** Stated dimensional stability tolerance: Board thickness shall not diminish by more than 2% max.
*** This numerical rating is not intended to reflect hazards presented by these or any other material under actual fire conditions.

TYPICAL PROPERTIES AND CHARACTERISTICS

Slope	Panel Type	Min. Thickness	Max. Thickness	Avg. Thickness	BD Feet/Panel
1/8" (3.2 mm)	A	1" (25.4 mm)	1.5" (38.1 mm)	1.25" (31.75 mm)	20
	AA	0.5" (12.7 mm)	1" (25.4 mm)	0.75" (19.1 mm)	12
	B	1.5" (38.1 mm)	2" (50.8 mm)	1.75" (44.5 mm)	28
	C	2" (50.8 mm)	2.5" (63.5 mm)	2.25" (57.2 mm)	36
	D	2.5" (63.5 mm)	3" (76.2 mm)	2.75" (69.9 mm)	44
	E	3" (76.2 mm)	3.5" (88.9 mm)	3.25" (82.6 mm)	52
	F	3.5" (88.9 mm)	4" (101.6 mm)	3.75" (95.3 mm)	60
	FF	4" (101.6 mm)	4.5" (114.3 mm)	4.25" (108 mm)	68
1/4" (6.35 mm)	X	0.5" (12.7 mm)	1.5" (38.1 mm)	1" (25.4 mm)	16
	Y	1.5" (38.1 mm)	2.5" (63.5 mm)	2" (50.8 mm)	32
	Z	2.5" (63.5 mm)	3.5" (88.9 mm)	3" (76.2 mm)	48
	ZZ	3.5" (88.9 mm)	4.5" (114.3 mm)	4" (101.6 mm)	64
	G	1" (25.4 mm)	2" (50.8 mm)	1.5" (38.1 mm)	24
	H	2" (50.8 mm)	3" (76.2 mm)	2.5" (63.5 mm)	40
	I	3" (76.2 mm)	4" (101.6 mm)	3.5" (88.9 mm)	56
1/2" (12.7 mm)	Q	0.5" (12.7 mm)	2.5" (63.5 mm)	1.5" (38.1 mm)	24
	QQ	2.5" (63.5 mm)	4.5" (114.3 mm)	3.5" (88.9 mm)	56
	XX	1" (25.4 mm)	3" (76.2 mm)	2" (50.8 mm)	32

Contact Siplast for typical properties and characteristics related to tapered panels not listed in the chart above.

SAFETY DATA SHEET (SDS)

HCFC-Free

SECTION 1: Identification

PRODUCT(S) IDENTIFICATION: **Paratherm W**

Article Name: Rigid polyisocyanurate foam panels
CAS Number: None Assigned
Common Name: Rigid Foam Insulation

PRODUCT DESCRIPTION AND USE:

Rigid foam insulation panels for installation as delivered over roof decks. Paratherm W consists of a flat or tapered closed-cell polyisocyanurate foam core bonded on both sides to a dark gray non-asphaltic, glass fiber reinforced organic felt facer. The thickness of the foam ranges from 0.5 to 4.5 inches. Intended to be covered by hot asphalt or coal tar BUR, modified bitumen, and single ply membrane system roof coverings.

SUPPLIER: Siplast
14911 Quorum Drive, Ste. 600
Dallas, TX 75254
Phone: 1-800-922-8800

In the event of a chemical emergency after 5:00 PM and on weekends, call CHEMTREC at 800-424-9300 (Domestic) or 703-527-3887 (International).

SECTION 2: Hazard(s) Identification

GHS CLASSIFICATION: Not a hazardous substance or mixture

GHS Label Element: Not a hazardous substance or mixture

WHMIS: In Canada, the product mentioned above is not considered hazardous under the Workplace Hazardous Materials Information System (WHMIS)

No unusual conditions are expected from this product. Freshly expanded or heated foam may off-gas some pentane-blowing agent, which is heavier than air and may accumulate to ignitable concentrations if stored inside a sealed container or within confined areas. Ignitable atmospheres have concentrations that exceed inhalation exposure limits for workers, further reinforcing the need for ventilation when foam is freshly expanded.

With the exception of the blowing agent, this product does not present an inhalation, ingestion, or contact health hazard unless subjected to operations such as sawing, sanding, or machining that result in the generation of airborne particulates (dusts). Exposure to high dust levels may irritate the skin, eyes, nose, throat, or upper respiratory tract. Inhalation of high amounts of dust over long periods may overload lung clearance mechanisms and make lungs more vulnerable to respiratory disease. [See Section 3 of this SDS for other exposure limit standards for the product ingredients.]

Canadian users: LD50 and LC50 data are listed below for the constituent(s) that are available.

	LC50	LD50	Hodge & Sterner classes	
	mg/(m3 air)	mg/(kg body wgt.)	(inhalation)	(oral)
Pentanes	364,000 (rat, inh, 4hr)	446 (mouse, i.v.)	relatively harmless	insufficient data
Formaldehyde	400 (mouse, inh, 2hr)	42 (mouse, oral) 100 (rat, oral)	moderately toxic	moderately toxic

POTENTIAL HEALTH EFFECTS:

Primary Means of Exposure: Inhalation of particulates
Secondary Means of Exposure: Eye and skin contact with particulates and inhalation of vapors

INHALATION HEALTH HAZARDS:

For polyiso foam (generated dust and residual vapor) and for organics in facers (generated dusts)

Acute: Dust may cause transient mechanical irritation of the upper respiratory tract. Workplace exposures to residual pentane vapors from this product are expected to be below levels of any health risk. Overexposure to high concentrations of pentane can cause narcotic effects. Signs and symptoms of overexposure to pentane include headache, nausea, dizziness, difficulty walking, or sleepiness. Studies have shown that short-term (10-minute) exposures to pentane concentrations as high as 5,000 ppm (11,750 mg/m^3) produced no symptoms. Workplace exposure limits for pentane and other organic components are provided in table below.

Chronic: There is no evidence that dusts generated from these products cause disease in humans. Facer dusts containing carbon black pigment are not analogous to the raw carbon black powders for which human carcinogenicity is suspected. No chronic effects are known for exposures to pentane vapor.

For continuous filament glass fibers in facers (generated dust)

Acute: Airborne fragments of glass fibers may cause mechanical irritation of the upper respiratory tract, particularly mouth, nose and throat; glass dust may cause transient irritation of the upper respiratory tract. Workplace exposure limits are provided in table below.

Chronic: No chronic health effects are known to be associated with exposure to glass fibers. Results from epidemiological studies have not shown any increase in respiratory disease or cancer. The International Agency for Research on Cancer has classified continuous filament fiberglass –Not Classifiable as to Carcinogenicity to Humans‖ (Group 3).

EYE CONTACT HEALTH HAZARDS:

Acute: Mechanical irritation, redness, tearing, and blurred vision can occur if dusts generated from these products come into contact with eyes.

Chronic: None known.

SKIN CONTACT HEALTH HAZARDS:

Acute: Direct contact with rough-cut foam or felt facers can cause mechanical abrasion cuts or puncture to fingers, hands or exposed skin.

Chronic: None known.

SIGNS AND SYMPTOMS OF EXPOSURE:

Irritation of the upper respiratory tract, eyes, and/or skin.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:

Any condition generally aggravated by mechanical irritants in the air or on the skin. Specific data are not available which address medical conditions that are generally recognized as being aggravated by exposure to this product.

CARCINOGENICITY:

Ingredient:	Textile Fibrous Glass
NTP:	Not Listed
IARC:	Not Classifiable – Group 3
OSHA:	Not Listed
Mutagenicity:	None
Teratogenicity:	None
Reproductive Toxicity:	None
California Proposition 65:	⚠ WARNING: This product can expose you to chemicals including quartz, which is known to the State of California to cause cancer. For more information, go to www.P65Warnings.ca.gov

Paratherm W does not contain any quartz compounds in the closed-cell polyisocyanurate foam core. However, there is a trace amount in the glass fiber reinforced felt facer that is bonded to the foam core.

SECTION 3: Composition and Ingredient Information

This item meets the definition of an "article" in the OSHA Hazard Communication Standard 29CFR1910.1200. *Non-hazardous* according to 29CFR1910.1200 when used as intended.

* The foam core does not contain urea formaldehyde

COMMON NAME	CHEMICAL NAME	WEIGHT % IN ARTICLE‡	CAS NUMBER
Polyiso foam, containing:	polyurethane modified polyisocyanurate polymer	78	None
Residual blowing agent	pentanes	< 4.7	109-66-0
Felt facer (composite of wood pulp and glass fibers), containing:		22	None
Fiberglass	continuous filament glass fibers	5	65997-17-3
Pigment	carbon black	1	1333-86-4

‡Weight % based on 1-inch foam thickness.

AIRBORNE EXPOSURE LIMITS:

Constituent or Category	OSHA PEL	ACGIH TLV	NIOSH REL
	(mg/m^3)	(mg/m^3)	(mg/m^3)
Nuisance dusts NOS containing no asbestos and <1% crystalline silica	15 TWA total 5 TWA respirable	10 TWA	Not applicable
Fiberglass dust	see nuisance dusts	5 TWA	Not applicable
Carbon black	3.5 TWA	3.5 TWA	3.5 TWA 1750 IDLH
Pentanes vapor	2950 TWA	1410 TWA	350 TWA 1800 Ceiling 3525 IDLH
Formaldehyde	0.9 TWA 2.5 STEL	0.4 TWA	0.02 TWA 0.12 STEL 25 IDLH

SECTION 4: First Aid Measures

FIRST AID PROCEDURES:

Inhalation:	Remove to fresh air. Drink water to clear throat and blow nose to remove dust.
Skin:	Wash with soap and cool running water.
Eyes:	Flush eyes with running water for at least 15 minutes. Do not rub or wipe eyes. If irritation persists, consult a medical professional.
Ingestion:	Product is not intended to be ingested or eaten. If product is ingested, irritation of the gastrointestinal tract may occur, and should be treated symptomatically. Do not induce vomiting. Rinse mouth with water to remove particles, and drink plenty of water to help reduce the irritation. [No chronic effects are expected following ingestion.]

Note to Physician: This product is a mechanical irritant. It is not expected to produce any chronic health effects from acute exposures. Treatment should be directed toward removing the source of irritation with symptomatic treatment as necessary.

SECTION 5: Fire Fighting Measures

The product is a solid article that will burn if exposed to an ignition source of sufficient heat and intensity, or open flame, such as a welder's torch. It should be installed with a 15-minute thermal barrier between it and the structure's interior. Under certain fire conditions, combustible gases can be generated, creating rapidly spreading, high-intensity flames and dense, black smoke. Burning of this product can produce irritating and potentially toxic fumes and gases, including carbon monoxide and carbon dioxide; other undetermined hydrocarbon fractions could be released in small quantities.

Flashpoint:	Not applicable (product is not a liquid)
Auto-ignition temperature:	Not determined
Extinguishing media:	Water spray/fog, CO_2, dry chemical (consider media appropriate for surrounding materials)
Respirator for fire-fighting:	Self-contained breathing apparatus (SCBA)

Pentane vapors may be emitted from freshly produced foam or when product is heated. Pentane concentrations between the lower and upper explosive limits (LEL and UEL) may accumulate under unique circumstances inside a sealed container or within confined areas. If such concentrations are provided a source of ignition, there may be a very high rate of flame propagation.

Pentane:	Flashpoint	≤ -37°C	Vapor pressure	= 514 mm Hg at 25°C
	Boiling point	= 28 to 49°C	LEL	= 1.5% (35,000 mg/m3)
			UEL	= 7.8%
	Vapor density	= 2.49		

SECTION 6: Accidental Release Measures

Do not discard residues into sewers, storm sewers, or surface waters. If accidentally released to a water body, material will float and disperse with wind and current; contain the material with booms and remove either manually or with a vacuum truck.

If accidentally released to land, scoop up material and put into suitable container for disposal.

Chemicals in this material are not expected to cause harm to aquatic or terrestrial plants or animals; however, fish or other animals may eat the product, which could obstruct their digestive tracts.

Be a good steward of the environment and clean up residues (some components of the product are not biodegradable).

SECTION 7: Handling and Storage

Storage: Store in a dry, well-ventilated area. Assure storage containers or areas and shipping containers are adequately ventilated. No Smoking—No Matches—No Lighters—No Welding rules should be enforced. Install according to manufacturer's recommendations.

Installation Procedure: Cutting of product should be done in a manner to reduce or control generation of airborne dusts. Avoid unnecessary dust exposures when cutting or abrading by using adequate local or general ventilation. Avoid dust contact with ignition sources. Handle product using good industrial hygiene and safety practices.

SECTION 8: Exposure Control - Personal Protection

Respiratory Protection: If a respiratory tract irritation occurs or if any dust exposure limit is exceeded, use a respirator such as 3M Model 8271 or Model 8210, or equivalent for protection against nuisance dusts. When normal ventilation is provided to work area, no respiratory protection is needed for pentane vapor.

Protective Clothing: To avoid skin irritation from excessive dust generated during cutting operations, wear long-sleeved, loose fitting clothing, long pants, and gloves.

Eye Protection: Goggles or safety glasses with side shields are recommended.

Work Area Cleanup: Pick up large pieces; do not wash down drain. Sweep or vacuum smaller pieces into a waste container for disposal. If needed, use water spray to wet down and minimize dust generation. Do not dry sweep dust accumulation or use compressed air for cleanup.

Hygienic Practices: Exposed skin areas should be washed with soap and cool water after working with product. Clothing should be laundered separately from other clothes.

SECTION 9: Physical/Chemical Characteristics

The following applies to the product (article), not to pure forms of individual constituents of the product:

Appearance: White or cream-colored foam solid with a dark gray glass fiber reinforced felt facing on both sides.

PROPERTY		PROPERTY	
Boiling Point (°F):	NA	Specific Gravity:	<1
Melting Point (°F):	>250	Solubility (Water):	Insoluble
Vapor Pressure:	NA	Vapor Density (Air=1):	NA
Percent Volatile By Volume:	<1	Evaporative Rate:	NA
pH:	NA	Odor:	Negligible

NA=not applicable

SECTION 10: Stability and Reactivity

Stability: Stable. Service temperature range: -100 to 250°F. To prevent structural deterioration, avoid contact with acetone, methyl ethyl ketone, tetrahydrofuran, chlorine, chloroform, hydrogen peroxide, ethylene dichloride, dimethyl sulfoxide, and dimethyl formamide.

Hazardous Decomposition Products: None identified

Hazardous Polymerization: Will not occur

SECTION 11: Toxicological Information

Extensive medical-scientific research has been conducted regarding the health aspects of fiber glass over the past 50 years. The International Agency for Research on Cancer (IARC), and agency of the World Health Organization (WHO), at a meeting in June 1987, reviewed all of the significant research on the health effects attributed to fiber glass.

IARC determined that the data from both human and animal studies was inadequate to classify continuous filament glass fibers such as used in fiber glass reinforcement products, as carcinogenic to humans.

No chronic health effects are known to be associated with exposure to glass fibers. Results from epidemiological studies have not shown any increase in respiratory disease or cancer. The International Agency for Research on Cancer has classified continuous filament fiberglass –Not Classifiable as to Carcinogenicity to Humans‖ (Group 3).

SECTION 12: Ecological Information

Chemicals in this material are not expected to cause harm to aquatic or terrestrial plants or animals; however, fish or other animals may eat the product, which could obstruct their digestive tracts.

Be a good steward of the environment and clean up residues (some components of the product are not biodegradable).

This product is not manufactured with, nor does it contain any Class 1 Ozone depleting chemicals as defined by EPA in Title VI of the Clean Air Act Amendments of 1990 40 CFR Part 82, Protection of Stratospheric Ozone.

SECTION 13: Disposal Considerations

This product, if discarded as supplied, is not considered a hazardous waste under RCRA (40 CFR 261) and may be placed directly into receptacles that will transport the waste to a municipal waste, industrial waste, or demolition waste landfill. If contact with a contaminating substance alters the material, it is the user's responsibility to determine at the time of disposal whether it meets RCRA criteria for hazardous waste. Dispose in accordance with federal, state and local regulations.

SECTION 14: Transportation Information

Transportation Regulations: This product is not regulated as a hazardous material in transportation.

National Motor Freight Classification (NMFC): 157320, Class 150

SECTION 15: Regulatory Information

TSCA: All chemicals in this product are listed on the TSCA Inventory. TSCA 12(b) export notification requirements do not apply to this product.

SARA TITLE III: There is no Section 302 extremely hazardous substance in this product. Reporting requirements under Sections 311, 312, or 313 do not apply. [Diisocyanate precursors do not remain in the polymer foam of this product.]

All chemicals and component categories found on state lists are addressed in this SDS.

This product has been classified in accordance with the hazard criteria of Canada's *Controlled Products Regulations* and the SDS contains all of the information required by said regulations. All chemical components are on Canada's Domestic Substances List (DSL). Pentane and carbon black are the only constituents on Canada's Ingredients Disclosure List (IDL) that exceed threshold concentrations.

SECTION 16: Other Information

	Health	Fire	Reactivity	Degree of Hazard
HMIS Rating	1	1	0	0 - Minimal (insignificant)
NFPA Rating	1	1	0	1 – Slight
				2 – Moderate
				3 – Serious (high)
				4 – Severe (extreme)
				5 – Chronic Health Effort(s)

Safety Data Sheet (SDS) prepared by: Siplast
14911 Quorum Drive, Ste. 600
Dallas, TX 75254

Original Prepared: January 2002
Revision Date: October 2022
Expiration Date: October 2025
Revision: Updated Address

Disclaimer: The information contained herein is accurate to the best of our knowledge. Siplast makes no warranty of any kind, express, or implied, concerning the safe use of this material in your process or in combination with other substances.

PRO FLEECE

Commercial Product Data Sheet

Pro Fleece is a non-woven, needle-punched polyester fabric reinforcement designed for compatibility with Parapro, Terapro, and Paraflex liquid products.

Contact Siplast for specific information on approved product uses.

USES:
REINFORCEMENT FOR LIQUID-APPLIED SYSTEMS

Colors	White
Nominal Thickness	40 mils
Weight	110 g/m^2
Water Absorption	< 1%

PRODUCT INFORMATION

Application

Refer to the applicable Siplast Installers Guides for specific applications.

Storage and Handling

All Siplast roll roofing products should be stored upright on a dry, clean, flat surface. All roofing products should be stored in a dry place out of direct exposure to the elements and should not be double stacked. There is no shelf life limitation with proper storage.

See product packaging and the Safety Data Sheet for specific information on the safe handling of this product.

Packaging

Roll Dimensions:
12 in x 82 ft (305 mm x 25 m)
12 in x 164 ft (305 mm x 50 m)
25 in x 164 ft (630 mm x 50 m)
41 in x 164 ft (1050 mm x 50 m)

Listings, Approvals, & Certifications

c UL us LISTED

FM APPROVED

Current copies of all Siplast Commercial Product Data Sheets & Safety Data Sheets are posted on our website at www.siplast.com
Rev Date 2/2022

SAFETY DATA SHEET

Revision Date: July 25th 2022

Section 1 : Identification

Description: Needle punched nonwoven substrate made from a blend of white polyester fibers with or without heat treatment surface finish.

Product code : Pro Fleece

Product use : Roofing and industrial applications.

Manufacturer details : Siplast, Inc.
14911 Quorum Drive, Ste. 600, Dallas, TX 75254
Tel: 800-922-8800, www.siplast.com

Emergency Telephone : CANUTEC (613) 996-6666 CHEMTREC 800-424-9300

Section 2 : Hazard Identification

United States (US) According to OSHA 29 CFR 1910.1200 HCS

Classification of the substance or mixture		OSHA HCS 2012	Not classified
Label Elements	OSHA HCS 2012		No label element(s) required.
Other Hazards	OSHA HCS 2012:		

Titanium dioxide is not water soluble and is encapsulated. It is not extracted or released in normal processing. Therefore, titanium dioxide in this material does not present a hazard in normal handling, processing use, and disposal. Under United States Regulations (29 CFR 1910.1200(c) - Hazard Communication Standard), the product(s) listed above are exempt as article(s) under stated normal conditions of use.

Canada

According to WHMIS 2015 (Workplace Hazardous Material Information System)

Classification of the Substance or Mixture		WHMIS 2015	Not classified
Label Elements		WHMIS 2015	No label element(s) required
Other Hazards	WHMIS 2015:		

Titanium dioxide is not water soluble and is encapsulated. It is not extracted or released in normal processing. Therefore, titanium dioxide in this material does not present a hazard in normal handling, processing use, and disposal. In Canada, this product is considered a manufactured article under the Workplace Hazardous Materials Information System (WHMIS) and is exempt.

EU/EEC

According to Regulation (EC) No 1272/2008 (CLP)/REACH 1907/2006 [amended by 2015/830]

Classification of the Substance or Mixture		CLP	Not classified
Label Elements		CLP	No label element(s) required
Other Hazards:		CLP:	

Titanium dioxide is not water soluble and is encapsulated. It is not extracted or released in normal processing. Therefore, titanium dioxide in this material does not present a hazard in normal handling, processing use, and disposal. This material is exempt from CLP/REACH obligations as an article as specified in REACH (1907/2006) and related ECHA guidance.

Other Information This material, as an article, does not legally require a SDS.

Section 3 : Composition/information on ingredients

Substances: Material does not meet the criteria of a substance in accordance with Regulation (EC) No1272/2008

Composition:

Component	CAS#	Weight %
Polyethyleneterephthalate	25038-59-9 (typical) NDA	≥ 90%
Titanium Dioxide	13463-67-7	≤ 5%
Fiber Lubricants	Proprietary NDA	≤ 3%
Color pigment	Proprietary NDA	≤ 2%
Catalyst	Proprietary NDA	≤ 1%

Section 4 : First aid measures

Inhalation: No data available.

Skin Contact: Product is not expected to be hazardous by skin contact. Should irritation occur rinse with water.

Eye Contact: Flush eyes with water as a precaution. If irritation persist get medical attention.

Ingestion: If swallowed, do NOT induce vomiting. Never give anything by mouth to a victim who is or is having convulsions. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Consult a physician if necessary.

Most important symptoms and effects, both acute and delayed

Refer to Section 11 - Toxicological Information.

Indication of any immediate medical attention and special treatment needed

Note to physician: Treat symptomatically.

Section 5 : Firefighting measures

Suitable Extinguishing Media: LARGE FIRE: Water spray, fog or regular foam.
SMALL FIRES: Dry chemical, CO_2, water spray or regular foam

Unsuitable Extinguishing Media: Do not use a solid water stream as it may scatter and spread fire.

Unusual Fire and Explosion Hazards: Some may burn, but none ignite readily.

Hazardous Combustion Products: Irritating and toxic gases or fumes may be released during a fire. Carbon monoxide, carbon dioxide, various hydrocarbon fragments as well as thick smoke.

Advice for Firefighters: Wear positive pressure self - contained breathing apparatus (SCBA). Structural firefighters' protective clothing will only provide limited protection.

Section 6 : Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Do not touch or walk through spilled material.
No emergency procedures are expected to be necessary if material is used under ordinary conditions as recommended.
Avoid run off to waterways and sewers.

Methods and material for containment and cleaning up

Sweep up or gather material and place in appropriate container.
Refer to Section 8 - Exposure Controls/Personal Protection and Section 13 - Disposal Considerations.

Section 7 : Handling and storage

Precautions for Safe Handling:

When material is cut, chopped, or manipulated in other similar methods, some dust may be produced. Use good housekeeping methods to keep accumulation of dust to a minimum.

Conditions for safe storage, including any incompatibilities:

Ventilate enclosed areas. Keep container closed. Keep away from heat, sparks and flame.

Section 8 : Exposure controls/personal protection

Exposure Limits / Guidelines

Titanium dioxide (13463-67-7):

Result	ACGIH	Canada Ontario	Canada Quebec	China	OSHA
STELs	Not established	Not established	Not established	16 mg/m3 STEL (total dust)	Not established
TWAs	10 mg/m3 TWA	10 mg/m3 TWA	10 mg/m3 TWAEV (no Asbestos and <1% Crystaline silica, total dust)	8 mg/m3 TWA (total dust)	15 mg/m3 TWA (total dust)

Exposure Control Notations

Germany DFG

Titanium dioxide (13463-67-7): Carcinogens (Category 3A (could be carcenogenic for man, inhalable fraction with exception of ultra small particles)).

Engineering Measures / Controls

Dilution ventilation. Adequate ventilation system as needed to control concentrations of airborn contaminants below applicable threshold limit values.

Respiratory Protection:

For limited exposure use an N95 dust mask. For prolonged exposure use an air respirator with high efficiency particulate air (HEPA) filters. Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or symptoms are experienced.

Eye/Face: Wear safety goggles.

Hands/Skin/Body: Wear appropriate gloves. Wear long sleeves and/or protective coveralls.

Work / Hygiene Practices: Wash hands before eating.
Follow best practice for site management and disposal of waste.

Other information:	Molten polymer or prolonged air drying of polymer at temperatures above 195ºF (91ºC) will release small quantities of acetaldehyde (CAS#75-07-0).

Section 9 : Physical and chemical properties

Material Description	
Physical Form:	Solid / needle punched nonwoven
Color:	Typically White / Off-White
Odor:	Odorless
Odor Threshold:	Data lacking
General Properties	
Boiling Point:	Data lacking
Decomposition Temperature:	Data lacking
Specific Gravity (water = 1):	Data lacking
Viscosity:	Data lacking
Oxidizing Properties:	Not an oxidizer
Melting Point:	110 - 300 °C (230 - 572 °F)
pH:	Data lacking
Water Solubility:	Insoluble
Explosive Properties:	Not explosive.
Volatility	
Vapor Pressure:	Data lacking
Evaporation Rate:	Data lacking
Vapor Density (air = 1):	Data lacking
VOC (Wt.):	0.5%
Flammability	
Flash Point:	Not relevant
LEL / UEL:	Not relevant
Flammability (solid, gas):	Not flammable
Autoignition Temperature:	Not relevant
Environmental	
Octanol/Water Partition coefficient	Data lacking

Section 10 : Stability and reactivity

Reactivity:	No dangerous reaction known under conditions of normal use.
Stability:	Stable under normal temperatures and pressures.
Possibility of hazardous	Hazardous polymerization not indicated.
Conditions to Avoid:	Keep away from heat, sparks and flame.
Incompatibility:	This product may react with strong oxidizing agents.
Hazardous decomposition products:	Molten polymer or prolonged air drying of polymer at temperatures above 195ºF (91ºC) will release small quantities of acetaldehyde (CAS#75-07-0).

Section 11 : Toxicological information

Information on toxicological effects:

GHS Properties	Classification
Acute toxicity	EU/CLP • Not relevant
Skin corrosion/Irritation	OSHA HCS 2012 • Not relevant
Serious eye damage/Irritation	WHMIS 2015 • Not relevant

Skin sensitization Respiratory sensitization Aspiration Hazard Carcinogenicity Germ Cell Mutagenicity Toxicity for Reproduction STOT-SE STOT-RE	

Potential Health Effects:

Inhalation

Acute (Immediate) Exposure to dust may cause irritation. Processes such as cutting, grinding, crushing, or may result in generation of excessive amounts of airborne dusts in the workplace. Nuisance dust may affect the lungs but reactions are typically reversible.

Chronic (Delayed) No data available

Skin

Acute (Immediate) Exposure to dust may cause mechanical irritation.

Chronic (Delayed) No data available

Eye

Acute (Immediate) Exposure to dust may cause mechanical irritation. Excessive concentrations of nuisance dust in the workplace may reduce visibility and may cause unpleasant deposits in eyes.

Chronic (Delayed) No data available

Ingestion

Acute (Immediate) Excessive concentrations of nuisance dust in the workplace may cause mechanical irritation to mucous membranes.

Chronic (Delayed) No data available

Carcinogenic Effects

Titanium dioxide (airborne particles of respirable size) is a listed carcinogen by IARC (2B). Titanium dioxide used in products of this material is not believed to have the potential to become of respirable size.

Titanium dioxide, CAS# 13463-67-7, Group 2B-Possible Carcinogen (IARC)

Section 12 : Ecological information

Toxicity

This product is not expected to produce significant ecotoxicity and aquatic systems. Based on similar substances, this material is expected to be essentially non-biodegradable.

Persistence and degradability

Material data lacking. Based on the physical properties of this product, significant environmental persistence is not expected.

Bioaccumulative potential

Material data lacking. Based on the physical properties of this product, significant environmental bioaccumulation is not expected.

Mobility in Soil Material data lacking.

Results of PBT and vPvB assessment Material data lacking.

Ecological Fate Potential Material data lacking.

Environmental Effects Material data lacking.

Section 13 : Disposal considerations

Product waste

Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Packaging waste

Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Section 14 : Transport information

	UN number	UN proper shiping name	Transport hazard class	Packaging group	Enviro hazards
DOT	NDA	Not Regulated	NDA	NDA	NDA
TDG	NDA	Not Regulated	NDA	NDA	NDA
IMO/IMDG	NDA	Not Regulated	NDA	NDA	NDA
IATA/ICAO	NDA	Not Regulated	NDA	NDA	NDA

Specal precautions for users: None known.
Transport in bulk - Annex II of MARPOL 73/78 and BIBC Code: Not relevent.

Section 15 : Regulatory information

SARA Hazard Classifications None

Titanimum dioxide (13463-67-7)

State Right To Know:	MA, NJ, PA = Yes
Inventory: Canada DSL = Yes	Inventory: China = Yes
Inventory: Canada NDSL = No	Inventory: Japan ENCS = Yes
Inventory: EU EINECS = Yes	Inventory: Korea KECL = Yes
Inventory: EU ELNICS = No	Inventory: TSCA = Yes

Canada

Labor / Canada WHMIS 1988 - Classification of Substances

Titanimum dioxide (13463-67-7) D2A (in certain cases, this classification does not apply. For more information, consult the section Substance Specific Issues: Titanium dioxide, mixture contaning on Health Canada's WHMIS Division website)

Labor / Canada WHMIS - Ingredient Disclosure List

Titanimum dioxide (13463-67-7) Not Listed

Environment / Canada - CEPA - Priority Substances List

Titanimum dioxide (13463-67-7) Not Listed

Europe

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Classification (OBSOLETE)
EU - CLP (1272/2008) - Annex VI - Table 3.2 - Concentration Limits (OBSOLETE)
EU - CLP (1272/2008) - Annex VI - Table 3.2 - Labelling (OBSOLETE)
EU - CLP (1272/2008) - Annex VI - Table 3.2 - Notes - Substances and Preparations (OBSOLETE)
EU - CLP (1272/2008) - Annex VI - Table 3.2 - Safety Phrases (OBSOLETE)

Titanimum dioxide (13463-67-7) Not Listed

United States

Labor / U.S. - OSHA - Process Safety Management - Highly Hazardous Chemicals
Labor / U.S. - OSHA - Specifically Regulated Chemicals

Titanimum dioxide (13463-67-7)	Not Listed

Environment / U.S. - CAA (Clean Air Act) - 1990 Hazardous Air Polluants
Environment / U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities
Environment / U.S. - CERCLA/SARA - Radionuclides and their Reportable Quantities
Environment / U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances EPCRA RQs
Environment / U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances TPQs.
Environment / U.S. CERCLA/SARA - Section 313 - Emission Reporting
Environment / U.S. CERCLA/SARA - Section 313 - PBT Chemical Listing Reporting

Titanimum dioxide (13463-67-7)	Not Listed

Environment / U.S. - California - Proposition 65 - Carcinogens List

Titanimum dioxide (13463-67-7)	⚠ WARNING: This product can expose you to chemicals including Titanium dioxide, which is known to the State of California to cause cancer. For more information, go to www.P65Warnings.ca.gov.

Environment / U.S. - California - Proposition 65 - Developmental Toxicity
Environment / U.S. - California - Proposition 65 - Maximum Allowable Dose Levels (MADL)
Environment / U.S. - California - Proposition 65 - No Significant Risk Levels (NSRL)
Environment / U.S. - California - Proposition 65 - Reproductivity Toxicity - Female
Environment / U.S. - California - Proposition 65 - Reproductivity Toxicity - Male

Titanimum dioxide (13463-67-7)	Not Listed

Labor / U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List
Labor / U.S. - Pennsylvania - RTK (Right to Know) - Special Hazardous Substances

Titanimum dioxide (13463-67-7)	Not Listed

Chemical Safety Assessment

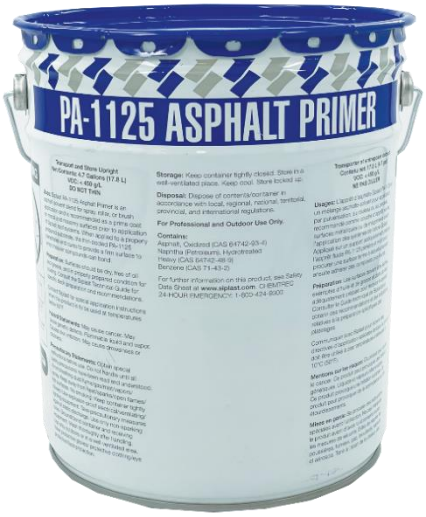
Chemical Safety Assessment is not required.

Other Information

WARNING: This product contains a chemical known to the State of California to cause cancer.

Section 16 : Other information

The information contained in this Safety Data Sheet is correct to the best of our current knowledge, information, experience and belief at the date of publication; No responsibility is accepted that the information is sufficient or correct in all cases. This information given is designed only as guidance for the safe handling, use, processing, storage, transportation, disposal and release of the material, and to help ensure the safety and health of employees, customers and the protection of the environment. It is not considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or process.



PA-1125® ASPHALT PRIMER

Commercial Product Data Sheet

PA-1125 Primer is an asphalt/solvent blend designed to prime metal, concrete masonry, and other approved materials/surfaces prior to application of Siplast SBS Roofing and Flashing Systems.

Contact Siplast for information on approved product uses.

USES:
ASPHALT PRIMER

Standards	ASTM D41
Unit	5 gal Pail 4.7 gal net content (17.8 L)
Coverage	Dependent on condition, profile, and porosity of surface receiving primer. Typical coverage ranges from 100 square feet per gallon (0.4 L per m^2) on very rough, porous surfaces to 400 square feet per gallon (1.6 L per m^2) on smooth, low-absorptive surfaces.
Flash Point	100°F (38°C) (Pensky-Martens Closed Cup)
VOC Content	<350 g/L

PRODUCT INFORMATION

Application

Refer to the applicable Siplast Technical Guide for detailed application information.

Storage and Handling

All Siplast priming products should be stored on a clean, flat surface. Care should be taken that containers are not dropped and container seals are not broken prior to use. All roofing products should be stored in a dry place out of direct exposure to the elements and kept away from excessive heat, fire, or open flames.

See product packaging and the Safety Data Sheet for specific information on the safe handling of this product.

Packaging

Pallet: 45 in x 48 in (114 cm x 122 cm) wooden pallet
Pails Per Pallet: 42
Pallets Per Truckload: 22
Weight Per Pail: 37 lb (16.8 kg)

Listings, Approvals, & Certifications

FM APPROVED

Current copies of all Siplast Commercial Product Data Sheets & Safety Data Sheets are posted on our website at www.siplast.com
Rev Date 3/2023

Safety Data Sheet
PA-1125 Asphalt Primer

SECTION 1: Identification

1.1 GHS Product identifier

Product name	PA-1125 Asphalt Primer

1.4 Supplier's details

Name	Siplast
Address	14911 Quorum Drive Suite 600 Dallas, TX 75254
Telephone	800-922-8800

1.5 Emergency phone number 800-424-9300 (CHEMTREC)

SECTION 2: Hazard identification

2.1 Classification of the substance or mixture

GHS classification in accordance with: OSHA (29 CFR 1910.1200)

- Carcinogenicity, Cat. 1A
- Carcinogenicity, Cat. 1B
- Eye damage/irritation, Cat. 2A
- Flammable liquids, Cat. 3
- Germ cell mutagenicity, Cat. 1A
- Germ cell mutagenicity, Cat. 1B
- Skin corrosion/irritation, Cat. 2
- Specific target organ toxicity (repeated exposure), Cat. 2
- Specific target organ toxicity (single exposure), Cat. 3

2.2 GHS label elements, including precautionary statements

Pictograms

Signal word **Danger**

Hazard statement(s)

H226	Flammable liquid and vapor
H315	Causes skin irritation
H319	Causes serious eye irritation
H335	May cause respiratory irritation
H336	May cause drowsiness or dizziness
H340	May cause genetic defects
H350	May cause cancer
H373	May cause damage to organs through prolonged or repeated exposure

Precautionary statement(s)

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P233	Keep container tightly closed.
P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof electrical/ventilating/lighting/ equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P261	Avoid breathing dust/fume/gas/mist/vapors/spray.
P264	Wash thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352	IF ON SKIN: Wash with plenty of water.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P312	Call a POISON CENTER/doctor if you feel unwell.
P314	Get medical advice/attention if you feel unwell.
P321	Specific treatment (see Section 4 on this label).
P332+P313	If skin irritation occurs: Get medical advice/attention.
P337+P313	If eye irritation persists: Get medical advice/attention.
P362+P364	Take off contaminated clothing and wash it before reuse.
P370+P378	In case of fire: Use appropriate media to extinguish.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P403+P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Hazardous components

1. Asphalt, oxidized

Concentration	50 - 55 % (weight)
EC no.	265-196-4
CAS no.	64742-93-4

2. Stoddard solvent

Concentration	45 - 50 % (weight)
EC no.	232-489-3
CAS no.	8052-41-3

- Flammable liquids, Cat. 3
- Aspiration hazard, Cat. 1
- Skin corrosion/irritation, Cat. 2
- Specific target organ toxicity (repeated exposure), Cat. 1
- Hazardous to the aquatic environment, long-term (chronic), Cat. 2

3. Naphtha (petroleum) hydrotreated heavy

Concentration	45 - 50 % (weight)
EC no.	265-150-3
CAS no.	64742-48-9

- Aspiration hazard, Cat. 1
- Germ cell mutagenicity, Cat. 1B
- Carcinogenicity, Cat. 1B
- Flammable liquids, Cat. 3

SECTION 4: First-aid measures

4.1 Description of necessary first-aid measures

General advice	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. If you feel unwell, seek medical advice (show the label where possible). Show this safety data sheet to the doctor in attendance.
If inhaled	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a poison center or doctor/physician if you feel unwell.
In case of skin contact	For hot product, immediately immerse in or flush the affected area with large amounts of cold water to dissipate heat. If clothing sticks to the skin, do not remove. Take off immediately all contaminated clothing. Wash contaminated clothing before reuse. Get medical attention immediately.
In case of eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.
If swallowed	Rinse mouth thoroughly. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Call a physician or poison control center immediately.

4.2 Most important symptoms/effects, acute and delayed

May cause skin dryness or cracking. Skin irritation. Causes serious eye irritation. Symptoms of overexposure can include shortness of breath, drowsiness, headaches, confusion, decreased coordination, visual disturbances and vomiting, and are reversible if exposure is stopped. Shortness of breath. Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. May cause redness and pain. Dizziness. Unconsciousness. May cause mild irritation including stinging, watering, and redness.

4.3 Indication of immediate medical attention and special treatment needed, if necessary
Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

SECTION 5: Fire-fighting measures

5.1 Suitable extinguishing media
Water fog. Alcohol resistant foam. Dry chemical powder. Carbon dioxide (CO2).

5.2 Specific hazards arising from the chemical
Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. During fire, gases hazardous to health may be formed.

5.3 Special protective actions for fire-fighters
Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk. In the event of fire, cool tanks with water spray.

Use standard firefighting procedures and consider the hazards of other involved materials. Move container from fire area if it can be done without risk. Self-contained breathing apparatus and full protective clothing must be worn in case of fire. In the event of fire and/or explosion do not breathe fumes.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Keep unnecessary personnel away. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist/vapors. Do not touch or walk through spilled material. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

6.2 Environmental precautions
Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

6.3 Methods and materials for containment and cleaning up
Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Take precautionary measures against static discharge. Use only non-sparking tools. The product is immiscible with water and will spread on the water surface. Prevent entry into waterways, sewer, basements or confined areas.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water.

Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. Put material in suitable, covered, labeled containers. For waste disposal, see section 13 of the SDS.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. When using do not smoke. Explosion-proof general and local exhaust ventilation. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Avoid breathing dust/fume/gas/mist/vapors/spray. Avoid contact with eyes, skin, and clothing. Do not get this material on clothing. Avoid prolonged exposure. Should be handled in closed systems, if possible. Wear appropriate personal protective equipment. Wash thoroughly after handling. Avoid release to the environment. Observe good industrial hygiene practices.

7.2 Conditions for safe storage, including any incompatibilities

Store locked up. Keep away from heat and sources of ignition. This material can accumulate static charge which may cause spark and become an ignition source. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in a cool, dry place out of direct sunlight. Store in tightly closed container. Store in a well-ventilated place. Keep in an area equipped with sprinklers. Store away from incompatible materials (see Section 10 of the SDS).

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

1. Stoddard solvent (CAS: 8052-41-3)
TLV® (Inhalation): 100 ppm, 525 mg/m3 (ACGIH)
eye, skin, kidney damage, nausea, CNS impair

REL-TWA (Inhalation): 350 mg/m3 (NIOSH)

REL-ST (Inhalation): 350 mg/m3, 1800 mg/m3 (NIOSH)

PEL-TWA (Inhalation): 500 ppm (2900 mg/m3) (OSHA)

PEL-C (Inhalation): 100 ppm (Cal/OSHA)

TWA (Inhalation): 790 mg/m3; Australia (AU/SWA)
Advisory carc cat: Carc. 1B

2. Naphtha (petroleum) hydrotreated heavy (CAS: 64742-48-9 EC: 265-150-3)
PEL-TWA (Inhalation): 400 mg/m3 / 100 ppm (OSHA)

8.2 Appropriate engineering controls

Provide adequate ventilation, including appropriate local extraction, to ensure that the defined occupational exposure limit is not exceeded. Provide eyewash station and safety shower.

8.3 Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection
Wear safety glasses with side shields (or goggles).

Skin protection
Chemical resistant gloves are recommended. If contact with forearms is likely wear gauntlet style gloves.

Body protection
Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

Respiratory protection

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Thermal hazards
Wear appropriate thermal protective clothing, when necessary.

Environmental exposure controls
Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

SECTION 9: Physical and chemical properties

Basic physical and chemical properties

Physical state	Liquid
Appearance	Viscous liquid
Color	Brown to Black
Odor	Mild Petroleum Odor
Odor threshold	Not available.
Melting point/freezing point	No data available.
Boiling point or initial boiling point and boiling range	300F (148.89C)
Flammability	Not available.
Lower and upper explosion limit/flammability limit	
Flash point	> 100 - < 140°F (> 37.8 - < 60°C) Cleveland Open Cup
Explosive properties	Not available.
Auto-ignition temperature	No data available.
Decomposition temperature	Not available.
pH	Not available.
Kinematic viscosity	Not available.
Solubility	Insoluble
Partition coefficient n-octanol/water (log value)	
Vapor pressure	Not available.
Evaporation rate	Not available.
Density and/or relative density	Not available.
Relative vapor density	Not available.

SECTION 10: Stability and reactivity

10.1 Reactivity
The product is stable and non-reactive under normal conditions of use, storage and transport.

10.2 Chemical stability
Material is stable under normal conditions.

10.3 Possibility of hazardous reactions
Hazardous polymerization does not occur.

10.4 Conditions to avoid
Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.

10.5 Incompatible materials
Strong oxidizing agents.

10.6 Hazardous decomposition products
No hazardous decomposition products are known.

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity

Product	Species	Test Results
PA-1125 ASPHALT PRIMER		
Acute		
Oral		
LD50	Rat	330600 mg/kg

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation
Causes skin irritation.

Serious eye damage/irritation
May be irritating to eyes.

Respiratory or skin sensitization
Respiratory sensitization: Not a respiratory sensitizer.
Skin sensitization: None known.

Germ cell mutagenicity
May cause genetic defects.

Carcinogenicity
May cause cancer.

IARC Monographs. Overall Evaluation of Carcinogenicity
ASPHALT, OXIDIZED (CAS 64742-93-4) 2A Probably carcinogenic to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)
Not listed.

US. National Toxicology Program (NTP) Report on Carcinogens
Not listed.

Reproductive toxicity
Not available.

Specific target organ toxicity (STOT) - single exposure
May cause drowsiness or dizziness.

Specific target organ toxicity (STOT) - repeated exposure
May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard
Not available.

Additional information
Symptoms may be delayed.

Skin irritation. Repeated exposure may cause skin dryness and cracking. Causes serious eye irritation. Irritation to respiratory system. May cause drowsiness or dizziness. Symptoms of overexposure can include shortness of

breath, drowsiness, headaches, confusion, decreased coordination, visual disturbances and vomiting, and are reversible if exposure is stopped. Nausea, vomiting. Unconsciousness. May cause redness and pain.

SECTION 12: Ecological information

Toxicity
The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Product Species Test Results
PA-1125 ASPHALT PRIMER
Aquatic

Crustacea	EC50	Daphnia	2939.8572 mg/l, 48 hours
Fish	LC50	Fish	12194.8398 mg/l, 96 hours

* Estimates for product may be based on additional component data not shown.

Persistence and degradability
No data is available on the degradability of this product.

Mobility in soil
No data available.

Other adverse effects
No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

SECTION 13: Disposal considerations

Disposal methods

Product disposal
Dispose of this material and its container to hazardous or special waste collection point. Incinerate the material under controlled conditions in an approved incinerator. Do not incinerate sealed containers. Do not allow this material to drain into sewers/water supplies. If discarded, this product is considered a RCRA ignitable waste, D001. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations: Dispose in accordance with all applicable regulations.

Packaging disposal
Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

Waste treatment
Hazardous waste code: D001: Waste Flammable material with a flash point <140°F
The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

SECTION 14: Transport information

DOT (US)
UN Number: UN1999
Class: 3

Packing Group: III
Proper Shipping Name: Tars, liquid
Marine pollutant: No
Special precautions for user: Read safety instructions, SDS and emergency procedures before handling. If shipped by ground in individual containers that are less than 119 gallons (450 L): Not regulated as a hazardous material. (49 CFR 173.121)
Special provisions: B1, B52, IB3, T4, TP1, TP29
Packaging exceptions: 150
Packaging non bulk: 203
Packaging bulk: 242

IMDG
UN Number: UN1999
Class: 3
Packing Group: III
EMS Number: F-E, S-E
Proper Shipping Name: Tars, liquid
Marine pollutant: No
Special precautions for user: Read safety instructions, SDS and emergency procedures before handling.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: Not established.

IATA
UN Number: UN1999
Class: 3
Packing Group: III
Proper Shipping Name: Tars, liquid
Environmental hazards: No
ERG Code: 3L
Special precautions for user: Read safety instructions, SDS and emergency procedures before handling.

IATA; IMDG

General information: If shipped by ground in individual containers that are less than 119 gallons (450 L): Not regulated as a hazardous material (49 CFR 173.121). If shipped by vessel in individual containers that are less than 119 gallons (450 L) each, then IMDG 2.3.2.5 exception applies. Not subject to the provisions for marking, labelling, and testing of packages. "Transport in accordance with 2.3.2.5 of the IMDG code."

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations specific for the product in question

New Jersey Right To Know Components
Common name: ASPHALT, OXIDIZED
CAS number: 64742-93-4

Canadian Domestic Substances List (DSL)
Chemical name: Asphalt, oxidized
CAS: 64742-93-4

SARA 311/312 Hazards

SARA 313 Components

SARA 302 Components

Canadian Domestic Substances List (DSL)
Chemical name: Stoddard solvent
CAS: 8052-41-3

HMIS Rating

PA-1125 Asphalt Primer	
HEALTH	2
FLAMMABILITY	2
PHYSICAL HAZARD	0
PERSONAL PROTECTION	

SECTION 16: Other information

16.1 Further information/disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. Siplast cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.

PARADIENE® 20 TG

Commercial Product Data Sheet

Paradiene 20 TG is the modified bitumen base ply of the Paradiene 20 TG/30 TG System. Designed for use in homogeneous multi-layer modified bitumen roof membrane systems, Paradiene 20 TG consists of a lightweight random fibrous glass mat impregnated and coated with high quality styrene-butadiene-styrene (SBS) modified bitumen and surfaced with a silica parting agent. The back of the sheet is coated with a modified bitumen asphalt layer specifically formulated for torch application, is embossed with a grooved pattern, and is surfaced with a polyolefin burn-off film.

Contact Siplast for information on approved product uses.

USES:
BASE PLY

Standards	ASTM D6163 Type I, Grade S; CSA A123.23-15 Type A, Grade 3
Roll Length	Min: 33.5 ft (10.21 m)
Roll Width	Avg: 39.4 in (1.0 m)
Coverage	1.0 Square (100.7 ft²) (9.4 m²)
Coverage Weight Per Square	Min: 75 lb (3.7 kg/m²)
Laying Lines	3 in (76.2 mm) & 4 in (102 mm) Line Color: White
Top Surfacing	Mineral Parting Agent
Back Surfacing	Polyolefin Burn-off Film
Product Options	RoofTag

PRODUCT INFORMATION

Application

Refer to the Siplast Technical Guide for detailed application information and slope limitations. Paradiene 20 TG is lapped 3 inches (76.2 mm) side and end.

Storage and Handling

All Siplast roll roofing products should be stored on end on a clean, flat surface. Rolls should not be dropped on ends or edges or stored in a leaning position. Deformation resulting from these actions will make proper installation difficult. All roofing products should be stored in a dry place out of direct exposure to the elements and should not be double stacked. Material should be handled so that it remains dry prior to and during installation.

See product packaging and the Safety Data Sheet for specific information on the safe handling of this product.

Packaging

Pallet: 41 in x 48 in (104 cm x 122 cm) wooden pallet
Rolls Per Pallet: 25
Pallets Per Truckload (Typical): 18
Minimum Roll Weight: 76 lb (34.5 kg)
Max Pallet Weight (Typical): 2138 lb (970 kg)

Listings, Approvals, & Certifications

c UL us LISTED · FM APPROVED · MIAMI-DADE COUNTY APPROVED · ICC ES

Classified by UL in accordance with ANSI/UL 790. Refer to UL Product iQ for specific assemblies.
FM Approved - Refer to RoofNav.com for specific assemblies.
Meets or Exceeds CSA A123.23.

Siplast 14911 Quorum Dr., Suite 600 Dallas, TX 75254
201 Bewicke Ave., Suite 208 North Vancouver, BC, Canada V7M 3M7
Customer Service in North America 1.800.922.8800 www.siplast.com

PARADIENE® 20 TG

Physical and Mechanical Properties

siplast® With you every step of the way

U.S. TEST STANDARDS

Property (as Manufactured)		Values / Units	Test Method
Thickness (minimum)		110 mils (2.8 mm)	ASTM D5147 Section 6
Thickness (average)		114 mils (2.9 mm)	ASTM D5147 Section 6
*Peak Load	@ 73.4°F (23°C) (average)	30 lbf/inch (5.3 kN/m)	ASTM D5147 Section 7
	@ 0°F (-18°C) (average)	75 lbf/inch (13.2 kN/m)	
*Elongation @ Peak Load	@ 73.4°F (23°C) (average)	3%	ASTM D5147 Section 7
	@ 0°F (-18°C) (average)	3%	
*Ultimate Elongation @ 73.4°F (23°C) (average)		80%	ASTM D5147 Section 7
*Tear Strength (average)		40 lbf (0.18 kN)	ASTM D5147 Section 8
Water Absorption (maximum)		1%	ASTM D5147 Section 10
Dimensional Stability (maximum)		0.5%	ASTM D5147 Section 11
Low Temperature Flexibility (maximum)		-15°F (-26°C)	ASTM D5147 Section 12
Compound Stability (minimum)		250°F (121°C)	ASTM D5147 Section 16
Coating Thickness – Back Surface		≥40 mils (1 mm)	ASTM D5147 Section 17
Cyclic Fatigue		Paradiene 30 finish ply bonded to Paradiene 20 base ply, with an approved method of attachment, passes ASTM D5849 both as manufactured and after heat conditioning, according to ASTM D5147.	
		The above properties have been validated by PRI and are under continuous surveillance. The product has been validated to meet ASTM D6163-08, Type I, Grade S.	

CANADIAN TEST STANDARDS

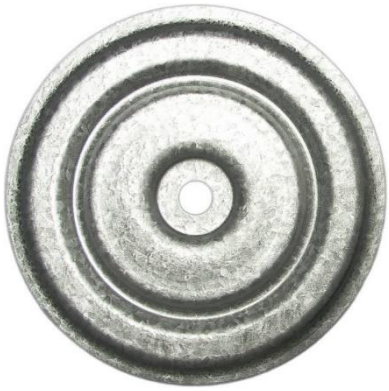
Property (as Manufactured)		Units	CAS A123.23 Requirement	Test Method	Test Performance
Thickness (minimum)		mm (mils)	2.0 (80)	ASTM D5147	2.8 (110)
Selvage Thickness (minimum)		mm (mils)	2.0 (80)	ASTM D5147	2.0 (78)
Mass Per Unit Area (minimum)		kg/m² (lb/100 ft²)	2.2 (45)	ASTM D5147	3.0 (61)
Back Surface Coating Thickness (minimum)		mm (mils)	1.0 (40)	ASTM D5147	1.0 (40)
*Strain Energy (Before After Heat Conditioning)	@ 23 ± 2°C (73.4 ± 3.6°F)	kN/m (lbf/inch)	See Tested Value	CSA A123.23-15	>0.5 (>2.9)
	@ -18 ± 2°C (-0.4 ± 3.6°F)				>0.3 (>1.7)
*Peak Load (Before and After Heat Conditioning)	@ 23 ± 2°C (73.4 ± 3.6°F)	kN/m (lbf/inch)	5.3 (30)	ASTM D5147	>7.5 (>43)
	@ -18 ± 2°C (-0.4 ± 3.6°F)		5.3 (30)		>14.2 (>81)
*Elongation @ Peak Load (Before and After Heat Conditioning)	@ 23 ± 2°C (73.4 ± 3.6°F)	%	2	ASTM D5147	>4
	@ -18 ± 2°C (-0.4 ± 3.6°F)		1		>4
*Ultimate Elongation (Before and After Heat Conditioning), @ 23 ± 2°C (73.4 ± 3.6°F)		%	3	ASTM D5147	>84
Dimensional Stability (maximum)		%	0.5	ASTM D5147	0.5
Low Temperature Flexibility (maximum)		°C (°F)	-18 (-0.4)	ASTM D5147	-26 (-15)
Low Temperature Weathered Flexibility (maximum)		°C (°F)	N/A	ASTM D5147	N/A
Compound Stability (minimum)		°C (°F)	91 (195)	ASTM D5147	91 (195)
Resistance to Puncture		N/A	N/A	CSA A123.23	N/A
Granule Loss		g (oz)	N/A	ASTM D5147	N/A

Data is based upon typical product performance and is subject to normal manufacturing and packaging tolerance and variation.
*The value reported is the lower of either MD or XD.

Siplast 14911 Quorum Dr., Suite 600 Dallas, TX 75254
201 Bewicke Ave., Suite 208 North Vancouver, BC, Canada V7M 3M7
Customer Service in North America 1.800.922.8800 www.siplast.com

PARAFAST® 3" TF PLATES

Commercial Product Data Sheet



Parafast® 3" TF Plates are manufactured from Galvalume® coated steel. The design provides an even distribution of loads and eliminates sharp corners that can damage the rigid insulation or membrane. Parafast 3" TF Plates are designed to be used with Parafast Fasteners.

Contact Siplast for more information on approved product uses.

USES:
MEMBRANE SEAM PLATE

Parafast 3" TF Plates			
Size/Diam.	Product No.	Pieces/Pail	Weight
3 in (mm)	45S290	1000	35 lb (15.88 kg)

PRODUCT INFORMATION

Application

Refer to the applicable Siplast Technical Guide for detailed application information.

Storage and Handling

All Siplast roofing products should be stored on a clean, flat surface out of direct exposure to the elements. Material should be handled so that it remains dry prior to and during installation.

See product packaging and the Safety Data Sheet for specific information on the safe handling of this product.

Packaging

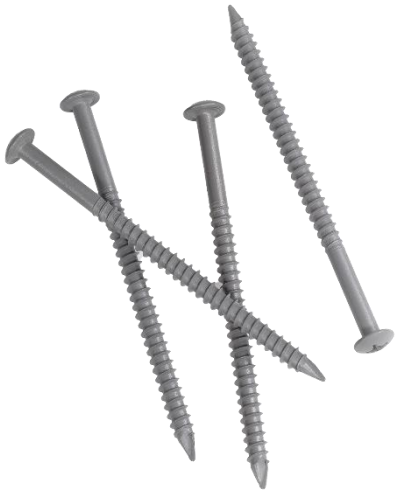
Packaging: Plastic Pail
Pails Per Pallet: 40
Weight Per Pail: 35 lb (15.88 kg)

Listings, Approvals, & Certifications

FM APPROVED

FM Approved - Refer to RoofNav.com for specific assemblies.

Siplast 14911 Quorum Dr., Suite 600 Dallas, TX 75254
201 Bewicke Ave., Suite 208 North Vancouver, BC, Canada V7M 3M7
Customer Service in North America 1.800.922.8800 www.siplast.com



PARAFAST® HD FASTENER

Commercial Product Data Sheet

The Parafast HD Fastener is a #14 heavy duty roofing screw which is coated with CR-10 corrosion resistant coating. The Parafast HD Fastener, in conjunction with appropriate Parafast plate, is designed to secure roof insulation and substrate panels, base sheets, and Parasolo membranes to structural decks.

Contact Siplast for information on approved product uses.

USES:
ROOFING FASTENER

Thread Diameter	0.245 in (2.5 mm)
Shank Diameter	0.190 in (2 mm)
Head Diameter	0.435 in (11 mm)
Head Style	#3 Phillips Truss Head
Drive Bit	#3 Phillips Drive Bit Included in Each Carton

Length	Product No.	Thread Lengths	Units/ Pkg	Box Weight
1-1/4 in	45S10	Full	1000	13 lb
1-3/4 in	45S12	Full	1000	17 lb
2 in	45S13	Full	1000	19 lb
3 in	45S14	Full	1000	27 lb
4 in	45S15	3 in	1000	34 lb
5 in	45S16	4 in	500	23 lb
6 in	45S17	4 in	500	26 lb
7 in	45S18	4 in	500	30 lb
8 in	45S19	4 in	500	34 lb
9 in	45S20	4 in	500	37 lb
10 in	45S21	4 in	500	40 lb
11 in	45S22	4 in	500	44 lb
12 in	45S23	4 in	250	25 lb

Longer lengths (up to 24") available upon request. Contact Siplast for information.

PRODUCT INFORMATION

Application

Refer to the applicable Siplast Technical Guide for detailed application information.

Storage and Handling

All Siplast roofing products should be stored upright on a clean, flat surface out of direct exposure to the elements. Material should be handled so that it remains dry prior to and during installation.

See product packaging and the Safety Data Sheet for specific information on the safe handling of this product.

Packaging

Corrugated Boxes (Various Sizes)

Listings, Approvals, & Certifications

FM APPROVED

MIAMI-DADE COUNTY APPROVED

Current copies of all Siplast Commercial Product Data Sheets & Safety Data Sheets are posted on our website at www.siplast.com
Rev Date 10/2023

SAFETY DATA SHEET

Rev. September 15, 2022

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: **Siplast Roofing Product Fastener** (NVS Fastener, Parafast CD-10 Fastener, Parafast Fastener, Parafast HD Fastener, Parafast LD Fastener, Parafast PA Fastener, Parafast RetroDriller Fastener, Parafast SXHD Fastener, Para-Lok Fastener, Zono-Tite Fastener)

Supplier: Siplast, Inc.
14911 Quorum Drive, Ste. 600
Dallas, TX 75254 USA
Phone: 1-800-922-8800
www.Siplast.com

Product Use(s): Devices for roofing products applications

2. HAZARDS IDENTIFICATION

This product is an *Article* as per OSHA *Hazard Communication* regulations (29CFR 1910.1200) or *Manufactured Article* as per Canada's *Hazardous Products Act* (RSC 1985, c. H-3, as amended). As such, neither a *Safety Data Sheet* (*SDS*) nor a GHS-compliant label is required for this product. This *SDS* is provided to our customers as a courtesy.

Classification(s): GHS Physical Hazard and Health Hazard Classifications: None applicable
Physical Hazards Not Otherwise Classified: None
Health Hazards Not Otherwise Classified: None

Symbol(s): None applicable

Signal Word(s): None applicable

Hazard Statement(s): None applicable

Precautionary Statement(s): None applicable

3. COMPOSITION/INFORMATION ON INGREDIENTS

All Products Listed

Ingredient	CAS Number	Percentage	Impurities
Iron	7440-50-8	91 – 99	None known
Chromium	7440-47-3	<1 - 2	None known
Manganese	7439-96-5	<1 – 2	None known

Nickel	7440-02-0	<1 - 2	None known
Silicon	7440-21-3	<1 - 2	None known

4. FIRST AID MEASURES

Eyes:	Not applicable.
Skin:	Not applicable.
Ingestion:	Not applicable.
Inhalation:	Not applicable.
Guidance for Physician or Poison Control Center:	Not applicable.

5. FIRE FIGHTING MEASURES

Extinguishing Media:	Not applicable to other products.
Fire and Explosion Hazards:	Products that are alloys will not burn.
Firefighting Instructions:	No special firefighting measures are required.

6. ACCIDENTAL RELEASE MEASURES

Methods and Materials:	None applicable.
Personal Precautions:	None applicable.
Environmental Precautions:	None applicable.

7. HANDLING AND STORAGE

Handling Precautions:	None applicable.
Work and Hygiene Practices:	None applicable.
Storage Precautions:	None applicable.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

	Ingredients	OSHA PEL(s)	ACGIH TLV(s)
Ingredients Exposure Limits:	Chromium, Iron, Manganese, Nickel, Silicon	Not applicable to this form of product	Not applicable to this form of product

	Ingredients	Biological Limits
Ingredients Biological Limits:	Chromium, Iron, Manganese, Nickel, Silicon	Not applicable to this form of product

Engineering Controls:	None applicable under anticipated conditions of use.
Eye/Face Protection:	None applicable under anticipated conditions of use.
Skin Protection:	None applicable under anticipated conditions of use.
Respiratory Protection:	None applicable under anticipated conditions of use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: formed structures
Odor: none
Odor threshold: not applicable
pH: not applicable
Melting point: >480°F./250°C.
Freezing point: not applicable
Boiling point: not applicable
Boiling range: not applicable
Flash Point: not applicable
Autoignition Point: not applicable
Flammability Class: not applicable
Lower Explosive Limit: not applicable
Upper Explosive Limit: not applicable
Vapor pressure: not applicable
Vapor density: not applicable
Evaporation Rate: not applicable
Percent volatile: not applicable
Relative density (H_2O): 1.4 – 8.0
Bulk density: no data
Solubility (H_2O): insoluble
Oil-water partition coefficient: not applicable
Decomposition temperature: no data
Viscosity: not applicable
Pour Point: not applicable

10. STABILITY AND REACTIVITY

Stability:	Stable
Reactivity:	Not chemically reactive in anticipated manner of use.
Hazardous Polymerization:	Will not occur
Risk of Dangerous Reactions:	None reasonably foreseeable
Conditions to Avoid:	None reasonably foreseeable
Incompatible Materials:	Ammonium nitrate; peroxides; lithium; nitric oxide; chlorates; sulfur dioxide; halogens; chlorine trifluoride; nitrogen dioxide; sulfur; carbides; nitric acid; hydrazine;

	lithium; hydrazoic acid; dioxane; selenium; performic acid; phosphorus; titanium plus potassium perchlorate.
Potential Decomposition Byproducts:	For alloys, none are reasonably foreseeable.

11. TOXICOLOGICAL INFORMATION

Ingredients Toxicology Data	LD_{50} Oral	LD_{50} Dermal	LC_{50}
Chromium, Iron, Manganese, Nickel, Silicon	Not applicable to this form of product	Not applicable to this form of product	Not applicable to this form of product

Primary Route(s) of Entry:	None applicable.
Eye Hazards:	None applicable.
Skin Hazards:	None applicable.
Ingestion Hazards:	None applicable.
Inhalation Hazards:	None applicable.
Symptoms Related to Overexposure:	None applicable.
Delayed Effects from Long Term Overexposure:	None applicable.

11. TOXICOLOGICAL INFORMATION (continued)

Carcinogenicity:	Nickel is classified as a potential human carcinogen by IARC (“2b”, possibly carcinogenic to humans) and NTP (“R”, reasonably anticipated to be a human carcinogen). ACGIH, by contrast, classifies *nickel metal* as “A5” (not suspected as a human carcinogen). Exposure to nickel dust or fume is implausible under the anticipated conditions of the products’ use.
Germ Cell Mutagenicity:	Not applicable.
Reproductive Toxicity:	Not applicable.
Acute Toxicity Estimates:	None applicable.
Interactive effects of components:	Not applicable.

12. ECOLOGICAL INFORMATION

No data available for Aquatic Toxicity to Fish, Invertebrates, Plants, or Microorganisms, Toxicity to Terrestrial Animals, Toxicity to Terrestrial Plants, Persistence and Biodegradability, Bioaccumulation Potential, or Mobility in Soil. This product contains no ingredients known to deplete the ozone layer.

13. DISPOSAL CONSIDERATIONS

Dispose of as nonhazardous waste.

14. TRANSPORTATION INFORMATION

Not applicable.

15. REGULATORY INFORMATION

United States Regulatory Information

None applicable to the form of product.

Canadian Regulatory Information

None applicable to the form of product.

California Proposition 65 Information

These products contain nickel which is known to the State of California to cause cancer. However, the nickel in this product is bound within the steel alloy of this product and no exposure can occur. Prop 65 warnings are not required for stainless and other specialty steels under typical use scenarios. The available science and Prop 65 enforcement action precedent show that any potential exposures are minimal and do not rise to the level that would require a warning. For more information go to www.P65Warnings.ca.gov.

16. OTHER INFORMATION

Hazardous Materials Information System (HMIS III) Ratings:	Not applicable to the form of product.
Personal Protective Equipment:	None required under anticipated conditions of use.
National Fire Protection Association (NFPA) Ratings:	Not applicable to the form of product.
Revision Information:	Publication Date: Sept. 15 2022

DISCLAIMER

Our products and the information contained herein are supplied on the condition that the persons receiving same will make their own determination as to suitability for their purposes prior to use. In no event will Siplast be responsible for damages of any nature whatsoever resulting from the use of or reliance upon information from this sheet or the products to which the information refers. Siplast does not warrant the accuracy or timeliness of the information in this sheet and has no liability for any errors or omissions in these materials. **The information contained in this SDS was provided by a third party to Siplast.**

This sheet is provided on an "as is" basis. No representations or warranties, either express or implied, of fitness for a particular purpose or of any other nature are made hereunder with respect to the information provided or the products to which the information refers.