SAFETY DATA SHEET

1. Identification

Product identifier	**CHO-BOND® 1075**
Other means of identification	
SDS number	PHC-052
Product code	50-00-1075-0000; 50-01-1075-0000; 50-02-1075-0000; 50-02-1075-1000; 50-03-1075-0000; 50-15-1075-1000; 50-99-1075-0000
Recommended use	Moisture cure adhesive / sealant.
Recommended restrictions	No restrictions on use known.
Chemical family	Mixture of: Metal compounds; Silicone elastomer; Silicone; Silica
Manufacturer	
Company name	Parker Hannifin Corp.
Address	Chomerics Division 77 Dragon Court Woburn, MA, USA 01888
Telephone	(781) 935 4580
Website	www.chomerics.com
E-Mail	chomailbox@parker.com
Supplier information	Refer to Manufacturer
Emergency phone number	INFOTRAC - (800) 535-5053 (Within Continental US); (352) 323-3500 (Outside US)

2. Hazard(s) Identification

This material is classified as hazardous under OSHA regulations (29CFR 1910.1200) (Hazcom 2012).

Physical hazards	This mixture does not meet the classification criteria according to OSHA Hazcom 2012.
Health hazards	Serious eye damage/eye irritation - Category 2A Carcinogenicity - Category 2 Reproductive toxicity - Category 2
Environmental hazards	Not currently regulated by OSHA, refer to Section 12 for additional information.
OSHA defined hazards	This mixture does not meet the classification criteria according to OSHA Hazcom 2012.
Label elements	
Signal Word	WARNING!
Hazard statement(s)	Causes serious eye irritation. Suspected of causing cancer. Suspected of damaging fertility or the unborn child.
Precautionary statement(s)	
Prevention	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wash hands and face thoroughly after handling. Wear protective gloves/clothing and eye/face protection.
Response	IF exposed or concerned: 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 eye irritation persists: get medical advice/attention.
Storage	Store locked up.
Disposal	Dispose of contents/container in accordance with local regulation.

Hazard(s) not otherwise Classified (HNOC)	No OSHA defined hazard classes. Other hazards which do not result in classification: May slowly hydrolyze in the presence of water to: Methanol. Upon completion of the curing process, these hydrolysis products are no longer released. Toxic fumes, gases or vapors may evolve on burning. When heated above 150°C in air, may release formaldehyde gas. May be mildly irritating to skin and respiratory system. Inhalation of fumes may result in metal fume fever, a flu-like illness. May cause gastrointestinal irritation. Prolonged overexposure may cause slight liver and kidney effects, such as increased organ weights. Silver in the form of a finely divided dust may cause discoloration in contact with skin, and argyrosis in case of inhalation. Environmental precautions: Avoid release to the environment. See ECOLOGICAL INFORMATION, Section 12.
Supplemental Information	Use with adequate ventilation. Avoid contact with eyes, skin and clothing. Keep away from incompatibles. Keep away from extreme heat and direct flame.

3. Composition/information on ingredients

Mixture

Chemical name	Common name and synonyms	CAS number	Concentration (%)
Aluminum	Not available.	7429-90-5	35.0 - 70.0
Polydimethylsiloxane	Dimethyl Siloxane, Hydroxy-terminated	70131-67-8	10.0 - 25.0
Silver	Silver metal Argentum	7440-22-4	5.0 - 15.0
Octamethyltrisiloxane	Not available.	107-51-7	5.0 - 10.0
Trimethoxymethylsilane	Methyltrimethoxysilane	1185-55-3	0.5 - 2.0
Octamethylcyclotetrasiloxane	Cyclodimethicone	556-67-2	< 0.2
Methanol	Carbinol Methyl alcohol Methyl hydrate	67-56-1	< 0.2
titanium dioxide	Anatase Titanic acid anhydride	13463-67-7	< 0.15
The following ingredient may be released from the product only when heated above 150°C:			
Formaldehyde	Methanal Methyl Aldehyde Methylene oxide	50-00-0	Not known.

The exact concentrations of the above listed chemicals are being withheld as a trade secret.

4. First-aid measures

Inhalation	If inhaled, move to fresh air. If breathing is difficult, give oxygen by qualified medical personnel only. If breathing stops, provide artificial respiration. IF exposed or concerned: Get medical advice/attention.
Skin contact	For skin contact, wash with soap and water while removing contaminated clothing. If irritation or symptoms develop, seek medical attention. Wash contaminated clothing before reuse.
Eye contact	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Flush eyes with water for at least 15 minutes. If eye irritation persists: get medical advice/attention.
Ingestion	Do not induce vomiting. Never give anything by mouth to a person who is unconscious or is having convulsions. IF exposed or concerned: Get medical advice/attention.

Most important symptoms and effects, both acute and delayed	Causes serious eye irritation. Symptoms may include stinging, tearing, redness, swelling and blurred vision. May slowly hydrolyze in the presence of water to: Methanol. Upon completion of the curing process, these hydrolysis products are no longer released. Suspected of causing cancer by inhalation. Symptoms may include persistent coughing, shortness of breath, coughing up blood and wheezing. Suspected of damaging fertility or the unborn child. Symptoms may include reduced fetal weight, delayed ossification and persistent behavioural effects. Symptoms may also include significant reductions in mean live litter sizes and mean number of pups born. May be mildly irritating to skin and respiratory system. May cause coughing and breathing difficulties. Direct skin contact may cause temporary redness. Inhalation of fumes may result in metal fume fever, a flu-like illness. Symptoms of metal fume fever may include fever, fatigue, vomiting, muscle aches and shortness of breath. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Prolonged overexposure may cause slight liver and kidney effects, such as increased organ weights. Silver in the form of a finely divided dust may cause discoloration in contact with skin, and argyrosis in case of inhalation. When heated above 150°C in air, may release formaldehyde gas. Formaldehyde is an eye and throat irritant and acute toxicant. Formaldehyde may cause sensitization by skin contact. Formaldehyde may cause mutations to non-reproductive (somatic) cells, based on animal data. Formaldehyde is classified as carcinogenic.
Indication of any immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically.
General Information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

5. Fire-fighting measures

Suitable extinguishing media	Carbon dioxide (CO2); Dry chemical; Alcohol resistant foam.
Unsuitable extinguishing media	May react with water. Do not use water if possible.
Specific hazards arising from the chemical	May react with water, generating heat. May slowly hydrolyze in the presence of water to: Methanol. Upon completion of the curing process, these hydrolysis products are no longer released. Closed containers may rupture if exposed to excess heat or flame due to a build-up of internal pressure. Toxic fumes, gases or vapors may evolve on burning.
Special protective equipment and precautions 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. Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode.
Fire-fighting equipment/instructions	Move containers from fire area if safe to do so. Cool closed containers exposed to fire with water spray. Do not get water inside containers. Do not allow run-off from fire fighting to enter drains or water courses. Dike for water control.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	Not classified as flammable. However, may burn if exposed to extreme heat and flame.
Hazardous combustion products	Carbon oxides; Metal oxides; formaldehyde; Silicon oxides; Other unidentified organic compounds

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep people away from and upwind of spill/leak. Restrict access to area until completion of clean-up. Wear appropriate protective equipment. Refer to protective measures listed in sections 7 and 8.

Methods and materials for containment and cleaning up

Ventilate the area. Remove all sources of ignition. Prevent further leakage or spillage if safe to do so. Use inert, non-combustible absorbents to assist the pick up of material. Pick up and transfer to properly labeled containers. Contaminated absorbent material may pose the same hazards as the spilled product. Contact the proper local authorities. For waste disposal, see Section 13 of the SDS.

Environmental precautions

Prevent product from entering drains, sewers, waterways and soil.

7. Handling and storage

Precautions for safe handling

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.
Use with adequate ventilation. Wear suitable protective equipment during handling. Wear protective gloves/clothing and eye/face protection. Avoid breathing dust, fume or vapors. Avoid contact with skin, eyes and clothing. Keep away from extreme heat and direct flame. Protect from moisture. Keep away from incompatibles. Keep containers tightly closed when not in use. Wash thoroughly after handling. Empty containers retain residue and can be dangerous.

Conditions for safe storage, including any incompatibilities

Store in cool/well-ventilated place. Store locked up. Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized personnel. Inspect periodically for damage or leaks. Do not store near any incompatible materials (see Section 10). Keep containers dry and tightly closed to avoid moisture absorption and contamination.

8. Exposure controls/personal protection

Occupational exposure limits

U.S. OSHA Exposure Limits (29 CFR 1910)

	Type	Value
Aluminum (CAS 7429-90-5)	TWA	15 mg/m³ (total dust); 5 mg/m³ (respirable)
Silver (CAS 7440-22-4)	TWA	0.01 mg/m³
Methanol (CAS 67-56-1)	TWA	200 ppm (260 mg/m³)
titanium dioxide (CAS 13463-67-7)	TWA	15 mg/m³ (total dust)
Formaldehyde (CAS 50-00-0)	STEL	2 ppm
	TWA	0.75 ppm

US. ACGIH Threshold Limit Values

	Type	Value
Aluminum (CAS 7429-90-5)	TWA	1 mg/m³ (respirable)
Silver (CAS 7440-22-4)	TWA	0.1 mg/m³ (dust and fume)
Octamethylcyclotetrasiloxane (CAS 556-67-2)	TWA	10 ppm (AIHA WEEL)
Methanol (CAS 67-56-1)	STEL	250 ppm (skin)
	TWA	200 ppm (skin)
titanium dioxide (CAS 13463-67-7)	TWA	10 mg/m³
Formaldehyde (CAS 50-00-0)	TWA	0.3 ppm (Ceiling)
	Ceiling	0.3 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

	Type	Value
Aluminum (CAS 7429-90-5)	TWA	10 mg/m³ (total dust); 5 mg/m³ (respirable)
Silver (CAS 7440-22-4)	TWA	0.01 mg/m³ (dust)
Methanol (CAS 67-56-1)	STEL	250 ppm (325 mg/m³) (skin)
	TWA	200 ppm (260 mg/m³) (skin)
Formaldehyde (CAS 50-00-0)	TWA	0.016 ppm
	Ceiling	0.1 ppm (15 min)

Biological limit values

Methanol	(CAS 67-56-1)	15 mg/L, Parameter: Methanol (background, nonspecific), Medium Urine

US ACGIH Threshold Limit Values: Skin designation

Methanol(CAS 67-56-1) — Can be absorbed through skin

US NIOSH Threshold Limit Values: Skin designation

Methanol(CAS 67-56-1) — Can be absorbed through skin

Appropriate engineering controls: Provide adequate ventilation. Apply technical measures to comply with the occupational exposure limits. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. In case of insufficient ventilation wear suitable respiratory equipment.

Individual protection measures, such as personal protective equipment

Eye / face protection: Wear eye/face protection. Chemical splash goggles are recommended. A full face shield may also be necessary.

Skin protection

Hand protection: Wear protective gloves/clothing. The suitability for a specific workplace should be discussed with the producers of the protective gloves. Wear resistant clothing and boots. Depending on conditions of use, an impervious apron should be worn.

Other: Ensure that eyewash stations and safety showers are close to the workstation location. Other equipment may be required depending on workplace standards.

Respiratory protection: If airbourne concentrations are above the permissible exposure limit or are not known, use NIOSH-approved respirators. Respirators should be selected based on the form and concentration of contaminants in air, and in accordance with OSHA (29CFR 1910.134). Advice should be sought from respiratory protection specialists.

Thermal hazards: Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations: Avoid breathing dust, fume or vapors. Avoid contact with skin, eyes and clothing. Wash thoroughly after handling. Remove and wash contaminated clothing before re-use. Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Appearance

Physical state: Solid

Form: Medium paste

Color	grey
Odor	Mild odor.
Odor threshold	N/Av
pH	N/Av
Melting point /freezing point	N/Av
Initial boiling point and boiling range	
	> 102°C (216°F) (based on ingredients)
Flash point	> 93.3°C (200°F) (based on ingredients) closed cup
Evaporation rate	N/Av
Flammability (solid, gas)	Not considered flammable.
Lower flammability/explosive limit	N/Av
Upper flammability/explosive limit	N/Av
Vapor pressure	N/Av
Vapor density	N/Av
Relative density	> 1
Solubility(ies)	
Other solubility(ies)	N/Av
Solubility (water)	Insoluble. May react with water.
Partition coefficient (n-octanol/water)	N/Av
Auto-ignition temperature	N/Av
Decomposition temperature	N/Av
Viscosity	N/Av
Other information	
Explosive properties	Not explosive
Oxidizing properties	None known.
Specific gravity	> 1
VOC	N/Av
Volatilities %	N/Av
Other physical/chemical data	No additional information.

10. Stability and reactivity

Reactivity	May react with water. May slowly hydrolyze in the presence of water to: Methanol. Upon completion of the curing process, these hydrolysis products are no longer released.
Chemical stability	Stable under normal conditions. When heated above 150°C in air, may release formaldehyde gas.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Direct sources of heat. Do not use in areas without adequate ventilation. Avoid contact with incompatible materials. Avoid excessive moisture.
Incompatible materials	Strong oxidizing agents; Strong acids; Strong bases; Water
Hazardous decomposition products	None known, refer to hazardous combustion products in Section 5.

11. Toxicological information

Information on likely routes of exposure

Routes of entry inhalation	May cause irritation of the nose, throat, mucous membranes, and respiratory tract.
Routes of entry skin & eye	Causes eye irritation. Mild skin irritant.
Routes of entry Ingestion	May cause gastrointestinal irritation.
Routes of exposure skin absorption	Not expected to be absorbed through the skin.
Most important symptoms/effects, acute and delayed	Causes serious eye irritation. Symptoms may include stinging, tearing, redness, swelling and blurred vision. May slowly hydrolyze in the presence of water to: Methanol. Upon completion of the curing process, these hydrolysis products are no longer released. Suspected of causing cancer by inhalation. Symptoms may include persistent coughing, shortness of breath, coughing up blood and wheezing. Suspected of damaging fertility or the unborn child. Symptoms may include reduced fetal weight, delayed ossification and persistent behavioural effects. Symptoms may also include significant reductions in mean live litter sizes and mean number of pups born. May be mildly irritating to skin and respiratory system. May cause coughing and breathing difficulties. Direct skin contact may cause temporary redness. Inhalation of fumes may result in metal fume fever, a flu-like illness. Symptoms of metal fume fever may include fever, fatigue, vomiting, muscle aches and shortness of breath. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Prolonged overexposure may cause slight liver and kidney effects, such as increased organ weights. Silver in the form of a finely divided dust may cause discoloration in contact with skin, and argyrosis in case of inhalation. When heated above 150°C in air, may release formaldehyde gas. Formaldehyde is an eye and throat irritant and acute toxicant. Formaldehyde may cause sensitization by skin contact. Formaldehyde may cause mutations to non-reproductive (somatic) cells, based on animal data. Formaldehyde is classified as carcinogenic.

Information on toxicological effects

Acute toxicity

Not expected to be hazardous by OSHA criteria.
There is no available data for the product itself, only for the ingredients. See below for individual ingredient acute toxicity data.

Components	Species	Test Results
Aluminum		
Acute		
Dermal		
LD50	Rabbit	N/Av
inhalation		
LC50	Rat	> 2.3 mg/L (dust) (No mortality)
Oral		
LD50	Rat	> 2000 mg/kg (No mortality)
Polydimethylsiloxane		
Acute		
Dermal		
LD50	Rabbit	> 2000 mg/kg
inhalation		
LC50	Rat	> 11.59 mg/L (mist)
Oral		
LD50	Rat	> 15 400 mg/kg
Silver		
Acute		
Dermal		
LD50	Rabbit	> 2000 mg/kg (No mortality)

inhalation		
LC50	Rat	> 5.16 mg/L (dust) (No mortality)
Oral		
LD50	Rat	> 2000 mg/kg (No mortality)

Octamethyltrisiloxane

Acute		
Dermal		
LD50	Rabbit	> 2000 mg/kg (No mortality)
inhalation		
LC50	Rat	> 22.6 mg/L (vapor) (No mortality)
Oral		
LD50	Rat	> 2000 mg/kg (No mortality)

Trimethoxymethylsilane

Acute		
Dermal		
LD50	Rabbit	> 9500 mg/kg
inhalation		
LC50	Rat	> 51.4 mg/L (vapor)
Oral		
LD50	Rat	> 9500 mg/kg

Octamethylcyclotetrasiloxane

Acute		
Dermal		
LD50	Rabbit	> 2400 mg/kg (No mortality)
inhalation		
LC50	Rat	36 mg/L (aerosol)
Oral		
LD50	Rat	> 4800 mg/kg

Methanol

Acute		
Dermal		
LD50	Rabbit	> 393 mg/kg (Monkey) 15 800 mg/kg (rabbit)
inhalation		
LC50	Rat	> 5000 ppm/6H (4.1 mg/L/4H (vapor)
Oral		
LD50	Rat	5628 mg/kg (rat) The estimated human lethal dose is: 300 - 1000 mg/kg

titanium dioxide

Acute		
Dermal		
LD50	Rabbit	> 10 000 mg/kg
inhalation		
LC50	Rat	> 6.82 mg/kg (dust) (No mortality)
Oral		
LD50	Rat	> 25 000 mg/kg

The following ingredient may be released from the product only when heated above 150°C:

Formaldehyde

Acute		
Dermal		
LD50	Rabbit	300 mg/kg
inhalation		
LC50	Rat	287 ppm

Oral		
LD50	Rat	800 mg/kg (rat) The estimated human lethal dose is: 317 - 475 mg/kg

Skin Corrosion/Irritation
Not expected to be hazardous by OSHA criteria.

Serious eye damage/Irritation
Hazardous by OSHA criteria. Classification:
Eye damage/irritation - Category 2A. Causes serious eye irritation.

Respiratory or skin sensitization
Not expected to be a skin or respiratory sensitizer.
Avoid heating, which will result in the liberation of formaldehyde gas. Formaldehyde may cause sensitization by skin contact.

Germ cell mutagenicity
No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Avoid heating, which will result in the liberation of formaldehyde gas. Formaldehyde may cause mutations to non-reproductive (somatic) cells, based on animal data.

Carcinogenicity
This material is classified as hazardous under OSHA regulations (29CFR 1910.1200) (Hazcom 2012). Classification:
Carcinogenicity - Category 2. Suspected of causing cancer.
Contains: titanium dioxide. Titanium dioxide is classified as possibly carcinogenic by IARC (Group 2B). Titanium dioxide is suspected of causing cancer by inhalation. The carcinogenic hazard is applicable when dusts are present.
Avoid heating, which will result in the liberation of formaldehyde gas. Formaldehyde is classified as carcinogenic.
See below for ingredients present on regulatory lists.

IARC Monographs. Overall Evaluation of Carcinogenicity

titanium dioxide(CAS 13463-67-7)	Group 2B (Possibly Carcinogenic to Humans)
Formaldehyde(CAS 50-00-0)	Group 1 (Carcinogenic to Humans)

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

titanium dioxide(CAS 13463-67-7)	Present
Formaldehyde(CAS 50-00-0)	Present

US National Toxicology Program(NTP) Report on Carcinogens

Formaldehyde(CAS 50-00-0)	Group 2

Reproductive toxicity
Hazardous by OSHA criteria. Classification:
Reproductive toxicity - Category 2. Suspected of damaging fertility or the unborn child.
Contains Octamethylcyclotetrasiloxane. Octamethylcyclotetrasiloxane may cause adverse reproductive effects.
Contains Methanol. Methanol may cause fetotoxic and teratogenic effects at doses which are not maternally toxic, based on animal data.

Specific target organ toxicity - single exposure
Not expected to be hazardous by OSHA criteria.

Specific target organ toxicity - repeated exposure
Not expected to be hazardous by OSHA criteria.

Chronic effects
Prolonged overexposure may cause slight liver and kidney effects, such as increased organ weights.

Aspiration toxicity
Not expected to be hazardous by OSHA criteria.

Further information
Silver in the form of a finely divided dust may cause discoloration in contact with skin, and argyrosis in case of inhalation.

12. Ecological information

Ecotoxicity

No data is available on the product itself. Should not be released into the environment. May slowly hydrolyze in the presence of water to: Methanol. Upon completion of the curing process, these hydrolysis products are no longer released. The product contains the following substances which are hazardous for the environment: Octamethyltrisiloxane; Octamethylcyclotetrasiloxane. This product also contains: Silver. The acute toxicity of silver to aquatic species varies drastically by the chemical form and correlates with the availability of free ionic silver. Aquatic toxicity is highly variable not only by organism but with physical and chemical characteristics of the water itself.

See the following tables for individual ingredient ecotoxicity data.

Ecotoxicity data:

Ingredients	CAS No	Toxicity to Fish		
		LC50 / 96h	NOEC / 21 day	M Factor
Aluminum	7429-90-5	N/Av	N/Av	None.
Polydimethylsiloxane	70131-67-8	N/Av	N/Av	None.
Silver	7440-22-4	N/Av	N/Av	None.
Octamethyltrisiloxane	107-51-7	N/Av	N/Av	None.
Trimethoxymethylsilane	1185-55-3	> 110 mg/L (Rainbow trout) (hydrolysis product and/or parent compound)	N/Av	None.
Octamethylcyclotetrasiloxane	556-67-2	> 500 mg/L (Zebra fish)	N/Av	None.
Methanol	67-56-1	15 400 mg/L (Bluegill sunfish)	446.7 mg/L/28-day (Fathead minnow) (QSAR)	None.
titanium dioxide	13463-67-7	> 100 mg/L (Japanese ricefish)	N/Av	None.
Formaldehyde	50-00-0	6.7 mg/L (Striped bass)	≥ 48 mg/L/28-day (Japanese ricefish)	None.

Ingredients	CAS No	Toxicity to Daphnia		
		EC50 / 48h	NOEC / 21 day	M Factor
Aluminum	7429-90-5	N/Av	N/Av	None.
Polydimethylsiloxane	70131-67-8	N/Av	N/Av	None.
Silver	7440-22-4	N/Av	N/Av	None.
Octamethyltrisiloxane	107-51-7	N/Av	N/Av	None.
Trimethoxymethylsilane	1185-55-3	> 122 mg/L (Daphnia magna) (hydrolysis product and/or parent compound)	N/Av	None.
Octamethylcyclotetrasiloxane	556-67-2	25.2 mg/L/24hr (Daphnia magna)	N/Av	None.
Methanol	67-56-1	> 10 000 mg/L (Daphnia magna)	208 mg/L (QSAR)	None.
titanium dioxide	13463-67-7	> 100 mg/L (Daphnia magna)	N/Av	None.
Formaldehyde	50-00-0	5.8 mg/L (Daphnia magna)	N/Av	None.

Ingredients	CAS No	Toxicity to Algae		
		EC50 / 96h or 72h	NOEC / 96h or 72h	M Factor
Aluminum	7429-90-5	N/Av	N/Av	None.
Polydimethylsiloxane	70131-67-8	N/Av	N/Av	None.
Silver	7440-22-4	N/Av	N/Av	None.
Octamethyltrisiloxane	107-51-7	N/Av	N/Av	None.
Trimethoxymethylsilane	1185-55-3	> 120 mg/L/72hr (Green algae) (hydrolysis product and/or parent compound)	120 mg/L/72hr (hydrolysis product and/or parent compound)	None.
Octamethylcyclotetrasiloxane	556-67-2	N/Av	N/Av	None.
Methanol	67-56-1	22 000 mg/L/96hr (Green algae)	N/Av	None.
titanium dioxide	13463-67-7	> 100 mg/L/72hr (Green algae)	N/Av	None.
Formaldehyde	50-00-0	14.7 mg/L/24hr (Green algae)	N/Av	None.

Persistence and degradability

The product itself has not been tested.
The following ingredients are considered to be readily biodegradable: Methanol.
Contains the following chemicals which are not readily biodegradable: Aluminum; silver; Trimethoxymethylsilane; titanium dioxide; Octamethyltrisiloxane; Octamethylcyclotetrasiloxane.
Octamethylcyclotetrasiloxane has a half life in sediment of > 728 days (Canadian Environmental Protection Agency). Octamethylcyclotetrasiloxane has a half-life in water of 37.5 days (Canadian Environmental Protection Agency).

Bioaccumulation potential

The product itself has not been tested. See the following data for ingredient information.

Components	Partition coefficient n-octanol/water (log Kow)	Bioconcentration factor (BCF)
Octamethyltrisiloxane (CAS 107-51-7)	6.6	3610; 5600 (Fish) (parent compound)
Trimethoxymethylsilane (CAS 1185-55-3)	- 0.67	3.16
Octamethylcyclotetrasiloxane (CAS 556-67-2)	6.49	12 400 (Fathead minnow) (steady-state) 13 400 (Fathead minnow) (kinetic)
Methanol (CAS 67-56-1)	- 0.82 to - 0.64	< 10 (common carp)
Formaldehyde (CAS 50-00-0)	0.35	3.0

Mobility in soil

The product itself has not been tested.

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 consideration

Disposal instructions

Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of in accordance with local regulations.

Local disposal regulations

Dispose in accordance with all applicable federal, state, territory and local regulations.

Hazardous waste code If this product, as supplied, becomes a waste in the United States, it may meet the criteria of a hazardous waste as defined under RCRA, Title 40 CFR 261. It is the responsibility of the waste generator to determine the proper waste identification and disposal method. For disposal of unused or waste material, check with local, state and federal environmental agencies.

US RCRA Hazardous Waste U List: Reference

Components

	RCRA Waste number
Formaldehyde (CAS 50-00-0)	U122

Waste from residues / unused products Dispose of contents/container in accordance with local regulation. This material and its container must be disposed of in a safe way.

Contaminated packaging Empty containers should be taken for local recycling or waste disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

49CFR/DOT

Not regulated as dangerous goods

ICAO/IATA

Not regulated as dangerous goods

IMDG

Not regulated as dangerous goods

General information Appropriate advice on safety must accompany the package. Keep containers dry and tightly closed to avoid moisture absorption and contamination.
This product does not meet the criteria for an environmentally hazardous mixture, according to the IMDG Code. See Section 12 for more environmental information.

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

15. Regulatory information

US Federal Information:

Components listed below are present on the following U.S. Federal chemical lists:

Ingredients	CAS #	TSCA Inventory	CERCLA Reportable Quantity(RQ) (40 CFR 117.302):	SARA TITLE III: Sec. 302, Extremely Hazardous Substance, 40 CFR 355:	SARA TITLE III: Sec. 313, 40 CFR 372, Specific Toxic Chemical	
					Toxic Chemical	de minimus Concentration
Aluminum	7429-90-5	Yes	None.	None.	Yes	1%
Polydimethylsiloxane	70131-67-8	Yes	None.	None.	No	N/Ap
Silver	7440-22-4	Yes	1000 lb/454 kg	None.	Yes	1%
Octamethyltrisiloxane	107-51-7	Yes	None.	None.	No	N/Ap
Trimethoxymethylsilane	1185-55-3	Yes	None.	None.	No	N/Ap
Octamethylcyclotetrasiloxane	556-67-2	Yes	None.	None.	No	N/Ap
Methanol	67-56-1	Yes	5000 lbs / 2270 kg	None.	Yes	1%
titanium dioxide	13463-67-7	Yes	None.	None.	No	N/Ap
Formaldehyde	50-00-0	Yes	100 lbs / 45.4 kg	500 lb TPQ	Yes	0.1%

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Immediate Hazard - Yes

Delayed Hazard - Yes

Fire Hazard - NO

Pressure Hazard - NO

Reactivity Hazard - NO

US state regulations

The following chemicals are specifically listed by individual States:

Ingredients	CAS #	California Proposition 65		State "Right to Know" Lists					
		Listed	Type of Toxicity	CA	MA	MN	NJ	PA	RI
Aluminum	7429-90-5	No	N/Ap	Yes	Yes	Yes	Yes	Yes	Yes
Polydimethylsiloxane	70131-67-8	No	N/Ap	No	No	No	No	No	No
Silver	7440-22-4	No	N/Ap	Yes	Yes	Yes	Yes	Yes	Yes
Octamethyltrisiloxane	107-51-7	No	N/Ap	No	No	Yes	No	No	No
Trimethoxymethylsilane	1185-55-3	No	N/Ap	No	No	No	No	No	No
Octamethylcyclotetrasiloxane	556-67-2	No	N/Ap	No	No	No	No	No	No
Methanol	67-56-1	Yes	Developmental	Yes	Yes	Yes	Yes	Yes	Yes
titanium dioxide	13463-67-7	Yes	Cancer (airborne, unbound particles of respirable size)	No	Yes	Yes	Yes	Yes	Yes
Formaldehyde	50-00-0	Yes	Cancer (gas)	Yes	Yes	Yes	Yes	Yes	Yes

Canadian Information:

Canadian Environmental Protection Act (CEPA) information: All ingredients listed appear on the Domestic Substances List (DSL).

International Inventories

Components listed below are present on the following International Inventory lists:

Ingredients	CAS #	European EINECs	Australia AICS	Philippines PICCS	Japan ENCS	Korea KECI/KECL	China IECSC	New Zealand IOC
Aluminum	7429-90-5	231-072-3	Present	Present	Not listed	KE-00881	Present	HSR001263 (coated, PGII); HSR001471, HSR001473 (coated, PGIII); HSR001474 (pyrophoric); HSR001472 (uncoated, PGII)
Polydimethylsiloxane	70131-67-8	Polymer	Present	Present	(7)-453; (7)-476	KE-31115	Present	HSR003459
Silver	7440-22-4	231-131-3	Present	Present	Not listed	KE-31261	Present	HSR003077
Octamethyltrisiloxane	107-51-7	203-497-4	Present	Present	(7)-476	98-3-930	Present	May be used as a single component chemical under an appropriate group standard.
Trimethoxymethylsilane	1185-55-3	214-685-0	Present	Present	(2)-2053; (2)-2052	KE-34364	Present	HSR003829
Octamethylcyclotetrasiloxane	556-67-2	209-136-7	Present	Present	(7)-475	KE-26606	Present	HSR003225
Methanol	67-56-1	200-659-6	Present	Present	(2)-201	KE-23193	Present	HSR001186
titanium dioxide	13463-67-7	236-675-5	Present	Present	(5)-5225; (1)-558	KE-33900	Present	May be used as a single component chemical under an appropriate group standard.
Formaldehyde	50-00-0	200-001-8	Present	Present	(2)-482	KE-17074	Present	HSR001584, HSR001162, HSR001518, HSR001583 (dilution)

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

Issue date 09/25/2014

Version # 2

Legend

ACGIH: American Conference of Governmental Industrial Hygienists
AICS: Australian Inventory of Chemical Substances
CA: California
CAS: Chemical Abstract Services
CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act of 1980
CFR: Code of Federal Regulations
CSA: Canadian Standards Association
DOT: Department of Transportation
EC50: Effective Concentration 50%
EINECS: European Inventory of Existing Commercial chemical Substances
ENCS: Existing and New Chemical Substances
EPA: Environmental Protection Agency
HSDB: Hazardous Substances Data Bank
IARC: International Agency for Research on Cancer
IBC: Intermediate Bulk Container
IECSC: Inventory of Existing Chemical Substances

IMDG: International Maritime Dangerous Goods
IOC: Inventory of Chemicals
KECI: Korean Existing Chemicals Inventory
KECL: Korean Existing Chemicals List
LC: Lethal Concentration
LD: Lethal Dose
MA: Massachusetts
MN: Minnesota
N/Ap: Not Applicable
N/Av: Not Available
NIOSH: National Institute of Occupational Safety and Health
NJ: New Jersey
NOEC: No observable effect concentration
NTP: National Toxicology Program
OECD: Organisation for Economic Co-operation and Development
OSHA: Occupational Safety and Health Administration
PA: Pennsylvania
PEL: Permissible exposure limit
PICCS: Philippine Inventory of Chemicals and Chemical Substances
RCRA: Resource Conservation and Recovery Act
RI: Rhode Island
RTECS: Registry of Toxic Effects of Chemical Substances
SARA: Superfund Amendments and Reauthorization Act
SDS: Safety Data Sheet
STEL: Short Term Exposure Limit
TDG: Canadian Transportation of Dangerous Goods Act & Regulations
TLV: Threshold Limit Values
TSCA: Toxic Substance Control Act
TWA: Time Weighted Average
WHMIS: Workplace Hazardous Materials Identification System

Revision Date SDS (dd/mm/yyyy)

02/06/2017

Revision Information

(M)SDS sections updated:
2. HAZARDS IDENTIFICATION (Other Important Hazards);
3. COMPOSITION/INFORMATION ON INGREDIENTS;
5. FIRE-FIGHTING MEASURES;
8. EXPOSURE CONTROLS / PERSONAL PROTECTION;
10. STABILITY AND REACTIVITY;
11. TOXICOLOGICAL INFORMATION;
12. ECOLOGICAL INFORMATION;
15. REGULATORY INFORMATION

Other special considerations for handling

: Provide adequate information, instruction and training for operators.

Disclaimer

Prepared by: ICC The Compliance Center Inc.
http://www.thecompliancecenter.com

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Bibliography

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2. International Agency for Research on Cancer Monographs, searched 2017.
3. Canadian Centre for Occupational Health and Safety, CCInfoWeb databases, 2017 (Chempendium, HSDB and RTECs).
4. Material Safety Data Sheets from manufacturer.
5. US EPA Title III List of Lists - March 2015 version.
6. California Proposition 65 List - January 27, 2017 version.
7. OECD - The Global Portal to Information on Chemical Substances - eChemPortal, 2017.