



SAFETY DATA SHEET

DDP Specialty Electronic Materials US,
LLC

Product name: BETAFORCE™ 9050 S PoIC

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DDP Specialty Electronic Materials US, LLC encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

1. IDENTIFICATION

Product name: BETAFORCE™ 9050 S PoIC

Recommended use of the chemical and restrictions on use

Identified uses: An adhesive -- For use in automotive applications.

COMPANY IDENTIFICATION

DDP Specialty Electronic Materials US,
LLC

EMERGENCY TELEPHONE NUMBER

24-Hour Emergency Contact: 1-800-424-9300

Local Emergency Contact: 800-424-9300

2. HAZARDS IDENTIFICATION

Hazard classification

GHS classification in accordance with 29 CFR 1910.1200

Acute toxicity - Category 4 - Oral

Serious eye damage - Category 1

Specific target organ toxicity - repeated exposure - Category 2 - Oral

Label elements

Hazard pictograms



Signal word: **DANGER!**

Hazards

Harmful if swallowed.

Causes serious eye damage.

May cause damage to organs (Kidney) through prolonged or repeated exposure if swallowed.

Precautionary statements

Prevention

Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.

Wash skin thoroughly after handling.

Do not eat, drink or smoke when using this product.

Wear eye protection/ face protection.

Response

IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.

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/doctor.

Get medical advice/ attention if you feel unwell.

Disposal

Dispose of contents/ container to an approved waste disposal plant.

Other hazards

No data available

3. COMPOSITION/INFORMATION ON INGREDIENTS

This product is a mixture.

Component	CASRN	Concentration
Glycerol, propylene oxide, ethylene oxide polymer	9082-00-2	> 45.0 - < 55.0 %
Talc	14807-96-6	> 30.0 - < 40.0 %
Ethylene glycol	107-21-1	< 10.0 %
Trimethylolpropane poly(oxypropylene)triamine	39423-51-3	< 5.0 %
Zeolites	1318-02-1	< 5.0 %
Dimethyl siloxane, reaction product with silica	67762-90-7	< 5.0 %

4. FIRST AID MEASURES

Description of first aid measures

General advice:

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

Inhalation: Move person to fresh air; if effects occur, consult a physician.

Skin contact: Immediately flush skin with water while removing contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Destroy contaminated leather items such as shoes, belts, and watchbands. Suitable emergency safety shower facility should be immediately available.

Eye contact: Wash immediately and continuously with flowing water for at least 30 minutes. Remove contact lenses after the first 5 minutes and continue washing. Obtain prompt medical consultation, preferably from an ophthalmologist. Suitable emergency eye wash facility should be immediately available.

Ingestion: Do NOT induce vomiting. Seek medical attention immediately. If person is fully conscious give 1 cup or 8 ounces (240 ml) of water. If medical advice is delayed and if an adult has swallowed several ounces of chemical, then give 3-4 ounces (1/3-1/2 Cup) (90-120 ml) of hard liquor such as 80 proof whiskey. For children, give proportionally less liquor at a dose of 0.3 ounce (1 1/2 tsp.) (8 ml) liquor for each 10 pounds of body weight, or 2 ml per kg body weight [e.g., 1.2 ounce (2 1/3 tbsp.) for a 40 pound child or 36 ml for an 18 kg child].

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 any immediate medical attention and special treatment needed

Notes to physician: Repeated excessive exposure may aggravate preexisting lung disease. 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. Maintain adequate ventilation and oxygenation of the patient. 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. Chemical eye burns may require extended irrigation. Obtain prompt consultation, preferably from an ophthalmologist. If burn is present, treat as any thermal burn, after decontamination. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

5. FIREFIGHTING MEASURES

Suitable extinguishing media: Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. Alcohol resistant foams (ATC type) are preferred. General purpose synthetic foams (including AFFF) or protein foams may function, but will be less effective.

Unsuitable extinguishing media: Do not use direct water stream. May spread fire.

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: Nitrogen oxides. Carbon monoxide. Carbon dioxide.

Unusual Fire and Explosion Hazards: Container may rupture from gas generation in a fire situation. Violent steam generation or eruption may occur upon application of direct water stream to hot liquids.

Advice for firefighters

Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of reignition has passed. Fight fire from protected location or safe distance. Consider the use of unmanned hose holders or monitor nozzles. Immediately withdraw all personnel from the area in case of rising sound from venting safety device or discoloration of the container. Do not use direct water stream. May spread fire. 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: Evacuate area. Only trained and properly protected personnel must be involved in clean-up operations. Keep upwind of spill. Ventilate area of leak or spill. Refer to section 7, Handling, for additional precautionary measures. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

Environmental precautions: 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. Absorb with materials such as: Cat litter. Sand. Sawdust. Collect in suitable and properly labeled containers. See Section 13, Disposal Considerations, for additional information.

7. HANDLING AND STORAGE

Precautions for safe handling: Do not swallow. Avoid contact with eyes, skin, and clothing. Avoid breathing vapor or mist. Wash thoroughly after handling. Keep container closed. Use with adequate ventilation. Spills of these organic materials on hot fibrous insulations may lead to lowering of the autoignition temperatures possibly resulting in spontaneous combustion. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

Conditions for safe storage: Store in accordance with good manufacturing practices.

Storage stability

Storage temperature:

5 - 25 °C (41 - 77 °F)

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

If exposure limits exist, they are listed below. If no exposure limits are displayed, then no values are applicable.

Component	Regulation	Type of listing	Value/Notation	
Ethylene glycol	Dow IHG	TWA	50 mg/m ³	
	Dow IHG	STEL	100 mg/m ³	
	ACGIH	C Aerosol only	100 mg/m ³	
	ACGIH	TWA Vapour	25 ppm	
	ACGIH	TWA Vapour and inhalable aerosols	25 ppm	
	ACGIH	STEL Vapour	50 ppm	
	ACGIH	STEL Vapour and inhalable aerosols	50 ppm	
	ACGIH	STEL Inhalable fraction, Aerosol only	10 mg/m ³	
	Zeolites	ACGIH	TWA Respirable fraction	1 mg/m ³ , Aluminium fraction

Although some of the components of this product may have exposure guidelines, no exposure would be expected under normal handling conditions due to the physical state of the material.

Exposure controls

Engineering controls: Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.

Individual protection measures

Eye/face protection: Use chemical goggles.

Skin protection

Hand protection: Use gloves chemically resistant to this material when prolonged or frequently repeated contact could occur. If hands are cut or scratched, use gloves chemically resistant to this material even for brief exposures. Use gloves with insulation for thermal protection, when needed. Examples of preferred glove barrier materials include: Butyl rubber. Natural rubber ("latex"). Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Polyvinyl alcohol ("PVA"). Polyvinyl chloride ("PVC" or "vinyl"). NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

Other protection: When prolonged or frequently repeated contact could occur, use protective clothing chemically resistant to this material. Selection of specific items such as faceshield, boots, apron, or full-body suit will depend on the task. When handling hot material, protect skin from thermal burns as well as from skin absorption.

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, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. For most conditions, no respiratory protection should be needed; however, if handling at elevated temperatures without sufficient ventilation, use an approved air-purifying respirator.

The following should be effective types of air-purifying respirators: Organic vapor cartridge.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Physical state	Paste
Color	White
Odor	Characteristic
Odor Threshold	No test data available
pH	No test data available
Melting point/range	No test data available
Freezing point	No test data available
Boiling point (760 mmHg)	No test data available
Flash point	No test data available
Evaporation Rate (Butyl Acetate = 1)	No test data available
Flammability (solid, gas)	The product is not flammable.
Lower explosion limit	No test data available
Upper explosion limit	No test data available
Vapor Pressure	No test data available
Relative Vapor Density (air = 1)	No test data available
Relative Density (water = 1)	1.3397 <i>Calculated.</i>
Water solubility	Not applicable

Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	No test data available
Decomposition temperature	No test data available
Kinematic Viscosity	No test data available
Explosive properties	No test data available
Oxidizing properties	No test data available
Molecular weight	No data available
Volatile Organic Compounds	No test data available

NOTE: The physical data presented above are typical values and should not be construed as a specification.

10. STABILITY AND REACTIVITY

Reactivity: No data available

Chemical stability: Stable under recommended storage conditions. See Storage, Section 7.

Possibility of hazardous reactions: Will not occur by itself.

Conditions to avoid: Product can oxidize at elevated temperatures. Generation of gas during decomposition can cause pressure in closed systems.

Incompatible materials: Avoid contact with oxidizing materials. Avoid contact with: Strong acids. Strong bases. Avoid unintended contact with isocyanates. The reaction of polyols and isocyanates generates heat.

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 dioxide. Alcohols. Ethers. Hydrocarbons. Ketones. Polymer fragments.

11. TOXICOLOGICAL INFORMATION

Toxicological information appears in this section when such data is available.

Acute toxicity

Acute oral toxicity

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. Swallowing may result in irritation of the mouth, throat, and gastrointestinal tract. Excessive exposure may cause central nervous system effects, cardiopulmonary effects (metabolic acidosis), and kidney failure. May cause abdominal discomfort or diarrhea. May cause nausea and vomiting.

Single dose oral LD50 has not been determined.

For Ethylene glycol:

Lethal Dose, Humans, 3 Ounces

Acute dermal toxicity

Prolonged skin contact is unlikely to result in absorption of harmful amounts. Repeated skin exposure to large quantities may result in absorption of harmful amounts. Massive contact with damaged skin or of material sufficiently hot to burn skin may result in absorption of potentially lethal amounts.

The dermal LD50 has not been determined.

Acute inhalation toxicity

At room temperature, exposure to vapor is minimal due to low volatility; vapor from heated material may cause respiratory irritation. This material contains mineral and/or inorganic fillers. There is essentially no potential for inhalation exposure to these fillers incidental to industrial handling due to the physical state.

As product: The LC50 has not been determined.

Skin corrosion/irritation

Prolonged contact may cause skin irritation with local redness.

Serious eye damage/eye irritation

May cause severe eye irritation.

May cause permanent impairment of vision, even blindness.

May cause corneal injury.

Vapor or mist may cause eye irritation.

Sensitization

Based on information for component(s):

Did not cause allergic skin reactions when tested in guinea pigs.

For respiratory sensitization:

No relevant information found.

Specific Target Organ Systemic Toxicity (Single Exposure)

Product test data not available. Refer to component data.

Specific Target Organ Systemic Toxicity (Repeated Exposure)

Based on information for component(s):

Observations in humans include:

Nystagmus (involuntary eye movement).

Contains component(s) which have been reported to cause effects on the following organs in animals:

Kidney.

Liver.

Carcinogenicity

Ethylene glycol did not cause cancer in long-term animal studies.

Teratogenicity

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

Ingestion of large amounts of ethylene glycol has been shown to interfere with reproduction in animals.

Mutagenicity

Contains a component(s) which were negative in in vitro genetic toxicity studies. Contains component(s) which were negative in animal genetic toxicity studies.

Aspiration Hazard

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

COMPONENTS INFLUENCING TOXICOLOGY:**Glycerol, propylene oxide, ethylene oxide polymer****Acute dermal toxicity**

Typical for this family of materials. LD50, Rabbit, > 2,000 mg/kg Estimated.

Acute inhalation toxicity

The LC50 has not been determined.

Specific Target Organ Systemic Toxicity (Single Exposure)

Evaluation of available data suggests that this material is not an STOT-SE toxicant.

Talc**Acute dermal toxicity**

The dermal LD50 has not been determined.

Acute inhalation toxicity

The LC50 has not been determined.

Specific Target Organ Systemic Toxicity (Single Exposure)

Evaluation of available data suggests that this material is not an STOT-SE toxicant.

Ethylene glycol**Acute dermal toxicity**

LD50, Rabbit, > 10,600 mg/kg

LD50, Mouse, male and female, > 3,500 mg/kg

Acute inhalation toxicity

LC50, Rat, male and female, 6 Hour, dust/mist, > 2.5 mg/l

Specific Target Organ Systemic Toxicity (Single Exposure)

Evaluation of available data suggests that this material is not an STOT-SE toxicant.

Trimethylolpropane poly(oxypropylene)triamine**Acute dermal toxicity**

LD50, Rat, male and female, > 1,000 mg/kg

Acute inhalation toxicity

The LC50 has not been determined.

Specific Target Organ Systemic Toxicity (Single Exposure)

Evaluation of available data suggests that this material is not an STOT-SE toxicant.

Zeolites**Acute dermal toxicity**

Typical for this family of materials. LD50, Rabbit, > 2,000 mg/kg

Acute inhalation toxicity

Typical for this family of materials. LC50, Rat, male and female, 4 Hour, dust/mist, > 3.35 mg/l
No deaths occurred at this concentration.

Specific Target Organ Systemic Toxicity (Single Exposure)

Available data are inadequate to determine single exposure specific target organ toxicity.

Dimethyl siloxane, reaction product with silica**Acute dermal toxicity**

LD50, Rat, > 2,000 mg/kg OECD Test Guideline 402

Acute inhalation toxicity

For similar material(s): LC50, Rat, 4 Hour, dust/mist, > 0.477 mg/l

Specific Target Organ Systemic Toxicity (Single Exposure)

Evaluation of available data suggests that this material is not an STOT-SE toxicant.

12. ECOLOGICAL INFORMATION

Ecotoxicological information appears in this section when such data is available.

Toxicity**Glycerol, propylene oxide, ethylene oxide polymer****Acute toxicity to fish**

For this family of materials:

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).

Acute toxicity to aquatic invertebrates

For this family of materials:

LC50, Daphnia magna (Water flea), static test, 48 Hour, 384 mg/l

Acute toxicity to algae/aquatic plants

For this family of materials:

ErC50, alga Scenedesmus sp., static test, 72 Hour, Growth rate, > 100 mg/l

Talc**Acute toxicity to fish**

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

LC50, Danio rerio (zebra fish), 24 Hour, > 100,000 mg/l, Method Not Specified.

Ethylene glycol**Acute toxicity to fish**

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).

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

Acute toxicity to aquatic invertebrates

EC50, Daphnia magna (Water flea), static test, 48 Hour, > 100 mg/l, OECD Test Guideline 202 or Equivalent

Acute toxicity to algae/aquatic plants

ErC50, Pseudokirchneriella subcapita, 96 Hour, Growth rate inhibition, 6,500 - 13,000 mg/l

Toxicity to bacteria

EC50, activated sludge, 30 min, 225 mg/l, OECD 209 Test

Chronic toxicity to fish

NOEC, Pimephales promelas (fathead minnow), 7 d, 15,380 mg/l

Chronic toxicity to aquatic invertebrates

NOEC, Ceriodaphnia dubia (water flea), 7 d, 8,590 mg/l

Trimethylolpropane poly(oxypropylene)triamine

Acute toxicity to fish

Material is moderately toxic to aquatic organisms on an acute basis (LC50/EC50 between 1 and 10 mg/L in the most sensitive species tested).

LC50, Oncorhynchus mykiss (rainbow trout), 96 Hour, > 100 mg/l

Acute toxicity to aquatic invertebrates

EC50, Daphnia magna (Water flea), static test, 48 Hour, 13 mg/l, OECD Test Guideline 202 or Equivalent

Acute toxicity to algae/aquatic plants

ErC50, Pseudokirchneriella subcapitata (green algae), static test, 72 Hour, Growth rate inhibition, 4.4 mg/l, OECD Test Guideline 201 or Equivalent

Toxicity to bacteria

EC50, activated sludge, Respiration inhibition, 0.5 Hour, > 1,000 mg/l, OECD 209 Test

Zeolites

Acute toxicity to fish

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

LC50, Danio rerio (zebra fish), semi-static test, 96 Hour, 1,800 mg/l

Acute toxicity to aquatic invertebrates

EC50, Daphnia magna (Water flea), 48 Hour, 1,000 - 1,800 mg/l

Acute toxicity to algae/aquatic plants

ErC50, Desmodesmus subspicatus (green algae), static test, 72 Hour, Growth rate, 130 mg/l, OECD Test Guideline 201

NOEC, Desmodesmus subspicatus (green algae), static test, 72 Hour, Growth rate, 18 mg/l, OECD Test Guideline 201

Toxicity to bacteria

EC50, Pseudomonas putida, 16 Hour, 1,550 mg/l

Chronic toxicity to fish

NOEC, Fathead minnow (Pimephales promelas), flow-through test, 30 d, number of offspring, > 86.7 mg/l

Chronic toxicity to aquatic invertebrates

NOEC, Daphnia magna (Water flea), semi-static test, 21 d, number of offspring, 32 mg/l

Dimethyl siloxane, reaction product with silica

Acute toxicity to fish

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).
LC50, zebra fish (Brachydanio rerio), 96 Hour, > 1,000 mg/l, OECD Test Guideline 203

Acute toxicity to aquatic invertebrates

EC50, Daphnia magna (Water flea), 24 Hour, > 1,000 mg/l, OECD Test Guideline 202

Persistence and degradability

Glycerol, propylene oxide, ethylene oxide polymer

Biodegradability: For this family of materials: Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.

Talc

Biodegradability: Biodegradation is not applicable.

Ethylene glycol

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

10-day Window: Pass

Biodegradation: 90 - 100 %

Exposure time: 10 d

Method: OECD Test Guideline 301A or Equivalent

10-day Window: Not applicable

Biodegradation: 90 %

Exposure time: 1 d

Method: OECD Test Guideline 302B or Equivalent

Theoretical Oxygen Demand: 1.29 mg/mg

Trimethylolpropane poly(oxypropylene)triamine

Biodegradability: Material is expected to biodegrade very slowly (in the environment). Fails to pass OECD/EEC tests for ready biodegradability.

10-day Window: Fail

Biodegradation: < 5 %

Exposure time: 28 d

Method: OECD Test Guideline 301F or Equivalent

Zeolites

Biodegradability: Biodegradation is not applicable.

Dimethyl siloxane, reaction product with silica

Biodegradability: Biodegradation is not applicable.

Bioaccumulative potential

Glycerol, propylene oxide, ethylene oxide polymer

Bioaccumulation: For this family of materials: No bioconcentration is expected because of the relatively high molecular weight (MW greater than 1000).

Talc

Bioaccumulation: Partitioning from water to n-octanol is not applicable.
Bioconcentration factor (BCF): 3 Estimated.

Ethylene glycol

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).
Partition coefficient: n-octanol/water(log Pow): -1.36 Measured
Bioconcentration factor (BCF): 10 Leuciscus idus (Golden orfe)

Trimethylolpropane poly(oxypropylene)triamine

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).
Partition coefficient: n-octanol/water(log Pow): -1.3 Estimated.

Zeolites

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

Dimethyl siloxane, reaction product with silica

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

Mobility in soil

Glycerol, propylene oxide, ethylene oxide polymer

No relevant data found.

Talc

No data available.

Ethylene glycol

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 (Koc): 1 Estimated.

Trimethylolpropane poly(oxypropylene)triamine

No relevant data found.

Zeolites

No relevant data found.

Dimethyl siloxane, reaction product with silica

No relevant data found.

13. DISPOSAL CONSIDERATIONS

Disposal methods: DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. AS YOUR SUPPLIER, WE HAVE NO CONTROL OVER THE MANAGEMENT PRACTICES OR

MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION: Composition Information. FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: Incinerator or other thermal destruction device.

Treatment and disposal methods of used packaging: Empty containers should be recycled or otherwise disposed of by an approved waste management facility. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. Do not re-use containers for any purpose.

14. TRANSPORT INFORMATION

DOT

Not regulated for transport

Classification for SEA transport (IMO-IMDG):

**Transport in bulk
according to Annex I or II
of MARPOL 73/78 and the
IBC or IGC Code**

Not regulated for transport
Consult IMO regulations before transporting ocean bulk

Classification for AIR transport (IATA/ICAO):

Not regulated for transport

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. 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

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

The following components are subject to reporting levels established by SARA Title III, Section 313:

Components	CASRN
Ethylene glycol	107-21-1

Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) Section 103

Calculated RQ exceeds reasonably attainable upper limit.

Components	CASRN	RQ (RCRA Code)
Ethylene glycol	107-21-1	5000 lbs RQ

Pennsylvania Worker and Community Right-To-Know Act:

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.

Components	CASRN
Talc	14807-96-6
Ethylene glycol	107-21-1

California Prop. 65

WARNING: This product can expose you to chemicals including Ethylene glycol, which is/are known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

United States TSCA Inventory (TSCA)

All components of this product are in compliance with the inventory listing requirements of the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

16. OTHER INFORMATION

Hazard Rating System**NFPA**

Health	Flammability	Instability
3	1	0

Revision

Identification Number: 11028934 / A749 / Issue Date: 02/02/2019 / Version: 9.1

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

Legend

ACGIH	USA. ACGIH Threshold Limit Values (TLV)
C	Ceiling limit
Dow IHG	Dow Industrial Hygiene Guideline
STEL	Short term exposure limit
TWA	Time weighted average

Full text of other abbreviations

AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of

Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Information Source and References

This SDS is prepared by Product Regulatory Services and Hazard Communications Groups from information supplied by internal references within our company.

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