

SAFETY DATA SHEET

1. IDENTIFICATION

Product Name:	DAPCO™ 2200 Primerless Firewall Sealant, Part A
Product Description:	Mixture of polysiloxanes and fillers
Synonyms:	None
Chemical Family:	Silicone
Molecular Formula:	Mixture
Molecular Weight:	Mixture
Intended/Recommended Use:	Engineered material sealant

CYTEC INDUSTRIES INC., FIVE GARRET MOUNTAIN PLAZA, WOODLAND PARK, NEW JERSEY 07424, USA
For Product and all Non-Emergency Information call 1-800/652-6013. Outside the USA and Canada call 1-973/357-3193.

EMERGENCY PHONE (24 hours/day) - For emergency only involving spill, leak, fire, exposure or accident call:

Asia Pacific:

Australia - +61-3-9663-2130 or 1800-033-111 (IXOM)

China (PRC) - +86 0532 83889090 (NRCC)

New Guinea - +61-3-9663-2130 or 1800-033-111

New Zealand - +61-3-9663-2130 or 0800-734-607 (IXOM)

India, Japan, Korea, Malaysia, Thailand - +65 3158 1074 (Carechem24 Singapore)

India (Hindi Speaking Only) - +65 3158 1198 or 000800 100 7479 (Carechem24 Singapore)

Canada: +1-905-356-8310 (Cytec Welland, Canada plant)

Europe/Africa/Middle East (Carechem24 UK):

Europe, Middle East, Africa, Israel - +44 (0) 1235 239 670

(Arabic speaking countries) - +44 (0) 1235 239 671

Latin America:

Brazil - 0800 7077 022 (SUATRANS)

Chile - +56-2-2-247-3600 (CITUC QUIMICO)

All Others - +52-376-73 74122 (Cytec Atequiza, Mexico plant)

USA: +1-703-527-3887 or 1-800-424-9300 (CHEMTREC #CCN6083)

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2. HAZARDS IDENTIFICATION

GHS Classification

Serious Eye Damage / Eye Irritation Hazard Category 1

Skin Corrosion / Irritation Hazard Category 2

LABEL ELEMENTS



Signal Word

Danger

Hazard Statements

Causes skin irritation
Causes serious eye damage

Precautionary Statements

Wash face, hands and any exposed skin thoroughly after handling.
Wear protective gloves/protective clothing/eye protection/face protection.
IF ON SKIN: Wash with plenty of soap and water.
Specific treatment (see supplemental first aid instructions on this label).
Take off all contaminated clothing and wash it before reuse.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a POISON CENTER or doctor/physician.

Hazards Not Otherwise Classified (HNOC), Other Hazards

Not applicable

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance, Mixture or Article? Mixture

HAZARDOUS INGREDIENTS

Component / CAS No.	%	GHS Classification	Carcinogen
Calcium carbonate 471-34-1	30 - 60	Eye Dam. 1 (H318) Skin Irrit. 2 (H315)	-
Frits 65997-18-4	< 5	Aquatic Acute 3 (H402) Aquatic Chronic 3 (H412)	OSHA(as Arsenic inorganic compounds) OSHA(as Cadmium compounds)
Titanium Dioxide 13463-67-7	< 5	Aquatic Acute 3 (H402) Aquatic Chronic 3 (H412)	IARC 2B
Trimethylated silica 68909-20-6	< 5	Not Classified	-
Carbon 7440-44-0	< 5	Not Classified	-

The specific chemical identity and/or exact percentage of composition for one or more ingredients has been withheld as a trade secret.

Additional GHS classification or other information may be included in this section but has not been adopted by OSHA. See Section 16 for full text of H phrases.

4. FIRST AID MEASURES**DESCRIPTION OF FIRST AID MEASURES****Eye Contact:**

Rinse immediately with plenty of water for at least 15 minutes. Obtain medical attention immediately.

Skin Contact:

Remove contaminated clothing and shoes without delay. Wash immediately with plenty of water. Do not reuse contaminated clothing without laundering. Get medical attention if pain or irritation persists after washing or if signs and symptoms of overexposure appear.

Ingestion:

If swallowed, call a physician immediately. Only induce vomiting at the instruction of a physician. Never give anything by mouth to an unconscious person.

Inhalation:

Remove to fresh air. If breathing is difficult, give oxygen. Obtain medical advice if there are persistent symptoms.

MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

None known

INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDS

Notes To Physician:

Formaldehyde is not a component of this product, however, heating to temperatures above 150 C in the presence of air may result in the release of formaldehyde. The International Agency for Research on Cancer (IARC) has classified formaldehyde as a Group 1 (known) human carcinogen. Formaldehyde is irritating to the eyes, nose, throat and skin and is a dermal sensitizer.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media:

Use water spray or fog, carbon dioxide or dry chemical.

Extinguishing Media to Avoid:

full water jet

Protective Equipment:

Firefighters, and others exposed, wear self-contained breathing apparatus. Wear full firefighting protective clothing. See MSDS Section 8 (Exposure Controls/Personal Protection).

Special Hazards:

None known

6. ACCIDENTAL RELEASE MEASURES

Personal precautions:

Where exposure level is not known, wear approved, positive pressure, self-contained respirator. Where exposure level is known, wear approved respirator suitable for level of exposure. Refer to Section 8 (Exposure Controls/Personal Protection) for appropriate personal protective equipment.

Methods For Cleaning Up:

Sweep up into containers for disposal. Flush spill area with water.

References to other sections:

See Sections 8 and 13 for additional information.

7. HANDLING AND STORAGE

HANDLING

Precautions: Wash hands thoroughly after handling. Wear protective gloves and eye/face protection.

Special Handling Statements: Heating to temperatures above 150 C (302 F) in the presence of air may result in the release of formaldehyde. Formaldehyde is a known animal carcinogen and is considered to be probably carcinogenic to humans by the International Agency for Research on Cancer and the National Toxicology Program. Formaldehyde is irritating to the eyes, nose, throat and skin and is a dermal sensitizer. The permissible exposure limit for formaldehyde should not be exceeded.

STORAGE

Store in accordance with local, state, and federal regulations.

Storage Temperature: Store at <27 °C 80 °F

Reason: Quality.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Measures:

Utilize a closed system process where feasible. Where this material is not used in a closed system, good enclosure and local exhaust ventilation should be provided to control exposure.

Respiratory Protection:

Where exposures are below the established exposure limit, no respiratory protection is required. Where exposures exceed the established exposure limit, use respiratory protection recommended for the material and level of exposure.

Eye Protection:

Prevent eye and skin contact. Provide eye wash fountain and safety shower in close proximity to points of potential exposure. Wear eye/face protection such as chemical splash proof goggles or face shield.

Skin Protection:

Prevent contamination of skin or clothing when removing protective equipment. Wear impermeable gloves and suitable protective clothing.

Hand Protection:

Wear impermeable gloves. Replace gloves immediately when torn or any change in appearance (dimension, colour, flexibility etc) is noticed.

Additional Advice:

Food, beverages, and tobacco products should not be carried, stored, or consumed where this material is in use. Before eating, drinking, or smoking, wash face and hands thoroughly with soap and water.

Exposure Limit(s)

The below constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

13463-67-7 Titanium Dioxide

OSHA (PEL): 15 mg/m³ total dust (TWA)

ACGIH (TLV): 10 mg/m³ (TWA)

Other Value: Not established

471-34-1 Calcium carbonate

OSHA (PEL): 15 mg/m³ total dust (TWA)

5 mg/m³ respirable fraction (TWA)

ACGIH (TLV): Not established

Other Value: Not established

65997-18-4 Frits

13463-67-7 Titanium Dioxide

OSHA (PEL):	10 µg/m ³ (TWA)(as Arsenic inorganic compounds) 50 µg/m ³ (TWA)(as Lead inorganic compounds) 0.5 mg/m ³ (TWA)(as Antimony compounds) 5 mg/m ³ (TWA)(as Zirconium compounds) 5 mg/m ³ (Ceiling)(as Manganese compounds) 10 µg/m ³ TWA(as Arsenic inorganic compounds) 5 µg/m ³ Action Level 30 µg/m ³ Action Level(as Lead inorganic compounds) 50 µg/m ³ TWA 5 µg/m ³ TWA(as Cadmium compounds) 2.5 µg/m ³ Action Level
ACGIH (TLV):	10 mg/m ³ Zr (STEL)(as Zirconium compounds) 0.01 mg/m ³ As (TWA)(as Arsenic inorganic compounds) 0.05 mg/m ³ Pb (TWA)(as Lead inorganic compounds) 0.01 mg/m ³ Cd (TWA)(as Cadmium compounds) 0.002 mg/m ³ respirable fraction Cd (TWA) 0.5 mg/m ³ Sb (TWA)(as Antimony compounds) 1 mg/m ³ dust and mist Cu (TWA)(as Copper compounds) 5 mg/m ³ Zr (TWA)(as Zirconium compounds) 0.02 mg/m ³ respirable fraction Mn (TWA)(as Manganese inorganic compounds) 0.1 mg/m ³ inhalable fraction Mn (TWA)
Other Value:	Not established

68909-20-6 Trimethylated silica

OSHA (PEL):	5 mg/m ³ ceiling (Dow Corning)
ACGIH (TLV):	Not established
Other Value:	5 mg/m ³ ceiling (Dow Corning)

9. PHYSICAL AND CHEMICAL PROPERTIES

Color:	blue
Appearance:	paste
Odor:	odorless
Boiling Point:	Not applicable
Melting Point:	Not applicable
Vapor Pressure:	Not applicable
Specific Gravity/Density:	1.45
Vapor Density:	Not applicable
Percent Volatile (% by wt.):	0.5
pH:	Not applicable
Saturation In Air (% By Vol.):	Not applicable
Evaporation Rate:	Not applicable
Solubility In Water:	negligible
Volatile Organic Content:	Not applicable
Flash Point:	Not applicable
Flammability (solid, gas):	Not available
Flammable Limits (% By Vol):	Not applicable
Autoignition (Self) Temperature:	Not available
Decomposition Temperature:	Not available
Partition coefficient (n-octanol/water):	Not applicable
Odor Threshold:	Not available
Viscosity (Kinematic):	Not applicable

DUST HAZARD INFORMATION

Particle Size (microns):	Not applicable
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Kst (bar-m/sec):	Not applicable
Maximum Explosion Pressure (Pmax):	Not applicable
Dust Class:	Not applicable
Minimum Ignition Energy (MIE) (mJ):	Not applicable
Minimum Ignition Temperature (MIT) (°C):	Not applicable
Minimum Explosive Concentration (MEC) (g/m³):	Not applicable
Limiting Oxygen Concentration (LOC) (%):	Not applicable

10. STABILITY AND REACTIVITY

Reactivity:	No information available
Stability:	Stable
Conditions To Avoid:	None known
Polymerization:	Will not occur
Conditions To Avoid:	None known
Materials To Avoid:	No specific incompatibility
Hazardous Decomposition Products:	Carbon dioxide Carbon monoxide (CO) calcium oxide Formaldehyde silicon dioxide

11. TOXICOLOGICAL INFORMATION

PRODUCT TOXICITY INFORMATION

Likely Routes of Exposure: Skin, Eyes, Oral.

ACUTE TOXICITY DATA

oral (gavage)	rat	Acute LD50	>2000 mg/kg
dermal	rabbit	Acute LD50	>2000 mg/kg
inhalation	rat	Acute LC50 4 hr	>5 mg/l (Dust/Mist)

LOCAL EFFECTS ON SKIN AND EYE

Acute Irritation	skin	Irritating
Acute Irritation	eye	Causes serious damage

ALLERGIC SENSITIZATION

Sensitization	skin	No data
Sensitization	respiratory	No data

GENOTOXICITY

Assays for Gene Mutations

Ames Salmonella Assay	No data
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OTHER INFORMATION

The product toxicity information above has been estimated.

HAZARDOUS INGREDIENT TOXICITY DATA

Calcium carbonate has an acute oral (rat) LD50 of 6.5 g/kg. Direct contact will cause moderate skin and severe eye irritation. Inhalation of dust can cause mild respiratory irritation.

Acute exposure to titanium dioxide dust is not likely to cause adverse effects. Chronic exposure to titanium dioxide may cause some lung fibrosis. Inhalation of titanium dioxide dust at 50 times the nuisance dust level caused lung fibrosis and a slight increase in lung tumor incidence in laboratory rats. When titanium dioxide was fed to rats and mice over lifetime in a carcinogen bioassay, it was not carcinogenic.

Trimethylated silica, which is a unique form of fumed silica, is not expected to cause adverse health effects via inhalation, oral or dermal routes of exposure. Trimethylated silica does not cause the lung diseases crystalline silica is known to cause. The acute oral (rat) LD50 for fumed silica is 3.1 g/kg.

Carbon dust can be mildly irritating to the lungs; however, acute overexposure is not expected to cause adverse health effects.

California Proposition 65 Warning (applicable in California only) - This product contains (a) chemical(s) known to the State of California to cause cancer.

12. ECOLOGICAL INFORMATION

TOXICITY, PERSISTENCE AND DEGRADABILITY, BIOACCUMULATIVE POTENTIAL, MOBILITY IN SOIL, OTHER ADVERSE EFFECTS

This material is not classified as dangerous for the environment.
The ecological assessment for this material is based on an evaluation of its components.

RESULTS OF PBT AND vPvB ASSESSMENT

Not determined

HAZARDOUS INGREDIENT TOXICITY DATA

Component / CAS No.	Toxicity to Algae	Toxicity to Fish	Toxicity to Water Flea
Calcium carbonate 471-34-1	Not available	Not available	Not available
Frits 65997-18-4	Not available	Not available	Not available
Titanium Dioxide 13463-67-7	Not available	Not available	Not available
Trimethylated silica 68909-20-6	Not available	Not available	Not available

Component / CAS No.	Toxicity to Algae	Toxicity to Fish	Toxicity to Water Flea
Carbon 7440-44-0	Not available	Not available	Not available

13. DISPOSAL CONSIDERATIONS

The information on RCRA waste classification and disposal methodology provided below applies only to the product, as supplied. If the material has been altered or contaminated, or it has exceeded its recommended shelf life, the guidance may be inapplicable. Hazardous waste classification under federal regulations (40 CFR Part 261 et seq) is dependent upon whether a material is a RCRA "listed hazardous waste" or has any of the four RCRA "hazardous waste characteristics." Refer to 40 CFR Part 261.33 to determine if a given material to be disposed of is a RCRA "listed hazardous waste"; information contained in Section 15 of this MSDS is not intended to indicate if the product is a "listed hazardous waste." RCRA Hazardous Waste Characteristics: There are four characteristics defined in 40 CFR Section 261.21-61.24: Ignitability, Corrosivity, Reactivity, and Toxicity. To determine Ignitability, see Section 9 of this MSDS (flash point). For Corrosivity, see Sections 9 and 14 (pH and DOT corrosivity). For Reactivity, see Section 10 (incompatible materials). For Toxicity, see Section 3 (composition). Federal regulations are subject to change. State and local requirements, which may differ from or be more stringent than the federal regulations, may also apply to the classification of the material if it is to be disposed. The Company encourages the recycle, recovery and reuse of materials, where permitted, as an alternate to disposal as a waste. The Company recommends that organic materials classified as RCRA hazardous wastes be disposed of by thermal treatment or incineration at EPA approved facilities. The Company has provided the foregoing for information only; the person generating the waste is responsible for determining the waste classification and disposal method.

14. TRANSPORT INFORMATION

This section provides basic shipping classification information. Refer to appropriate transportation regulations for specific requirements.

US DOT

Dangerous Goods? Not applicable/Not regulated

TRANSPORT CANADA

Dangerous Goods? Not applicable/Not regulated

ICAO / IATA

Dangerous Goods? Not applicable/Not regulated

IMO

Dangerous Goods? Not applicable/Not regulated

15. REGULATORY INFORMATION

Inventory Information

United States (USA): All components of this product are included on the TSCA Chemical Inventory or are not required to be listed on the TSCA Chemical Inventory.

Canada: All components of this product are included on the Domestic Substances List (DSL) or are not required to be listed on the DSL.

European Economic Area (including EU): Cytec has appointed an Only Representative to relieve our customers from their registration requirements under the REACH Regulation (EC) No. 1907/2006. Please contact us if you wish to benefit from the OR arrangement.

Australia: All components of this product are included in the Australian Inventory of Chemical Substances (AICS) or are not required to be listed on AICS.

China: All components of this product are included on the Chinese inventory or are not required to be listed on the Chinese inventory.

Japan: All components of this product are included on the Japanese (ENCS) inventory or are not required to be listed on the Japanese inventory.

Korea: All components of this product are included on the Korean (ECL) inventory or are not required to be listed on the Korean inventory.

Philippines: All components of this product are included on the Philippine (PICCS) inventory or are not required to be listed on the Philippine inventory.

Switzerland: All components of this product are exempt from the new substance notification requirements for Switzerland (SR 813.11 art. 16-17).

Taiwan: All components of this product are included on the Taiwan Chemical Substance Inventory (TCSI) or are not required to be listed on the Taiwan inventory.

OTHER ENVIRONMENTAL INFORMATION

The following components of this product may be subject to reporting requirements pursuant to Section 313 of CERCLA (40 CFR 372), Section 12(b) of TSCA, or may be subject to release reporting requirements (40 CFR 307, 40 CFR 311, etc.) See Section 13 for information on waste classification and waste disposal of this product.

Component / CAS No.	%	TPQ (lbs)	RQ(lbs)	S313	TSCA 12B
Frits 65997-18-4	< 5	None		Yes(as Arsenic inorganic compounds) Yes(as Vanadium compounds) Yes(as Lead inorganic compounds) Yes(as Barium compounds) Yes(as Cadmium compounds) Yes(as Silver compounds) Yes(as Zinc compounds) Yes(as Antimony compounds) Yes(as Copper compounds) Yes(as Manganese compounds) Yes(as Nickel compounds)	No

This product does not contain any components regulated under these sections of the EPA

PRODUCT HAZARD CLASSIFICATION UNDER SECTION 311 OF SARA

- Acute

16. OTHER INFORMATION

NFPA Hazard Rating (National Fire Protection Association)

Health: 3 - Materials that, under emergency conditions, can cause serious or permanent injury.

Fire: 1 - Materials that must be preheated before ignition can occur.

Instability: 0 - Materials that in themselves are normally stable, even under fire exposure conditions.

Reasons For Issue: Revised Section 5
Revised Section 11

Date Prepared: 10/13/2016

Date of last significant revision: 01/20/2014

Component Hazard Phrases

Calcium carbonate

H315 - Causes skin irritation.

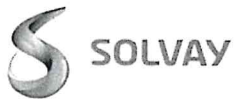
H318 - Causes serious eye damage.

Titanium Dioxide

H412 - Harmful to aquatic life with long lasting effects.

Prepared By: Legal & Compliance Services; E-mail: custinfo@cytec.com

This information is given without any warranty or representation. We do not assume any legal responsibility for same, nor do we give permission, inducement, or recommendation to practice any patented invention without a license. It is offered solely for your consideration, investigation, and verification. Before using any product, read its label.



SDS: 0009766
Date Prepared: 11/15/2016

SAFETY DATA SHEET

1. IDENTIFICATION

Product Name: DAPCO™ 2200 Primerless Firewall Sealant, Part B
Product Description: Mixture of alkyl silicate and silane compound
Synonyms: None
Chemical Family: Silane
Molecular Formula: Mixture
Molecular Weight: Mixture
Intended/Recommended Use: Engineered material sealant

CYTEC INDUSTRIES INC., FIVE GARRET MOUNTAIN PLAZA, WOODLAND PARK, NEW JERSEY 07424, USA
For Product and all Non-Emergency Information call 1-800/652-6013. Outside the USA and Canada call 1-973/357-3193.

EMERGENCY PHONE (24 hours/day) - For emergency only involving spill, leak, fire, exposure or accident call:

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Chile - +56-2-2-247-3600 (CITUC QUIMICO)
All Others - +52-376-73 74122 (Cytec Atequiza, Mexico plant)

USA: +1-703-527-3887 or 1-800-424-9300 (CHEMTREC #CCN6083)

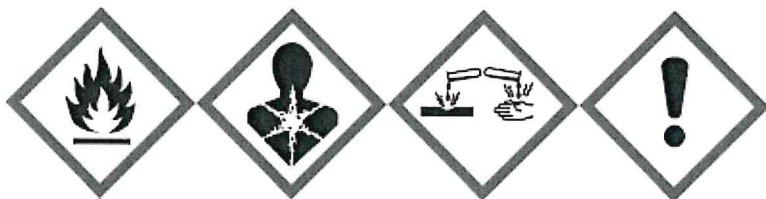
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2. HAZARDS IDENTIFICATION

GHS Classification

Flammable Liquid Hazard Category 3
Germ Cell Mutagenicity Hazard Category 2
Reproductive Toxicant Category 1A
Specific Target Organ Toxicity - Repeated Exposure Hazard Category 1
Specific Target Organ Toxicity - Single Exposure Hazard Category 1
Skin Corrosion / Irritation Hazard Category 1B
Serious Eye Damage / Eye Irritation Hazard Category 1
Skin Sensitizer Hazard Category 1B
Aquatic Environment Acute Hazard Category 3
Aquatic Environment Chronic Hazard Category 3

LABEL ELEMENTS



Signal Word

Danger

Hazard Statements

Flammable liquid and vapor
Suspected of causing genetic defects
May damage fertility or the unborn child
Causes damage to organs through prolonged or repeated exposure
Causes damage to organs
Causes severe skin burns and eye damage
May cause an allergic skin reaction
Harmful to aquatic life with long lasting effects

Precautionary Statements

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Keep container tightly closed.
Ground/Bond container and receiving equipment.
Use explosion-proof electrical/ventilating/lighting/equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Wear protective gloves/protective clothing/eye protection/face protection.
Obtain special instructions before use.
Do not breathe dust/fume/gas/mist/vapours/spray.
Wash face, hands and any exposed skin thoroughly after handling.
Do not eat, drink or smoke when using this product.
Contaminated work clothing should not be allowed out of the workplace.
Avoid release to the environment.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
In case of fire: Use CO2, dry chemical, or foam for extinction.
Specific treatment (see supplemental first aid instructions on this label).
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
Wash contaminated clothing before reuse.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
Immediately call a POISON CENTER or doctor/physician.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Store in a well-ventilated place. Keep cool.
Store locked up.
Dispose of contents/container in accordance with local and national regulations.

Hazards Not Otherwise Classified (HNOC), Other Hazards

Not applicable

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance, Mixture or Article? Mixture

HAZARDOUS INGREDIENTS

Component / CAS No.	%	GHS Classification	Carcinogen
gamma-Aminopropyltriethoxy silane 919-30-2	30-50	Acute Tox. 4 (H302) Skin Corr. 1B (H314) Eye Dam. 1 (H318) Skin Sens. 1B (H317)	-
Tetrapropyl orthosilicate 682-01-9	30-50	Skin Irrit. 2 (H315) Eye Irrit. 2A (H319)	-
Dibutyltin dilaurate 77-58-7	1-2	Muta. 2 (H341) Repr. 1B (H360FD) STOT Rep. 1 (H372) STOT Single 1 (H370) Skin Corr. 1C (H314) Eye Dam. 1 (H318) Skin Sens. 1B (H317) Aquatic Acute 1 (H410) Aquatic Chronic 1 (H410)	-
Ethanol 64-17-5	0.1-1	Flam. Liq. 2 (H225) Repr. 1A (H360) Skin Irrit. 3 (H316) Eye Irrit. 2A (H319)	IARC 1 NTP(as Alcoholic beverages) ACGIH A3

The specific chemical identity and/or exact percentage of composition for one or more ingredients has been withheld as a trade secret.

Additional GHS classification or other information may be included in this section but has not been adopted by OSHA. See Section 16 for full text of H phrases.

4. FIRST AID MEASURES

DESCRIPTION OF FIRST AID MEASURES

Eye Contact:

Rinse immediately with plenty of water for at least 15 minutes. Obtain medical attention immediately.

Skin Contact:

Remove contaminated clothing and shoes without delay. Wear impermeable gloves. Wash immediately with plenty of water. Pay particular attention to skin crevices, nail folds, etc. Do not reuse contaminated clothing without laundering. Do not reuse contaminated leatherware. Obtain medical attention.

Ingestion:

If swallowed, call a physician immediately. Only induce vomiting at the instruction of a physician. Never give anything by mouth to an unconscious person.

Inhalation:

Remove to fresh air. If breathing is difficult, give oxygen. Obtain medical advice if there are persistent symptoms.

MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

None known

INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDS

Not applicable

5. FIRE-FIGHTING MEASURES

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media:

Use water spray, alcohol foam, carbon dioxide or dry chemical to extinguish fires. Water stream may be ineffective.

Extinguishing Media to Avoid:

full water jet

Protective Equipment:

Firefighters, and others exposed, wear self-contained breathing apparatus. Wear full firefighting protective clothing. See MSDS Section 8 (Exposure Controls/Personal Protection).

Special Hazards:

Keep containers cool by spraying with water if exposed to fire. Use water to keep containers cool but avoid letting it contact this product.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions:

Where exposure level is not known, wear approved, positive pressure, self-contained respirator. Where exposure level is known, wear approved respirator suitable for level of exposure. In addition to the protective clothing/equipment in Section 8 (Exposure Controls/Personal Protection), wear impermeable boots.

Methods For Cleaning Up:

Remove sources of ignition. Cover spills with some inert absorbent material; sweep up and place in a waste disposal container. Flush spill area with water.

References to other sections:

See Sections 8 and 13 for additional information.

7. HANDLING AND STORAGE

HANDLING

Precautions: Keep away from heat, sparks and open flame. - No smoking. Keep container tightly closed. Ground/Bond container and receiving equipment. Use explosion-proof electrical, ventilating, lighting and other equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Wash hands thoroughly after handling. Wear protective gloves/clothing and eye/face protection. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not eat, drink or smoke when using this product. Do not breathe vapors or spray mist.

Special Handling Statements: This material will corrode steel or aluminum at a rate greater than 6.25 mm (0.25 inches/year) @ 55 °C (130 °F). It is thus considered to be a corrosive material for transportation purposes.

STORAGE

Areas containing this material should have fire safe practices and electrical equipment in accordance with applicable regulations and/or guidelines. Standards are primarily based on the material's flashpoint, but may also take into account properties such as miscibility with water or toxicity. All local and national regulations should be followed. In the Americas, National Fire Protection Association (NFPA) 30: Flammable and Combustible Liquids Code, is a widely used standard. NFPA 30 establishes storage conditions for the following classes of materials: Class I Flammable Liquids, Flashpoint <37.8 °C. Class II Combustible Liquids, 37.8 °C < Flashpoint <60 °C. Class IIIa Combustible Liquids, 60 °C < Flashpoint < 93 °C. Class IIIb Combustible Liquids, Flashpoint > 93 °C.

Storage Temperature: Store at <27 °C 80 °F

Reason: Quality.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Measures:

Utilize a closed system process where feasible. Where this material is not used in a closed system, good enclosure and local exhaust ventilation should be provided to control exposure when spraying or curing at elevated temperatures.

Respiratory Protection:

Where exposures are below the established exposure limit, no respiratory protection is required. Where exposures exceed the established exposure limit, use respiratory protection recommended for the material and level of exposure. A full facepiece respirator also provides eye and face protection. Cutting, grinding or sanding of parts fabricated after curing may create respirable dust particles. Respiratory protection appropriate for this dust may be required. Refer to components listed above for potential hazardous components in the dust.

Eye Protection:

Prevent eye and skin contact. Provide eye wash fountain and safety shower in close proximity to points of potential exposure. Wear eye/face protection such as chemical splash proof goggles or face shield.

Skin Protection:

Prevent contamination of skin or clothing when removing protective equipment. Barrier creams may be used in conjunction with the gloves to provide additional skin protection. Wear impermeable gloves and suitable protective clothing.

Hand Protection:

Nitrile or fluorinated rubber gloves. Consider the porosity and elasticity data of the glove manufacturer and the specific conditions in the work place. Consider the porosity and elasticity data of the glove manufacturer and the specific conditions in the work place. Barrier creams may help to protect the exposed areas of the skin, they should however not be applied once exposure has occurred.

Additional Advice:

Food, beverages, and tobacco products should not be carried, stored, or consumed where this material is in use. Before eating, drinking, or smoking, wash face and hands thoroughly with soap and water. It is recommended that a shower be taken after completion of workshift especially if significant contact has occurred. Work clothing should then be laundered prior to reuse. Street clothing should be stored separately from work clothing and protective equipment. Work clothing and shoes should not be taken home.

Exposure Limit(s)

The below constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

64-17-5 Ethanol

OSHA (PEL):	1000 ppm (TWA) 1900 mg/m ³ (TWA)
ACGIH (TLV):	1000 ppm (STEL)
Other Value:	Not established

77-58-7 Dibutyltin dilaurate

OSHA (PEL):	0.1 mg/m ³ (TWA)(as Tin organic compounds)
ACGIH (TLV):	0.2 mg/m ³ Sn (STEL)(as Tin organic compounds) (skin)(as Tin organic compounds)
	0.1 mg/m ³ Sn (TWA)(as Tin organic compounds)
Other Value:	Not established

9. PHYSICAL AND CHEMICAL PROPERTIES

Color:	white
Appearance:	liquid
Odor:	ammonia-like

9. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point:	Not available
Melting Point:	Not available
Vapor Pressure:	Not applicable
Specific Gravity/Density:	0.928
Vapor Density:	Not available
Percent Volatile (% by wt.):	60 - 65
pH:	Not available
Saturation In Air (% By Vol.):	Not available
Evaporation Rate:	Not available
Solubility In Water:	Reacts with water
Volatile Organic Content:	676 gm/L
Flash Point:	60 °C 140 °F Setaflash Closed Cup
Flammability (solid, gas):	Not available
Flammable Limits (% By Vol):	Not available
Autoignition (Self) Temperature:	Not available
Decomposition Temperature:	Not available
Partition coefficient (n-octanol/water):	Not available
Odor Threshold:	Not available
Viscosity (Kinematic):	Not available

DUST HAZARD INFORMATION

Particle Size (microns):	Not applicable
Kst (bar-m/sec):	Not applicable
Maximum Explosion Pressure (Pmax):	Not applicable
Dust Class:	Not applicable
Minimum Ignition Energy (MIE) (mJ):	Not applicable
Minimum Ignition Temperature (MIT) (°C):	Not applicable
Minimum Explosive Concentration (MEC) (g/m³):	Not applicable
Limiting Oxygen Concentration (LOC) (%):	Not applicable

10. STABILITY AND REACTIVITY

Reactivity:	No information available
Stability:	Stable
Conditions To Avoid:	None known
Polymerization:	Will not occur
Conditions To Avoid:	None known
Materials To Avoid:	This material contains an organo silane compound which reacts vigorously with water releasing heat. The addition of small amounts of water (in the range of 2-15%) can produce an exothermic reaction which generates alcohol, to the extent that the resulting solution can reach a temperature which exceeds the flash point of the new solution. If a water solution is desired, add the product to water, and not vice versa.
Hazardous Decomposition Products:	Carbon dioxide Carbon monoxide (CO) Oxides of nitrogen silicon dioxide

12. ECOLOGICAL INFORMATION

TOXICITY, PERSISTENCE AND DEGRADABILITY, BIOACCUMULATIVE POTENTIAL, MOBILITY IN SOIL, OTHER ADVERSE EFFECTS

Overall Environmental Toxicity: Harmful to aquatic life. Harmful to aquatic life with long lasting effects.

The ecological assessment for this material is based on an evaluation of its components.

RESULTS OF PBT AND vPvB ASSESSMENT

Not determined

HAZARDOUS INGREDIENT TOXICITY DATA

Component / CAS No.	Toxicity to Algae	Toxicity to Fish	Toxicity to Water Flea
gamma-Aminopropyltriethoxy silane 919-30-2	Not available	Not available	Not available
Tetrapropyl orthosilicate 682-01-9	Not available	Not available	Not available
Dibutyltin dilaurate 77-58-7	Not available	Not available	Not available
Ethanol 64-17-5	Not available	LC50 > 100 mg/L - Pimephales promelas (96h) static LC50 12.0 - 16.0 mL/L - Oncorhynchus mykiss (96h) static LC50 13400 - 15100 mg/L - Pimephales promelas (96h) flow-through	EC50 = 2 mg/L - Daphnia magna (48h) Static LC50 9268 - 14221 mg/L - Daphnia magna (48h)

13. DISPOSAL CONSIDERATIONS

13. DISPOSAL CONSIDERATIONS

The information on RCRA waste classification and disposal methodology provided below applies only to the product, as supplied. If the material has been altered or contaminated, or it has exceeded its recommended shelf life, the guidance may be inapplicable. Hazardous waste classification under federal regulations (40 CFR Part 261 et seq) is dependent upon whether a material is a RCRA "listed hazardous waste" or has any of the four RCRA "hazardous waste characteristics." Refer to 40 CFR Part 261.33 to determine if a given material to be disposed of is a RCRA "listed hazardous waste"; information contained in Section 15 of this MSDS is not intended to indicate if the product is a "listed hazardous waste." RCRA Hazardous Waste Characteristics: There are four characteristics defined in 40 CFR Section 261.21-61.24: Ignitability, Corrosivity, Reactivity, and Toxicity. To determine Ignitability, see Section 9 of this MSDS (flash point). For Corrosivity, see Sections 9 and 14 (pH and DOT corrosivity). For Reactivity, see Section 10 (incompatible materials). For Toxicity, see Section 3 (composition). Federal regulations are subject to change. State and local requirements, which may differ from or be more stringent than the federal regulations, may also apply to the classification of the material if it is to be disposed. The Company encourages the recycle, recovery and reuse of materials, where permitted, as an alternate to disposal as a waste. The Company recommends that organic materials classified as RCRA hazardous wastes be disposed of by thermal treatment or incineration at EPA approved facilities. The Company has provided the foregoing for information only; the person generating the waste is responsible for determining the waste classification and disposal method.

14. TRANSPORT INFORMATION

This section provides basic shipping classification information. Refer to appropriate transportation regulations for specific requirements.

US DOT

Dangerous Goods? X

Proper Shipping Name: Corrosive liquid, flammable, n.o.s.

Hazard Class: 8

Subsidiary Class: 3

Packing Group: II

UN/ID Number: UN2920

Transport Label Required: Corrosive
Flammable Liquid
Marine Pollutant

Marine Pollutant

Technical Name (N.O.S.): Ethanol, gamma-aminopropyltriethoxy silane, Dibutyltin dilaurate

Comments: Marine Pollutants - DOT requirements specific to Marine Pollutants do not apply to non-bulk packagings transported by motor vehicles, rail cars or aircraft.

TRANSPORT CANADA

Dangerous Goods? X

Proper Shipping Name: Corrosive liquid, flammable, n.o.s.

Hazard Class: 8

Subsidiary Class: 3

Packing Group: II

UN Number: UN2920

Transport Label Required: Corrosive
Flammable Liquid
Marine Pollutant

Marine Pollutant

Technical Name (N.O.S.): Ethanol, gamma-aminopropyltriethoxy silane, Dibutyltin dilaurate

ICAO / IATA

Dangerous Goods? X

Proper Shipping Name: Corrosive liquid, flammable, n.o.s.

Hazard Class: 8

Subsidiary Class: 3

Packing Group: II

UN Number: UN2920

Transport Label Required: Corrosive
Flammable Liquid
Marine Pollutant

Technical Name (N.O.S.): Ethanol, gamma-aminopropyltriethoxy silane, Dibutyltin dilaurate

Comments: Marine Pollutants-IATA Special Provision A197 when transported in single or combination packagings containing a net quantity per single or inner packaging of 5L or less for liquids or 5 kg for solids, are not subject to any provisions of these regulations. Note if the material also meets the criteria under additional hazard classes then all requirements continue to apply for those hazards.

IMO

Dangerous Goods? X

Proper Shipping Name: Corrosive liquid, flammable, n.o.s.

Hazard Class: 8

Subsidiary Class: 3

UN Number: UN2920

Packing Group: II

Transport Label Required: Corrosive
Flammable Liquid
Marine Pollutant

Marine Pollutant

Technical Name (N.O.S.): Ethanol, gamma-aminopropyltriethoxy silane, Dibutyltin dilaurate

Comments: Marine Pollutants -IMDG 2.10.2.7 when packaged in single or combination packagings, containing a net quantity per single or inner packaging of 5L or less for liquids or 5 kg for solids are not subject to any other provisions of this code. Note if the material also meets the criteria under additional hazard classes then all requirements continue to apply for those hazards.

15. REGULATORY INFORMATION

Inventory Information

United States (USA): All components of this product are included on the TSCA Chemical Inventory or are not required to be listed on the TSCA Chemical Inventory.

Canada: All components of this product are included on the Domestic Substances List (DSL) or are not required to be listed on the DSL.

European Economic Area (including EU): Cytec has appointed an Only Representative to relieve our customers from their registration requirements under the REACH Regulation (EC) No. 1907/2006. Please contact us if you wish to benefit from the OR arrangement.

Australia: All components of this product are included in the Australian Inventory of Chemical Substances (AICS) or are not required to be listed on AICS.

China: All components of this product are included on the Chinese inventory or are not required to be listed on the Chinese inventory.

Japan: All components of this product are included on the Japanese (ENCS) inventory or are not required to be listed on the Japanese inventory.

Korea: All components of this product are included on the Korean (ECL) inventory or are not required to be listed on the Korean inventory.

Philippines: All components of this product are included on the Philippine (PICCS) inventory or are not required to be listed on the Philippine inventory.

Switzerland: All components of this product are exempt from the new substance notification requirements for Switzerland (SR 813.11 art. 16-17).

Taiwan: All components of this product are included on the Taiwan Chemical Substance Inventory (TCSI) or are not required to be listed on the Taiwan inventory.

OTHER ENVIRONMENTAL INFORMATION

The following components of this product may be subject to reporting requirements pursuant to Section 313 of CERCLA (40 CFR 372), Section 12(b) of TSCA, or may be subject to release reporting requirements (40 CFR 307, 40 CFR 311, etc.) See Section 13 for information on waste classification and waste disposal of this product.

This product does not contain any components regulated under these sections of the EPA

PRODUCT HAZARD CLASSIFICATION UNDER SECTION 311 OF SARA

- Acute
- Chronic
- Fire

16. OTHER INFORMATION

NFPA Hazard Rating (National Fire Protection Association)

Health: 3 - Materials that, under emergency conditions, can cause serious or permanent injury.

Fire: 2 - Materials that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur.

Instability: 1 - Materials that in themselves are normally stable, but that can become unstable at elevated temperatures and pressures.

Special: Water Reactive

Reasons For Issue: Revised Section 2
Revised Section 3
Revised Section 11
Revised Section 12

Date Prepared: 11/15/2016

Date of last significant revision: 11/15/2016

Component Hazard Phrases

gamma-Aminopropyltriethoxy silane

H302 - Harmful if swallowed.

H314 - Causes severe skin burns and eye damage.

H317 - May cause an allergic skin reaction.

Dibutyltin dilaurate

H314 - Causes severe skin burns and eye damage.
H317 - May cause an allergic skin reaction.
H318 - Causes serious eye damage.
H341 - Suspected of causing genetic defects.
H360FD - May damage fertility. May damage the unborn child.
H370 - Causes damage to organs.
H372 - Causes damage to organs through prolonged or repeated exposure.
H400 - Very toxic to aquatic life.
H410 - Very toxic to aquatic life with long lasting effects.

Ethanol

H225 - Highly flammable liquid and vapor.
H316 - Causes mild skin irritation.
H319 - Causes serious eye irritation.
H360 - May damage fertility or the unborn child.

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