

SAFETY DATA SHEET

RoofGhard Base Coat HS

Jul 29, 2020

1. Identification

Product Name

RoofGhard Base Coat HS

Identified uses

Acrylic Base Coat

COMPANY IDENTIFICATION

Ghemco
PO Box 3977
Santa Fe Springs, CA 90670

Customer Information Number: 562-250-4745

EMERGENCY TELEPHONE NUMBER

Chemtrec: 800-424-9300 (Account CCN837338
or International: 703-527-3887 (Account CCN837338)

2. Hazards Identification

Classification of the substance or mixture This material is hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29CFR 1910.1200.

Hazard Class:

Flammable liquids	Category 3
Serious eye damage/eye irritation	Category 2A
Skin corrosion/irritation	Category 2
Skin sensitization	Category 1
Specific target organ toxicity - repeated exposure (Oral)	Category 2
Carcinogen (Inhalation)	Category 1

Label elements

Hazard Symbol:



Signal Word: Danger

Hazards of product:

Flammable liquid and vapour.

Causes skin irritation.

Causes serious eye irritation.

May cause an allergic skin reaction.

May cause cancer by inhalation.

May cause damage to nervous system, respiratory system and kidneys through prolonged or repeated exposure.

Precautionary Statements:

Prevention: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Wear protective gloves/ protective clothing/ eye protection/ face protection. Do not handle until all safety precautions have been read and understood.

Response: IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower. If skin irritation occurs: Get medical advice/ attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF exposed or concerned: Get medical advice/ attention.

Storage: Store in a well-ventilated place. Keep cool.

Disposal: Dispose of contents and container to licensed, permitted incinerator, or other thermal destruction device.

3. Composition Information

This product is a mixture.

Component	CAS #	Amount
Titanium dioxide	13463-67-7	>= 0.0 - <= 50.0 %
Aluminum hydroxide	21645-51-2	>= 0.0 - <= 6.0 %
Silica	7631-86-9	>= 0.0 - <= 6.0 %
Limestone	1317-65-3	>= 0.0 - <= 50.0 %
Silica, crystalline (quartz)	14808-60-7	>= 0.0 - <= 10.0 %
Syenite, nepheline	37244-96-5	>= 0.0 - <= 40.0 %
Zinc oxide	1314-13-2	>= 0.0 - <= 5.0 %
Diatomaceous earth	61790-53-2	>= 0.0 - <= 10.0 %
Isothiazolinone chloride	55965-84-9	>= 0.0 - <= 0.005 %
Water	7732-18-5	>= 30.0 - <= 80.0 %
Polymer(s)	Not Available	>= 1.0 - <= 60.0 %
Propylene glycol	57-55-6	>= 0.0 - <= 10.0 %
Isobutyric acid, ester with 2,2,4-trimethyl-1,3-pentanediol	25265-77-4	>= 0.0 - <= 10.0 %
Dipropylene glycol n-butylether	29911-28-2	>= 0.0 - <= 10.0 %
Ethylene glycol	107-21-1	>= 0.0 - <= 10.0 %
Ethanol	64-17-5	>= 0.0 - <= 10.0 %
Diethylene glycol monobutyl ether	112-34-5	>= 0.0 - <= 10.0 %
Ethylene glycol monobutyl ether	111-76-2	>= 0.0 - <= 10.0 %

4. First-aid measures

Description of first aid measures

General advice: If potential for exposure exists refer to Section 8 for specific personal protective equipment. First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection).

Inhalation: Move person to fresh air. If not breathing, give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask, etc). If breathing is difficult, oxygen should be administered by qualified personnel. Call a physician or transport to a medical facility.

Skin Contact: Remove material from skin immediately by washing with soap and plenty of water. Remove contaminated clothing and shoes while washing. Seek medical attention if irritation persists. Wash clothing before reuse. Discard items which cannot be decontaminated, including leather articles such as shoes, belts and watchbands. Suitable emergency safety shower facility should be available in work area.

Eye Contact: Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist. Suitable emergency eye wash facility should be available in work area.

Ingestion: Do not induce vomiting. Seek medical attention immediately.

Most important symptoms and effects, both acute and delayed

Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

Indication of immediate medical attention and special treatment needed

Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient. If several ounces (60 - 100 ml) of ethylene glycol have been ingested, early administration of ethanol may counter the toxic effects (metabolic acidosis, renal damage). Consider hemodialysis or peritoneal dialysis & thiamine 100 mg plus pyridoxine 50 mg intravenously every 6 hours. If ethanol is used, a therapeutically effective blood concentration in the range of 100 - 150 mg/dl may be achieved by a rapid loading dose followed by a continuous intravenous infusion. Consult standard literature for details of treatment. 4-Methyl pyrazole (Antizol®) is an effective blocker of alcohol dehydrogenase and should be used in the treatment of ethylene glycol (EG), di- or triethylene glycol (DEG, TEG), ethylene glycol butyl ether (EGBE), or methanol intoxication if available. Fomepizole protocol (Brent, J. et al., New England Journal of Medicine, Feb. 8, 2001, 344:6, p. 424-9): loading dose 15 mg/kg intravenously, follow by bolus dose of 10 mg/kg every 12 hours; after 48 hours, increase bolus dose to 15 mg/kg every 12 hours. Continue fomepizole until serum methanol, EG, DEG, TEG or EGBE are undetectable. The signs and symptoms of poisoning include anion gap metabolic acidosis, CNS depression, renal tubular injury, and possible late stage cranial nerve involvement. Respiratory symptoms, including pulmonary edema, may be delayed. Persons receiving significant exposure should be observed 24-48 hours for signs of respiratory distress. In severe poisoning, respiratory support with mechanical ventilation and positive end expiratory pressure may be required. If lavage is performed, suggest endotracheal and/or esophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. May cause asthma-like (reactive airways) symptoms. Bronchodilators, expectorants, antitussives and corticosteroids may be of help. Maintain adequate ventilation and oxygenation of the patient. If burn is present, treat as any thermal burn, after decontamination. In cases where several ounces (60 - 100 ml) have been ingested, consider the use of ethanol and hemodialysis in the treatment. Consult standard literature for details of treatment. Due to structural analogy and clinical data, this material may have a mechanism of intoxication similar to ethylene glycol. On that basis, treatment similar to ethylene glycol intoxication may be of benefit.

5. Fire Fighting Measures

Suitable extinguishing media

Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. Do not use direct water stream. Straight or direct water streams may not be effective to extinguish fire.

Alcohol resistant foams (ATC type) are preferred. General purpose synthetic foams (including AFFF) or protein foams may function, but will be less effective.

Special hazards arising from the substance or mixture

Hazardous Combustion Products: During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Carbon monoxide. Carbon dioxide.

Unusual Fire and Explosion Hazards: Violent steam generation or eruption may occur upon application of direct water stream to hot liquids. Flammable mixtures may exist within the vapor space of containers at room temperature. Flammable concentrations of vapor can accumulate at temperatures above flash point; see Section 9.

Advice for firefighters

Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry. Water may not be effective in extinguishing fire. Burning liquids may be extinguished by dilution with water. Do not use direct water stream. May spread fire. Eliminate ignition sources. Move container from fire area if this is possible without hazard. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage. Contain fire water run-off if possible. Fire water run-off, if not contained, may cause environmental damage. Review the "Accidental Release Measures" and the "Ecological Information" sections of this (M)SDS.

Special Protective Equipment for Firefighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). Avoid contact with this material during fire fighting operations. If contact is likely, change to full chemical resistant fire fighting clothing with self-contained breathing apparatus. If this is not available, wear full chemical resistant clothing with self-contained breathing apparatus and fight fire from a remote location. For protective equipment in post-fire or non-fire clean-up situations, refer to the relevant sections.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures: Isolate area. Keep unnecessary and unprotected personnel from entering the area. Refer to Section 7, Handling, for additional precautionary measures. Keep upwind of spill. Ventilate area of leak or spill. No smoking in area. For large spills, warn public of downwind explosion hazard. Check area with combustible gas detector before reentering area. Ground and bond all containers and handling equipment. Vapor explosion hazard. Keep out of sewers. Eliminate all sources of ignition in vicinity of spill or released vapor to avoid fire or explosion. Ground and bond all containers and handling equipment. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

Environmental precautions: Spills or discharge to natural waterways is likely to kill aquatic organisms. Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

Methods and materials for containment and cleaning up: Contain spilled material if possible. Ground and bond all containers and handling equipment. Collect in suitable and properly labeled containers. See Section 13, Disposal Considerations, for additional information.

7. Handling and Storage

Handling

General Handling: Keep away from heat, sparks and flame. Do not swallow. Avoid prolonged or repeated contact with skin. Avoid contact with eyes, skin, and clothing. Avoid breathing vapor. Wash thoroughly after handling. Keep container closed. Use only with adequate ventilation. Never use air pressure for transferring product. No smoking, open flames or sources of ignition in handling and storage area. Containers, even those that have been emptied, can contain vapors. Do not cut, drill, grind, weld, or perform similar operations on or near empty containers. Electrically bond and ground

all containers and equipment before transfer or use of material. Use of non-sparking or explosion-proof equipment may be necessary, depending upon the type of operation. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

Storage

Minimize sources of ignition, such as static build-up, heat, spark or flame. Keep container closed. Flammable mixtures may exist within the vapor space of containers at room temperature.

8. Exposure Controls / Personal Protection

Exposure Limits

Component	List	Type	Value
Titanium dioxide	ACGIH	TWA	10 mg/m ³
	OSHA Table Z-1	PEL Total dust.	15 mg/m ³
	Z3	Total dust.	5 mg/m ³
	Z3	Respirable fraction.	15 mg/m ³
Aluminum hydroxide	ACGIH	TWA Respirable dust as Al	1 mg/m ³
	ACGIH	TWA Respirable fraction.	1 mg/m ³
Silica	Z3	TWA	0.8 mg/m ³ 20 millions of particles per cubic foot of air
	Z3	TWA	20 millions of particles per cubic foot of air
	Z3	TWA	0.8 mg/m ³ The exposure limit is calculated from the equation, $80/(\%SiO_2)$, using a value of 100% SiO ₂ . Lower values of % SiO ₂ will give higher exposure limits.
Limestone	OSHA Table Z-1	PEL Respirable fraction.	5 mg/m ³
	OSHA Table Z-1	PEL Total dust.	15 mg/m ³
Silica, crystalline (quartz)	ACGIH	TWA Respirable fraction.	0.025 mg/m ³
	Z3	TWA Respirable.	2.4 millions of particles per cubic foot of air The exposure limit is calculated from the equation, $250/(\%SiO_2+5)$, using a value of 100% SiO ₂ . Lower percentages of SiO ₂ will yield higher exposure limits.
	Z3	TWA Respirable.	0.1 mg/m ³ The exposure limit is calculated from the equation, $10/(\%SiO_2+2)$, using a value of 100% SiO ₂ . Lower percentages of SiO ₂ will yield higher exposure limits.

	Z3	TWA Total dust.	0.3 mg/m3 The exposure limit is calculated from the equation, $30/(\%SiO_2+2)$, using a value of 100% SiO2. Lower values of % SiO2 will give higher exposure limits.
Zinc oxide	ACGIH	TWA Respirable fraction.	2 mg/m3
	ACGIH	STEL Respirable fraction.	10 mg/m3
	OSHA Table Z-1	PEL Fume.	5 mg/m3
	OSHA Table Z-1	PEL Respirable fraction.	5 mg/m3
	OSHA Table Z-1	PEL Total dust.	15 mg/m3
Diatomaceous earth	Z3	TWA	20 millions of particles per cubic foot of air
	Z3	TWA	0.8 mg/m3 The exposure limit is calculated from the equation, $80/(\%SiO_2)$, using a value of 100% SiO2. Lower values of % SiO2 will give higher exposure limits.
Propylene glycol	WEEL	TWA Aerosol.	10 mg/m3
Dipropylene glycol n-butylether	IHG	TWA Aerosol	10 mg/m3
Ethylene glycol	ACGIH	Ceiling Aerosol.	100 mg/m3
Ethanol	OSHA Table Z-1	PEL	1,900 mg/m3 1,000 ppm
	ACGIH	STEL	1,000 ppm
Diethylene glycol monobutyl ether	IHG	TWA	35 ppm
	ACGIH	TWA Inhalable fraction and vapor.	10 ppm
Ethylene glycol monobutyl ether	ACGIH	TWA	20 ppm BEI
	OSHA Table Z-1	PEL	240 mg/m3 50 ppm SKIN

Personal Protection

Eye/Face Protection: Use chemical goggles.

Skin Protection: Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task.

Hand protection: Use gloves chemically resistant to this material.

Respiratory Protection: Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, use an approved respirator. Selection of air-purifying or positive-pressure supplied-air

will depend on the specific operation and the potential airborne concentration of the material. For emergency conditions, use an approved positive-pressure self-contained breathing apparatus.

Ingestion: Use good personal hygiene. Do not consume or store food in the work area. Wash hands before smoking or eating.

Engineering Controls

Ventilation: Use engineering controls to maintain airborne level below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, use only with adequate ventilation. Local exhaust ventilation may be necessary for some operations.

9. Physical and Chemical Properties

Appearance

Physical State	Liquid.
Color	Color is variable
Odor	No information available.
Odor Threshold	No test data available
pH	7.0 - 9.0
Melting Point	No test data available
Freezing Point	No test data available
Boiling Point (760 mmHg)	No test data available.
Flash Point - Closed Cup	34 °C (93 °F) <i>PMCC, ASTM D93</i>
Flash Point - Open Cup	No test data available
Flammable Limits In Air	Lower: No test data available Upper: No test data available
Vapor Pressure	No test data available
Vapor Density (air = 1)	No test data available
Specific Gravity (H ₂ O = 1)	No test data available
Solubility in water (by weight)	No test data available
Partition coefficient, n-octanol/water (log Pow)	No data available for this product. See Section 12 for individual component data.
Autoignition Temperature	No test data available
Decomposition Temperature	No test data available
Dynamic Viscosity	No test data available

10. Stability and Reactivity

Reactivity

No dangerous reaction known under conditions of normal use.

Chemical stability

Stable under recommended storage conditions. See Storage, Section 7.

Possibility of hazardous reactions

Polymerization will not occur.

Conditions to Avoid: Exposure to elevated temperatures can cause product to decompose.

Incompatible Materials: Avoid contact with oxidizing materials. Avoid contact with: Acids. Bases.

Hazardous decomposition products

Decomposition products depend upon temperature, air supply and the presence of other materials.

Decomposition products can include and are not limited to: Carbon monoxide. Carbon dioxide.

Aldehydes. Alcohols. Ethers. Ketones. Organic acids.

11. Toxicological Information

Acute Toxicity

Ingestion

Oral toxicity is expected to be moderate in humans due to ethylene glycol even though tests with animals show a lower degree of toxicity. Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury. Excessive exposure may cause central nervous system effects, cardiopulmonary effects (metabolic acidosis), and kidney failure. May cause nausea and vomiting. May cause abdominal discomfort or diarrhea. In animals, effects have been reported on the following organs: blood (hemolysis) and secondary effects on the kidney and liver. Human red blood cells have been shown to be significantly less sensitive to hemolysis than those of rodents and rabbits. Massive ingestion of ethylene glycol monobutyl ether (attempted suicides) may produce metabolic acidosis and subsequent secondary effects such as hemolysis, central nervous system and kidney effects.

For Ethylene glycol: Lethal Dose, Humans 3 Ounces

As product: Single dose oral LD50 has not been determined. Based on information for component(s): Estimated. LD50, rat > 5,000 mg/kg

Aspiration hazard

Based on physical properties, not likely to be an aspiration hazard.

Dermal

Prolonged skin contact is unlikely to result in absorption of harmful amounts.

As product: The dermal LD50 has not been determined. Based on information for component(s): Estimated. LD50, rabbit > 2,000 mg/kg

Inhalation

Prolonged excessive exposure may cause adverse effects. Excessive exposure may cause irritation to upper respiratory tract (nose and throat) and lungs. May cause central nervous system depression. Symptoms of excessive exposure may be anesthetic or narcotic effects; dizziness and drowsiness may be observed. In animals, effects have been reported on the following organs: blood (hemolysis) and secondary effects on the kidney and liver. Human red blood cells have been shown to be significantly less sensitive to hemolysis than those of rodents and rabbits.

As product: The LC50 has not been determined.

Eye damage/eye irritation

May cause moderate eye irritation. May cause slight corneal injury.

Skin corrosion/irritation

Brief contact may cause skin irritation with local redness. Repeated exposure may cause irritation, even a burn. May cause more severe response on covered skin (under clothing, gloves). May cause drying and flaking of the skin.

Sensitization**Skin**

For the minor component(s): Has caused allergic skin reactions when tested in guinea pigs.

Respiratory

No relevant data found.

Repeated Dose Toxicity

Based on information for component(s): In humans, effects have been reported on the following organs: Kidney. Central nervous system. Liver. In humans, symptoms may include: Nystagmus (involuntary eye movement). Central nervous system depression. May cause dizziness and drowsiness. Headache. In animals, effects have been reported on the following organs: Blood. Lung. Kidney effects have been observed in male rats. These effects are believed to be species specific and unlikely to occur in humans. Repeated excessive exposure to crystalline silica may cause silicosis, a progressive and disabling disease of the lungs. In rare cases, repeated excessive exposure to propylene glycol may cause central nervous system effects.

Chronic Toxicity and Carcinogenicity

Contains component(s) which have caused cancer in humans. Contains component(s) which have caused cancer in laboratory animals. In long-term animal studies with ethylene glycol butyl ether, small but statistically significant increases in tumors were observed in mice but not rats. The effects are not believed to be relevant to humans. If the material is handled in accordance with proper industrial handling procedures, exposures should not pose a carcinogenic risk to man. Lung fibrosis and tumors have been observed in rats exposed to titanium dioxide in two lifetime inhalation studies. Effects are believed to be due to overloading of the normal respiratory clearance mechanisms caused by the extreme study conditions. Workers exposed to titanium dioxide in the workplace have not shown an unusual incidence of chronic respiratory disease or lung cancer. Titanium dioxide was not carcinogenic in laboratory animals in lifetime feeding studies.

Carcinogenicity Classifications:

Component	List	Classification
Titanium dioxide	IARC	Possibly carcinogenic to humans.; 2B
Silica, crystalline (quartz)	NTP	Known carcinogen.
	ACGIH	Suspected human carcinogen.; Group A2
	IARC	Carcinogenic to humans.; 1
Ethylene glycol monobutyl ether	ACGIH	Confirmed animal carcinogen with unknown relevance to humans.; Group A3

Developmental Toxicity

Based on information for component(s): Has been toxic to the fetus in laboratory animals at doses toxic to the mother. Has caused birth defects in lab animals at high doses. Based on animal studies, ingestion of very large amounts of ethylene glycol appears to be the major and possibly only route of exposure to produce birth defects. Exposures by inhalation or skin contact, the primary routes of occupational exposure, had minimal effect on the fetus, in animal studies.

Reproductive Toxicity

Based on information for component(s): Ingestion of large amounts of ethylene glycol has been shown to interfere with reproduction in animals.

Genetic Toxicology

Contains component(s) which were negative in some in vitro genetic toxicity studies and positive in others. Contains component(s) which were negative in some animal genetic toxicity studies and positive in others.

Component Toxicology - Titanium dioxide

Inhalation	No deaths occurred at this concentration. LC50, 4 h, Dust, rat, male > 6.82 mg/l
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Component Toxicology - Silica

Inhalation	Maximum attainable concentration. No deaths occurred at this concentration. LC50, 4 h, Dust, rat > 2.08 mg/l
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Component Toxicology - Limestone

Inhalation	Maximum attainable concentration. No deaths occurred at this concentration. LC50, 4 h, Aerosol, rat > 3.0 mg/l
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Component Toxicology - Zinc oxide

Inhalation	LC50, 4 h, rat > 5 mg/l
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Component Toxicology - Diatomaceous earth

Inhalation	No deaths occurred at this concentration. LC50, 4 h, rat > 0.69 mg/l
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Component Toxicology - Isothiazolinone chloride

Inhalation	LC50, rat 0.33 mg/l
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Component Toxicology - Propylene glycol

Inhalation	No deaths occurred at this concentration. LC50, 2 h, Aerosol, rabbit 317.042 mg/l
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Component Toxicology - Isobutyric acid, ester with 2,2,4-trimethyl-1,3-pentanediol

Inhalation	No deaths occurred at this concentration. LC50, 6 h, rat > 3.55 mg/l
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Component Toxicology - Dipropylene glycol n-butylether

Inhalation	As product: The LC50 has not been determined. , 4 h
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Inhalation	No deaths occurred at this concentration. LC0, 4 h, Aerosol, rat > 2.04 mg/l
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Component Toxicology - Ethylene glycol

Inhalation	LC50, 6 h, Aerosol, rat, male and female > 2.5 mg/l
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Component Toxicology - Ethanol

Inhalation	LC50, 4 h, Vapor, rat 124.7 mg/l
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Component Toxicology - Ethylene glycol monobutyl ether

Inhalation	LC0, 1 h, Vapor, guinea pig > 3.1 mg/l
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Inhalation	No deaths occurred at this concentration.
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12. Ecological Information

Toxicity

Data for Component: Titanium dioxide

Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).

Fish Acute & Prolonged Toxicity

NOEC mortality, *Leuciscus idus* (Golden orfe), static test, 48 h: > 1,000 mg/l

Aquatic Invertebrate Acute Toxicity

EC50, *Daphnia magna* (Water flea), static test, 48 h, immobilization: > 1,000 mg/l

Data for Component: Aluminum hydroxide

Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).

Fish Acute & Prolonged Toxicity

NOEC, fish, 96 h: 100 mg/l

Data for Component: Silica

Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).

Fish Acute & Prolonged Toxicity

LC50, *Danio rerio* (zebra fish), 96 h: 5,000 - 10,000 mg/l

Aquatic Invertebrate Acute Toxicity

EC50, *Daphnia magna* (Water flea), 24 h, immobilization: > 10,000 mg/l

Aquatic Plant Toxicity

EC50, *Pseudokirchneriella subcapitata* (green algae), biomass growth inhibition, 72 h: 440 mg/l

Data for Component: Limestone

Material is practically non-toxic to fish on an acute basis (LC50 > 100 mg/L).

Fish Acute & Prolonged Toxicity

LC50, *Gambusia affinis* (Mosquito fish), static test, 96 h: > 56,000 mg/l

Data for Component: Silica, crystalline (quartz)

Not expected to be acutely toxic to aquatic organisms.

Data for Component: Syenite, nepheline

No relevant data found.

Data for Component: Zinc oxide

Material is very highly toxic to aquatic organisms on an acute basis (LC50/EC50 <0.1 mg/L in the most sensitive species).

Fish Acute & Prolonged Toxicity

LC50, *Oncorhynchus mykiss* (rainbow trout), static test, 96 h: 0.14 - 1.1 mg/l

Aquatic Invertebrate Acute Toxicity

EC50, *Daphnia magna* (Water flea), static test, 48 h, immobilization: 0.07 mg/l

Data for Component: Diatomaceous earth

For similar material(s): Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).

Data for Component: Isothiazolinone chloride

Material is very highly toxic to aquatic organisms on an acute basis (LC50/EC50 <0.1 mg/L in the most sensitive species).

Fish Acute & Prolonged Toxicity

LC50, *Oncorhynchus mykiss* (rainbow trout), flow-through test, 96 h: 0.19 mg/l

LC50, *Lepomis macrochirus* (Bluegill sunfish), flow-through test, 96 h: 0.28 mg/l

Aquatic Invertebrate Acute Toxicity

LC50, Daphnia magna (Water flea), flow-through test, 48 h: 0.16 mg/l

Aquatic Plant Toxicity

EC50, Pseudokirchneriella subcapitata (green algae), 72 h: 0.027 mg/l

NOEC, Skeletonema costatum, static, Growth rate inhibition, 72 h: 0.0014 mg/l

Fish Chronic Toxicity Value (ChV)

rainbow trout (Oncorhynchus mykiss), flow-through test, 14 d, NOEC, NOEC:0.05 mg/l

Aquatic Invertebrates Chronic Toxicity Value

Daphnia magna (Water flea), flow-through test, 21 d, NOEC, NOEC: 0.1 mg/l

Data for Component: **Polymer(s)**

No relevant data found.

Data for Component: **Propylene glycol**

Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).

Fish Acute & Prolonged Toxicity

LC50, Oncorhynchus mykiss (rainbow trout), static test, 96 h: 40,613 mg/l

Aquatic Invertebrate Acute Toxicity

LC50, Ceriodaphnia Dubia (water flea), static test, 48 h: 18,340 mg/l

Aquatic Plant Toxicity

ErC50, Pseudokirchneriella subcapitata (green algae), Growth rate inhibition, 96 h: 19,000 mg/l

Toxicity to Micro-organisms

EC50, activated sludge test (OECD 209), Respiration inhibition, 3 h: > 1,000 mg/l

Aquatic Invertebrates Chronic Toxicity Value

Ceriodaphnia Dubia (water flea), semi-static test, 7 d, number of offspring, NOEC: 13020 mg/l

Data for Component: **Isobutyric acid, ester with 2,2,4-trimethyl-1,3-pentanediol**

Material is slightly toxic to aquatic organisms on an acute basis (LC50/EC50 between 10 and 100 mg/L in the most sensitive species tested).

Fish Acute & Prolonged Toxicity

LC50, Pimephales promelas (fathead minnow), static test, 96 h: 33 mg/l

Aquatic Invertebrate Acute Toxicity

EC50, Daphnia magna (Water flea), static test, 48 h, immobilization: > 95 mg/l

Aquatic Plant Toxicity

EC50, Pseudokirchneriella subcapitata (green algae), static test, Growth rate inhibition, 72 h: > 57 mg/l

Data for Component: **Dipropylene glycol n-butylether**

Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).

Fish Acute & Prolonged Toxicity

LC50, Poecilia reticulata (guppy), static test, 96 h: 841 mg/l

Aquatic Invertebrate Acute Toxicity

LC50, Daphnia magna (Water flea), static test, 48 h, immobilization: > 1,000 mg/l

Data for Component: **Ethylene glycol**

Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).

Fish Acute & Prolonged Toxicity

LC50, Pimephales promelas (fathead minnow), static test, 96 h: 72,860 mg/l

Aquatic Invertebrate Acute Toxicity

EC50, Daphnia magna (Water flea), static test, 48 h, immobilization: > 100 mg/l

Aquatic Plant Toxicity

ErC50, Pseudokirchneriella subcapitata (green algae), Growth rate inhibition, 96 h: 6,500 - 13,000 mg/l

Toxicity to Micro-organisms

EC50, activated sludge test (OECD 209), Respiration inhibition, 30 min: 225 mg/l

Data for Component: **Ethanol**

Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).

Fish Acute & Prolonged Toxicity

LC50, Oncorhynchus mykiss (rainbow trout), flow-through test, 96 h: 11,200 - 13,000 mg/l

Aquatic Invertebrate Acute Toxicity

EC50, Daphnia magna (Water flea), 48 h, immobilization: 5,414 mg/l

Aquatic Plant Toxicity

EbC50, Skeletonema costatum, biomass growth inhibition, 5 d: 10,943 - 11,619 mg/l

Data for Component: **Diethylene glycol monobutyl ether**

Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).

Fish Acute & Prolonged Toxicity

LC50, Lepomis macrochirus (Bluegill sunfish), static test, 96 h: 1,300 mg/l

Aquatic Invertebrate Acute Toxicity

EC50, Daphnia magna (Water flea), static test, 48 h, immobilization: > 100 mg/l

Aquatic Plant Toxicity

ErC50, alga Scenedesmus sp., static test, Growth rate inhibition, 96 h: > 100 mg/l

ErC50, alga Scenedesmus sp., static test, biomass growth inhibition, 96 h: > 100 mg/l

Toxicity to Micro-organisms

EC50; Bacteria, static test: 255 mg/l

Data for Component: **Ethylene glycol monobutyl ether**

Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).

Fish Acute & Prolonged Toxicity

LC50, Oncorhynchus mykiss (rainbow trout), static test, 96 h: 1,474 mg/l

Aquatic Invertebrate Acute Toxicity

EC50, Daphnia magna (Water flea), static test, 48 h, immobilization: 1,550 mg/l

Aquatic Plant Toxicity

EbC50, Pseudokirchneriella subcapitata (green algae), static test, biomass growth inhibition, 72 h: 911 mg/l

Toxicity to Micro-organisms

IC50; Bacteria: > 1,000 mg/l

Fish Chronic Toxicity Value (ChV)

Danio rerio (zebra fish), semi-static test, 21 d, NOEC:> 100 mg/l

Aquatic Invertebrates Chronic Toxicity Value

Daphnia magna (Water flea), semi-static test, 21 d, Other, NOEC: 100 mg/l

Persistence and DegradabilityData for Component: **Titanium dioxide**

Biodegradation is not applicable.

Data for Component: **Aluminum hydroxide**

Biodegradation is not applicable.

Data for Component: **Silica**

Biodegradation is not applicable.

Data for Component: **Limestone**

Biodegradation is not applicable.

Data for Component: **Silica, crystalline (quartz)**

Biodegradation is not applicable.

Data for Component: **Syenite, nepheline**

No relevant data found.

Data for Component: **Zinc oxide**

Biodegradation is not applicable.

Data for Component: **Diatomaceous earth**

Biodegradation is not applicable.

Data for Component: **Isothiazolinone chloride**

Considered to be rapidly degradable. Material is not readily biodegradable according to OECD/EEC guidelines.

OECD Biodegradation Tests:

Biodegradation	Exposure Time	Method	10 Day Window
< 50 %	10 d	No information available.	Not applicable

Data for Component: **Polymer(s)**

No relevant data found.

Data for Component: **Propylene glycol**

Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.

Biodegradation may occur under anaerobic conditions (in the absence of oxygen).

OECD Biodegradation Tests:

Biodegradation	Exposure Time	Method	10 Day Window
81 %	28 d	OECD 301F Test	pass
96 %	64 d	OECD 306 Test	Not applicable

Indirect Photodegradation with OH Radicals

Rate Constant	Atmospheric Half-life	Method
1.28E-11 cm ³ /s	10 h	Estimated.

Biological oxygen demand (BOD):

BOD 5	BOD 10	BOD 20	BOD 28
69.0 %	70.0 %	86.0 %	

Chemical Oxygen Demand: 1.53 mg/mg**Theoretical Oxygen Demand:** 1.68 mg/mgData for Component: **Isobutyric acid, ester with 2,2,4-trimethyl-1,3-pentanediol**

Material is readily biodegradable. Passes OECD test(s) for ready biodegradability. Material is ultimately biodegradable (reaches > 70% biodegradation in OECD test(s) for inherent biodegradability).

OECD Biodegradation Tests:

Biodegradation	Exposure Time	Method	10 Day Window
76 - 79 %	28 d	OECD 301B Test	pass
99.5 %	15 d	OECD 302B Test	Not applicable

Indirect Photodegradation with OH Radicals

Rate Constant	Atmospheric Half-life	Method
1.62420E-11 cm ³ /s	0.659 d	Estimated.

Theoretical Oxygen Demand: 2.44 mg/mgData for Component: **Dipropylene glycol n-butylether**

Material is readily biodegradable. Passes OECD test(s) for ready biodegradability. Material is ultimately biodegradable (reaches > 70% biodegradation in OECD test(s) for inherent biodegradability).

OECD Biodegradation Tests:

Biodegradation	Exposure Time	Method	10 Day Window
91 %	28 d	OECD 301E Test	pass
95 %	21 d	OECD 301A Test	pass
96 %	28 d	OECD 302B Test	Not applicable

Indirect Photodegradation with OH Radicals

Rate Constant	Atmospheric Half-life	Method
4.97E-11 cm ³ /s	2.6 h	Estimated.

Theoretical Oxygen Demand: 2.35 mg/mgData for Component: **Ethylene glycol**

Material is readily biodegradable. Passes OECD test(s) for ready biodegradability. Material is ultimately biodegradable (reaches > 70% biodegradation in OECD test(s) for inherent biodegradability).

OECD Biodegradation Tests:

Biodegradation	Exposure Time	Method	10 Day Window
90 - 100 %	10 d	OECD 301A Test	pass
90 %	1 d	OECD 302B Test	Not applicable

Theoretical Oxygen Demand: 1.29 mg/mg

Data for Component: Ethanol

Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.

OECD Biodegradation Tests:

Biodegradation	Exposure Time	Method	10 Day Window
> 70 %	5 d	OECD 301D Test	pass

Indirect Photodegradation with OH Radicals

Rate Constant	Atmospheric Half-life	Method
3.58E-12 cm ³ /s	2.99 d	Estimated.

Theoretical Oxygen Demand: 2.08 mg/mg

Data for Component: Diethylene glycol monobutyl ether

Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.

OECD Biodegradation Tests:

Biodegradation	Exposure Time	Method	10 Day Window
89 - 93 %	28 d	OECD 301C Test	Not applicable
100 %	28 d	OECD 302B Test	Not applicable

Indirect Photodegradation with OH Radicals

Rate Constant	Atmospheric Half-life	Method
3.62E-11 cm ³ /s	11 h	Estimated.

Biological oxygen demand (BOD):

BOD 5	BOD 10	BOD 20	BOD 28
27 %	60 %	81 %	

Theoretical Oxygen Demand: 2.17 mg/mg

Data for Component: Ethylene glycol monobutyl ether

Material is readily biodegradable. Passes OECD test(s) for ready biodegradability. Material is ultimately biodegradable (reaches > 70% biodegradation in OECD test(s) for inherent biodegradability).

OECD Biodegradation Tests:

Biodegradation	Exposure Time	Method	10 Day Window
90.4 %	28 d	OECD 301B Test	pass

Biological oxygen demand (BOD):

BOD 5	BOD 10	BOD 20	BOD 28
5.2 %	57 %	72.2 %	

Chemical Oxygen Demand: 2.21 mg/g

Theoretical Oxygen Demand: 2.30 mg/mg

Bioaccumulative potentialData for Component: Titanium dioxide

Bioaccumulation: Partitioning from water to n-octanol is not applicable.

Data for Component: Aluminum hydroxide

Bioaccumulation: Partitioning from water to n-octanol is not applicable.

Data for Component: Silica

Bioaccumulation: Partitioning from water to n-octanol is not applicable.

Data for Component: Limestone

Bioaccumulation: Partitioning from water to n-octanol is not applicable.

Data for Component: Silica, crystalline (quartz)

Bioaccumulation: Partitioning from water to n-octanol is not applicable.

Data for Component: Syenite, nepheline

Bioaccumulation: No relevant data found.

Data for Component: Zinc oxide

Bioaccumulation: Partitioning from water to n-octanol is not applicable.

Data for Component: Diatomaceous earth

Bioaccumulation: No relevant data found.

Data for Component: Isothiazolinone chloride

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

Partition coefficient, n-octanol/water (log Pow): 0.486 Measured

Data for Component: **Polymer(s)****Bioaccumulation:** No data available.Data for Component: **Propylene glycol****Bioaccumulation:** Bioconcentration potential is low (BCF < 100 or Log Pow < 3).**Partition coefficient, n-octanol/water (log Pow):** -1.07 Measured**Bioconcentration Factor (BCF):** 0.09; Estimated.Data for Component: **Isobutyric acid, ester with 2,2,4-trimethyl-1,3-pentanediol****Bioaccumulation:** Bioconcentration potential is low (BCF < 100 or Log Pow < 3).**Partition coefficient, n-octanol/water (log Pow):** 3.00 Estimated.**Bioconcentration Factor (BCF):** 60; Fish; Estimated.Data for Component: **Dipropylene glycol n-butylether****Bioaccumulation:** Bioconcentration potential is low (BCF < 100 or Log Pow < 3).**Partition coefficient, n-octanol/water (log Pow):** 1.523 Estimated.Data for Component: **Ethylene glycol****Bioaccumulation:** Bioconcentration potential is low (BCF < 100 or Log Pow < 3).**Partition coefficient, n-octanol/water (log Pow):** -1.36 MeasuredData for Component: **Ethanol****Bioaccumulation:** Bioconcentration potential is low (BCF < 100 or Log Pow < 3).**Partition coefficient, n-octanol/water (log Pow):** -0.31 MeasuredData for Component: **Diethylene glycol monobutyl ether****Bioaccumulation:** Bioconcentration potential is low (BCF < 100 or Log Pow < 3).**Partition coefficient, n-octanol/water (log Pow):** 1 MeasuredData for Component: **Ethylene glycol monobutyl ether****Bioaccumulation:** Bioconcentration potential is low (BCF < 100 or Log Pow < 3).**Partition coefficient, n-octanol/water (log Pow):** 0.81 Measured**Mobility in soil**Data for Component: **Titanium dioxide****Mobility in soil:** No data available.Data for Component: **Aluminum hydroxide****Mobility in soil:** No relevant data found.Data for Component: **Silica****Mobility in soil:** No relevant data found.Data for Component: **Limestone****Mobility in soil:** No relevant data found.Data for Component: **Silica, crystalline (quartz)****Mobility in soil:** No relevant data found.Data for Component: **Syenite, nepheline****Mobility in soil:** No relevant data found.Data for Component: **Zinc oxide****Mobility in soil:** No data available.Data for Component: **Diatomaceous earth****Mobility in soil:** No relevant data found.Data for Component: **Isothiazolinone chloride****Mobility in soil:** Potential for mobility in soil is very high (Koc between 0 and 50)., Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process.**Partition coefficient, soil organic carbon/water (Koc):** 28 Estimated.**Henry's Law Constant (H):** 4.96E-08 atm*m³/mole Estimated using a bond contribution method.Data for Component: **Polymer(s)****Mobility in soil:** No data available.Data for Component: **Propylene glycol****Mobility in soil:** Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process., Potential for mobility in soil is very high (Koc between 0 and 50).**Partition coefficient, soil organic carbon/water (Koc):** < 1 Estimated.**Henry's Law Constant (H):** 1.2E-08 atm*m³/mole Measured

Data for Component: Isobutyric acid, ester with 2,2,4-trimethyl-1,3-pentanediol

Mobility in soil: Potential for mobility in soil is very high (Koc between 0 and 50)., Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process.

Partition coefficient, soil organic carbon/water (Koc): 22 Estimated.

Henry's Law Constant (H): 1.07E-07 atm*m3/mole; 25 °C Estimated from vapor pressure and water solubility.

Data for Component: Dipropylene glycol n-butylether

Mobility in soil: Potential for mobility in soil is very high (Koc between 0 and 50).

Partition coefficient, soil organic carbon/water (Koc): 10 - 21 Estimated.

Henry's Law Constant (H): 3.78E-07 atm*m3/mole; 25 °C Estimated.

Data for Component: Ethylene glycol

Mobility in soil: Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process., Potential for mobility in soil is very high (Koc between 0 and 50).

Partition coefficient, soil organic carbon/water (Koc): 1 Estimated.

Henry's Law Constant (H): 8.05E-09 atm*m3/mole; 25 °C Estimated.

Distribution in Environment: Mackay Level 1 Fugacity Model:

Air	Water.	Biota	Soil	Sediment
0.03 %	100 %	0 %	0 %	0 %

Data for Component: Ethanol

Mobility in soil: Potential for mobility in soil is very high (Koc between 0 and 50).

Partition coefficient, soil organic carbon/water (Koc): 1.0 Estimated.

Henry's Law Constant (H): 5.00E-06 atm*m3/mole; 25 °C Measured

Data for Component: Diethylene glycol monobutyl ether

Mobility in soil: Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process., Potential for mobility in soil is very high (Koc between 0 and 50).

Partition coefficient, soil organic carbon/water (Koc): 2 Estimated.

Henry's Law Constant (H): 1.52E-09 atm*m3/mole; 25 °C Estimated.

Data for Component: Ethylene glycol monobutyl ether

Mobility in soil: Potential for mobility in soil is high (Koc between 50 and 150).

Partition coefficient, soil organic carbon/water (Koc): 67 Estimated.

Henry's Law Constant (H): 1.60E-06 atm*m3/mole Measured

Results of PBT and vPvB assessment

Data for Component: Titanium dioxide

This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

Data for Component: Aluminum hydroxide

This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).

Data for Component: Silica

This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

Data for Component: Limestone

This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).

Data for Component: Silica, crystalline (quartz)

This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

Data for Component: Syenite, nepheline

This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

Data for Component: Zinc oxide

This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

Data for Component: Diatomaceous earth

This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

Data for Component: Isothiazolinone chloride

This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

Data for Component: Polymer(s)

This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

Data for Component: Propylene glycol

This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).

Data for Component: Isobutyric acid, ester with 2,2,4-trimethyl-1,3-pentanediol

This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).

Data for Component: Dipropylene glycol n-butylether

This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).

Data for Component: Ethylene glycol

This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).

Data for Component: Ethanol

This substance is not considered to be persistent, bioaccumulating and toxic (PBT).

Data for Component: Diethylene glycol monobutyl ether

This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).

Data for Component: Ethylene glycol monobutyl ether

This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).

Other adverse effects**Data for Component: Titanium dioxide**

This substance is not in Annex I of Regulation (EC) No 1005/2009 on substances that deplete the ozone layer.

Data for Component: Aluminum hydroxide

This substance is not in Annex I of Regulation (EC) No 1005/2009 on substances that deplete the ozone layer.

Data for Component: Silica

This substance is not in Annex I of Regulation (EC) No 1005/2009 on substances that deplete the ozone layer.

Data for Component: Limestone

This substance is not in Annex I of Regulation (EC) No 1005/2009 on substances that deplete the ozone layer.

Data for Component: Silica, crystalline (quartz)

This substance is not in Annex I of Regulation (EC) No 1005/2009 on substances that deplete the ozone layer.

Data for Component: Syenite, nepheline

This substance is not in Annex I of Regulation (EC) No 1005/2009 on substances that deplete the ozone layer.

Data for Component: Zinc oxide

This substance is not in Annex I of Regulation (EC) No 1005/2009 on substances that deplete the ozone layer.

Data for Component: Diatomaceous earth

This substance is not in Annex I of Regulation (EC) No 1005/2009 on substances that deplete the ozone layer.

Data for Component: Isothiazolinone chloride

This substance is not in Annex I of Regulation (EC) No 1005/2009 on substances that deplete the ozone layer.

Data for Component: Polymer(s)

This substance is not in Annex I of Regulation (EC) No 1005/2009 on substances that deplete the ozone layer.

Data for Component: Propylene glycol

This substance is not in Annex I of Regulation (EC) No 1005/2009 on substances that deplete the ozone layer.

Data for Component: Isobutyric acid, ester with 2,2,4-trimethyl-1,3-pentanediol

This substance is not in Annex I of Regulation (EC) No 1005/2009 on substances that deplete the ozone layer.

Data for Component: Dipropylene glycol n-butylether

This substance is not in Annex I of Regulation (EC) No 1005/2009 on substances that deplete the ozone layer.

Data for Component: Ethylene glycol

This substance is not in Annex I of Regulation (EC) No 1005/2009 on substances that deplete the ozone layer.

Data for Component: Ethanol

This substance is not in Annex I of Regulation (EC) No 1005/2009 on substances that deplete the ozone layer.

Data for Component: Diethylene glycol monobutyl ether

This substance is not in Annex I of Regulation (EC) No 1005/2009 on substances that deplete the ozone layer.

Data for Component: Ethylene glycol monobutyl ether

This substance is not in Annex I of Regulation (EC) No 1005/2009 on substances that deplete the ozone layer.

13. Disposal Considerations

Disposal methods

NOTICE: Research sample for use by qualified personnel only. Upon completion of tests, dispose of material and container safely and in accord with federal, state/provincial and local laws and regulations. If further information is needed on disposal or use, consult Ghemco.

14. Transport Information

DOT Non-Bulk

Proper Shipping Name: RoofGhard Base Coat HS
Hazard Class: 3 **ID Number:** UN1139 **Packing Group:** PG III

IMDG

Proper Shipping Name: RoofGhard Base Coat HS
Hazard Class: 3 **ID Number:** UN1139 **Packing Group:** PG III
EMS Number: F-E,S-E
Marine pollutant: Yes

ICAO/IATA

Proper Shipping Name: RoofGhard Base Coat HS
Hazard Class: 3 **ID Number:** UN1139 **Packing Group:** PG III
Cargo Packing Instruction: 366
Passenger Packing Instruction: 355
Additional Information

MARINE POLLUTANT (zinc oxide)

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

15. Regulatory Information

OSHA Hazard Communication Standard

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312

Immediate (Acute) Health Hazard Yes
Delayed (Chronic) Health Hazard Yes

Fire Hazard	Yes
Reactive Hazard	No
Sudden Release of Pressure Hazard	No

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313

This product contains the following substances which are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and which are listed in 40 CFR 372.

Component	CAS #	Amount
Zinc oxide	1314-13-2	>= 0.0 - <= 5.0 %
Ethylene glycol	107-21-1	>= 0.0 - <= 10.0 %
Diethylene glycol monobutyl ether	112-34-5	>= 0.0 - <= 10.0 %
Ethylene glycol monobutyl ether	111-76-2	>= 0.0 - <= 10.0 %

Pennsylvania (Worker and Community Right-To-Know Act): Pennsylvania Hazardous Substances List and/or Pennsylvania Environmental Hazardous Substance List:

The following product components are cited in the Pennsylvania Hazardous Substance List and/or the Pennsylvania Environmental Substance List, and are present at levels which require reporting.

Component	CAS #	Amount
Titanium dioxide	13463-67-7	>= 0.0 - <= 50.0 %
Silica	7631-86-9	>= 0.0 - <= 6.0 %
Limestone	1317-65-3	>= 0.0 - <= 50.0 %
Silica, crystalline (quartz)	14808-60-7	>= 0.0 - <= 10.0 %
Zinc oxide	1314-13-2	>= 0.0 - <= 5.0 %
Diatomaceous earth	61790-53-2	>= 0.0 - <= 10.0 %
Propylene glycol	57-55-6	>= 0.0 - <= 10.0 %
Ethylene glycol	107-21-1	>= 0.0 - <= 10.0 %
Ethanol	64-17-5	>= 0.0 - <= 10.0 %
Diethylene glycol monobutyl ether	112-34-5	>= 0.0 - <= 10.0 %
Ethylene glycol monobutyl ether	111-76-2	>= 0.0 - <= 10.0 %

Pennsylvania (Worker and Community Right-To-Know Act): Pennsylvania Special Hazardous Substances List:

To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.

California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986)

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

Component	CAS #	Amount
Silica, crystalline (quartz)	14808-60-7	>= 0.0 - <= 10.0 %
Ethanol	64-17-5	>= 0.0 - <= 10.0 %

California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986)

WARNING: This product contains a chemical(s) known to the State of California to cause birth defects or other reproductive harm.

Component	CAS #	Amount
Ethanol	64-17-5	>= 0.0 - <= 10.0 %

US. Toxic Substances Control Act

All components of this product are either on the TSCA Inventory, are exempt from TSCA Inventory Requirements under 40 CFR 720.30, or comply with the PMN Polymer Exemption 40 CFR 723.250.

16. Other Information

Revision

Issue Date 08/12/2019 / Version:

Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

Legend

N/A	Not available
W/W	Weight/Weight
OEL	Occupational Exposure Limit
STEL	Short Term Exposure Limit
TWA	Time Weighted Average
ACGIH	American Conference of Governmental Industrial Hygienists, Inc.
IHG	Industrial Hygiene Guideline
WEEL	Workplace Environmental Exposure Level
HAZ_DES	Hazard Designation
Action Level	A value set by OSHA that is lower than the PEL which will trigger the need for activities such as exposure monitoring and medical surveillance if exceeded.

Ghemco urges each customer or recipient of this SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific SDSs, we are not and cannot be responsible for SDSs obtained from any source other than ourselves. If you have obtained an SDS from another source or if you are not sure that the SDS you have is current, please contact us for the most current version.