



# POLYGEM

Revision date 21-Feb-2025

## SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:  
US OSHA Hazard Communication Standard (29 CFR 1910.1200)

Revision Number 1

### 1. Identification

#### Product identifier

**Product Name** Part A:  
1618 Clear  
Aqua-Gem  
2089FS

#### Other means of identification

**Product Code(s)** FG-2294A

**Synonyms** None

#### Recommended use of the chemical and restrictions on use

**Recommended use** Epoxy Coating

**Restrictions on use** No information available

#### Details of the supplier of the safety data sheet

##### Supplier Address

Polygem, 5600 Lower Macungie Rd, Macungie, PA 18062, USA, Phone: +01.610.252.5800, [www.smooth-on.com](http://www.smooth-on.com),  
[sds@smooth-on.com](mailto:sds@smooth-on.com)

**E-mail** [sds@smooth-on.com](mailto:sds@smooth-on.com)

#### Emergency telephone number

**Emergency Telephone** Chemtel: US: 1-800.255.3924; International: 1-813.248.0585

### 2. Hazard(s) identification

#### Classification

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2B
Skin sensitization	Category 1
Germ cell mutagenicity	Category 2
Carcinogenicity	Category 2

#### Hazards not otherwise classified (HNOC)

Not applicable

#### Label elements



Warning

#### **Hazard statements**

H315 - Causes skin irritation  
 H317 - May cause an allergic skin reaction  
 H320 - Causes eye irritation  
 H341 - Suspected of causing genetic defects  
 H351 - Suspected of causing cancer

#### **Precautionary Statements - Prevention**

Obtain special instructions before use.  
 Do not handle until all safety precautions have been read and understood.  
 Wear protective gloves/clothing and eye/face protection.  
 Avoid breathing dust/fume/gas/mist/vapors/spray.  
 Use only outdoors or in a well-ventilated area.  
 Wash face, hands and any exposed skin thoroughly after handling.  
 Contaminated work clothing must not be allowed out of the workplace.

#### **Precautionary Statements - 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.  
 IF ON SKIN: Wash with plenty of water and soap.  
 Take off contaminated clothing and wash it before reuse.  
 If skin irritation or rash occurs: Get medical advice/attention.  
 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

#### **Precautionary Statements - Storage**

Store locked up.

#### **Precautionary Statements - Disposal**

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

#### **Other information**

Toxic to aquatic life with long lasting effects.

### **3. Composition/information on ingredients**

#### **Substance**

Not applicable.

#### **Mixture**

Chemical name	CAS No.	Weight-%	Trade secret
Oxirane, 2,2-[(1-methylethylidene)bis(4,1-phenyleneoxymeth ylene)]bis-, homopolymer	25085-99-8	65 - 85	*
Oxirane, [(2-methylphenoxy)methyl]-	2210-79-9	7 - 13	*
Oxirane, 2,2-[1,4-butanediylbis(oxymethylene)]bis-	2425-79-8	3 - 7	*
Trimethylolpropane triacrylate	15625-89-5	2	*

\*The exact percentage (concentration) of composition has been withheld as a trade secret.

## 4. First-aid measures

### Description of first aid measures

<b>General advice</b>	Show this safety data sheet to the doctor in attendance. IF exposed or concerned: Get medical advice/attention.
<b>Inhalation</b>	Remove to fresh air. Get medical attention immediately if symptoms occur. If symptoms persist, call a physician. If breathing has stopped, give artificial respiration. Get medical attention immediately.
<b>Eye contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Get medical attention if irritation develops and persists. Remove contact lenses, if present and easy to do. Continue rinsing.
<b>Skin contact</b>	May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a physician. Wash off immediately with soap and plenty of water for at least 15 minutes.
<b>Ingestion</b>	Rinse mouth. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Get medical attention.
<b>Self-protection of the first aider</b>	Avoid contact with skin, eyes or clothing. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid breathing vapors or mists. Use personal protective equipment as required. See section 8 for more information.

### Most important symptoms and effects, both acute and delayed

<b>Symptoms</b>	Itching. Rashes. Hives. Coughing and/ or wheezing. Difficulty in breathing.
<b>Effects of Exposure</b>	Mutagenic effects.

### Indication of any immediate medical attention and special treatment needed

<b>Note to physicians</b>	May cause sensitization in susceptible persons. Treat symptomatically.
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## 5. Fire-fighting measures

<b>Suitable Extinguishing Media</b>	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
<b>Large Fire</b>	CAUTION: Use of water spray when fighting fire may be inefficient.
<b>Unsuitable extinguishing media</b>	Do not scatter spilled material with high pressure water streams.
<b>Specific hazards arising from the chemical</b>	Product is or contains a sensitizer. May cause sensitization by skin contact.
<b>Explosion data</b>	
<b>Sensitivity to mechanical impact</b>	None.
<b>Sensitivity to static discharge</b>	None.
<b>Special protective equipment and precautions for fire-fighters</b>	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

## 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

<b>Personal precautions</b>	Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Avoid breathing vapors or mists.
<b>Other information</b>	Refer to protective measures listed in Sections 7 and 8.

### Methods and material for containment and cleaning up

<b>Methods for containment</b>	Prevent further leakage or spillage if safe to do so.
<b>Methods for cleaning up</b>	Pick up and transfer to properly labeled containers.
<b>Prevention of secondary hazards</b>	Clean contaminated objects and areas thoroughly observing environmental regulations.

## 7. Handling and storage

### Precautions for safe handling

<b>Advice on safe handling</b>	Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Remove contaminated clothing and shoes. Avoid breathing vapors or mists.
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### Conditions for safe storage, including any incompatibilities

<b>Storage Conditions</b>	Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children.
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## 8. Exposure controls/personal protection

### Control parameters

<b>Exposure Limits</b>	This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.
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### Appropriate engineering controls

<b>Engineering controls</b>	Showers Eyewash stations Ventilation systems.
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### Individual protection measures, such as personal protective equipment

<b>Eye/face protection</b>	Wear safety glasses with side shields (or goggles). None required for consumer use.
<b>Hand protection</b>	Wear suitable gloves. Impervious gloves.
<b>Skin and body protection</b>	Wear suitable protective clothing. Long sleeved clothing.

<b>Respiratory protection</b>	Appropriate respiratory protection should be selected and used according to the chemical nature, hazards and use of this product and safety requirements of the local jurisdiction. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.
<b>General hygiene considerations</b>	Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product. Wear suitable gloves and eye/face protection. Avoid contact with skin, eyes or clothing.

## 9. Physical and chemical properties

### Information on basic physical and chemical properties

<b>Physical state</b>	Liquid
<b>Appearance</b>	Clear Liquid
<b>Color</b>	clear
<b>Odor</b>	Aromatic
<b>Odor threshold</b>	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
<b>pH</b>	No data available	None known
<b>pH (as aqueous solution)</b>		None known
<b>Melting point / freezing point</b>	No data available	None known
<b>Initial boiling point and boiling range</b>	137.778°C (280°F)	None known
<b>Flash point</b>	No data available	None known
<b>Evaporation rate</b>	No data available	None known
<b>Flammability</b>	No data available	None known
<b>Flammability Limit in Air</b>		None known
<b>Upper flammability or explosive limits</b>	No data available	
<b>Lower flammability or explosive limits</b>	No data available	
<b>Vapor pressure</b>	No data available	None known
<b>Relative vapor density</b>	No data available	None known
<b>Relative density</b>	1.2	None known
<b>Water solubility</b>	No data available	None known
<b>Solubility(ies)</b>	No data available	None known
<b>Partition coefficient</b>	No data available	None known
<b>Autoignition temperature</b>	No data available	None known
<b>Decomposition temperature</b>		None known
<b>Kinematic viscosity</b>	No data available	None known
<b>Dynamic viscosity</b>	No data available	None known

### Other information

<b>Explosive properties</b>	No information available
<b>Oxidizing properties</b>	No information available
<b>Softening point</b>	No information available
<b>Molecular weight</b>	No information available
<b>VOC content</b>	No information available
<b>Liquid Density</b>	No information available
<b>Bulk density</b>	No information available

## 10. Stability and reactivity

<b>Reactivity</b>	No information available.
<b>Chemical stability</b>	Stable under normal conditions.
<b>Possibility of hazardous reactions</b>	None under normal processing.
<b>Conditions to avoid</b>	Excessive heat.

**Incompatible materials** Strong acids. Strong bases. Strong oxidizing agents.

**Hazardous decomposition products** None known based on information supplied.

## 11. Toxicological information

### Information on likely routes of exposure

#### Product Information

<b>Inhalation</b>	Specific test data for the substance or mixture is not available. May cause irritation of respiratory tract. Harmful by inhalation. (based on components).
<b>Eye contact</b>	Specific test data for the substance or mixture is not available. Causes eye irritation. May cause redness, itching, and pain.
<b>Skin contact</b>	May cause sensitization by skin contact. Specific test data for the substance or mixture is not available. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. (based on components). Causes skin irritation.
<b>Ingestion</b>	Specific test data for the substance or mixture is not available. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

### Symptoms related to the physical, chemical and toxicological characteristics

**Symptoms** Itching. Rashes. Hives. Redness. May cause redness and tearing of the eyes. Coughing and/ or wheezing.

**Acute toxicity** Harmful by inhalation.

#### Numerical measures of toxicity

The following values are calculated based on chapter 3.1 of the GHS document

<b>ATEmix (oral)</b>	9,695.40 mg/kg
<b>ATEmix (dermal)</b>	10,082.90 mg/kg
<b>ATEmix (inhalation-dust/mist)</b>	> 5 mg/l

#### Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Oxirane, [(2-methylphenoxy)methyl]- 2210-79-9	= 4 g/kg ( Rat )	> 2200 mg/kg ( Rabbit )	> 6.1 ppm ( Rat ) 4 h
Oxirane, 2,2-[1,4-butanediylbis(oxymethylene)]b is- 2425-79-8	= 1134 mg/kg ( Rat )	> 2150 mg/kg ( Rat )	-
Trimethylolpropane triacrylate 15625-89-5	= 5190 mg/kg ( Rat )	= 5000 mg/kg ( Rabbit )	-

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

**Skin corrosion/irritation** Classification based on data available for ingredients. Causes skin irritation.

**Serious eye damage/eye irritation** Classification based on data available for ingredients. Causes eye irritation.

**Respiratory or skin sensitization** May cause an allergic skin reaction.

**Germ cell mutagenicity** Contains a known or suspected mutagen. Classification based on data available for ingredients. Suspected of causing genetic defects.

**Carcinogenicity** Contains a known or suspected carcinogen. Classification based on data available for ingredients. Suspected of causing cancer.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
Trimethylolpropane triacrylate 15625-89-5	-	Group 2B	-	X

**Legend**

**IARC (International Agency for Research on Cancer)**

Group 2B - Possibly Carcinogenic to Humans

**Occupational Safety and Health Administration of the US Department of Labor**

X - Present

**Reproductive toxicity** No information available.

**STOT - single exposure** No information available.

**STOT - repeated exposure** No information available.

**Aspiration hazard** No information available.

**Other adverse effects** No information available.

**Interactive effects** No information available.

## 12. Ecological information

**Ecotoxicity** Toxic to aquatic life with long lasting effects.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Oxirane, [(2-methylphenoxy)methyl]- 2210-79-9	-	LC50: 2.8 - 5.1mg/L (96h, Oncorhynchus mykiss)	-	-

**Persistence and degradability** No information available.

### Bioaccumulation

#### Component Information

Chemical name	Partition coefficient
Oxirane, [(2-methylphenoxy)methyl]- 2210-79-9	2.5
Oxirane, 2,2-[1,4-butanediylbis(oxymethylene)]bis- 2425-79-8	-0.269

Other adverse effects No information available.

### 13. Disposal considerations

#### Disposal methods

**Waste from residues/unused products** Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

**Contaminated packaging** Do not reuse empty containers.

### 14. Transport information

**DOT** Not regulated

**IATA** Regulated

This product is not regulated for single or combination packaging having a net quantity of 5L or less.

**UN number or ID number** 3082  
**UN proper shipping name** Environmentally hazardous substance, liquid, n.o.s. (Epoxy Resin)  
**Transport hazard class(es)** 9  
**Packing group** III

**IMDG** Regulated

This product is not regulated for single or combination packaging having a net quantity of 5L or less.

**UN number or ID number** 3082  
**UN proper shipping name** Environmentally hazardous substance, liquid, n.o.s. (Epoxy Resin)  
**Transport hazard class(es)** 9  
**Packing group** III  
**EmS-No.** F-A, S-F  
**Marine Pollutant** Marine pollutant

### 15. Regulatory information

#### International Inventories

**TSCA** Contact supplier for inventory compliance status.  
**DSL/NDL** Contact supplier for inventory compliance status.  
**EINECS/ELINCS** Contact supplier for inventory compliance status.  
**ENCS** Contact supplier for inventory compliance status.  
**IECSC** Contact supplier for inventory compliance status.  
**KECI** Contact supplier for inventory compliance status.  
**PICCS** Contact supplier for inventory compliance status.  
**AIIC** Contact supplier for inventory compliance status.  
**NZIoC** Contact supplier for inventory compliance status.



**Legend:**

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory  
**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List  
**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances  
**ENCS** - Japan Existing and New Chemical Substances  
**IECSC** - China Inventory of Existing Chemical Substances  
**KECL** - Korean Existing and Evaluated Chemical Substances  
**PICCS** - Philippines Inventory of Chemicals and Chemical Substances  
**AIIC** - Australian Inventory of Industrial Chemicals  
**NZIoC** - New Zealand Inventory of Chemicals

**US Federal Regulations****SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

**SARA 311/312 Hazard Categories**

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

**CWA (Clean Water Act)**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

**CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

**US State Regulations****California Proposition 65**

This product contains the following Proposition 65 chemicals:

Chemical name	California Proposition 65
Trimethylolpropane triacrylate - 15625-89-5	Carcinogen

**U.S. State Right-to-Know Regulations**

This product does not contain any substances regulated under applicable state right-to-know regulations

**U.S. EPA Label Information**

**EPA Pesticide Registration Number** Not applicable

**16. Other information**

<b>NFPA</b>	<b>Health hazards</b> 3	<b>Flammability</b> 0	<b>Instability</b> 0	<b>Special hazards</b> -
<b>HMIS</b>	<b>Health hazards</b> 2 *	<b>Flammability</b> 0	<b>Physical hazards</b> 0	<b>Personal protection</b> X
<i>Chronic Hazard Star Legend</i>		<i>* = Chronic Health Hazard</i>		

**Key or legend to abbreviations and acronyms used in the safety data sheet****Legend**

SVHC: Substances of Very High Concern for Authorization:  
PBT: Persistent, Bioaccumulative, and Toxic (PBT) Substances

vPvB: Very Persistent and very Bioaccumulative (vPvB) Substances  
STOT: Specific Target Organ Toxicity  
ATE: Acute Toxicity Estimate  
LC50: 50% Lethal Concentration  
LD50: 50% Lethal Dose

**Legend Section 8: Exposure controls/personal protection**

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	Sk*	Skin designation
+	Sensitizers		

**Key literature references and sources for data used to compile the SDS**

Agency for Toxic Substances and Disease Registry (ATSDR)  
U.S. Environmental Protection Agency ChemView Database  
European Food Safety Authority (EFSA)  
Environmental Protection Agency  
Acute Exposure Guideline Level(s) (AEGL(s))  
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act  
U.S. Environmental Protection Agency High Production Volume Chemicals  
Food Research Journal  
Hazardous Substance Database  
International Uniform Chemical Information Database (IUCLID)  
National Institute of Technology and Evaluation (NITE)  
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)  
NIOSH (National Institute for Occupational Safety and Health)  
National Library of Medicine's ChemID Plus (NLM CIP)  
National Library of Medicine's PubMed database (NLM PUBMED)  
U.S. National Toxicology Program (NTP)  
New Zealand's Chemical Classification and Information Database (CCID)  
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications  
Organization for Economic Co-operation and Development High Production Volume Chemicals Program  
Organization for Economic Co-operation and Development Screening Information Data Set  
World Health Organization

**Revision date** 21-Feb-2025  
**Revision Note** No information available.

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**End of Safety Data Sheet**



# POLYGEM

Revision date 07-Mar-2025

## SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:  
US OSHA Hazard Communication Standard (29 CFR 1910.1200)

Revision Number 1

### 1. Identification

#### Product identifier

Product Name Part B: 2089FS

#### Other means of identification

Product Code(s) FG-2355B

UN number or ID number 2735

Synonyms None

#### Recommended use of the chemical and restrictions on use

Recommended use Industrial use  
Epoxy Coating

Restrictions on use No information available

#### Details of the supplier of the safety data sheet

##### Supplier Address

Polygem, 5600 Lower Macungie Rd, Macungie, PA 18062, USA, Phone: +01.610.252.5800, www.smooth-on.com, sds@smooth-on.com

E-mail sds@smooth-on.com

#### Emergency telephone number

Emergency Telephone Chemtel: US: 1-800.255.3924; International: 1-813.248.0585

### 2. Hazard(s) identification

#### Classification

Acute toxicity - Oral	Category 4
Acute toxicity - Inhalation (Dusts/Mists)	Category 4
Skin corrosion/irritation	Category 1 Sub-category B
Serious eye damage/eye irritation	Category 1
Reproductive toxicity	Category 2

#### Hazards not otherwise classified (HNOC)

Not applicable

#### Label elements



Danger

**Hazard statements**

H302 - Harmful if swallowed

H314 - Causes severe skin burns and eye damage

H332 - Harmful if inhaled

H361 - Suspected of damaging fertility or the unborn child

**Precautionary Statements - Prevention**

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Wear protective gloves/clothing and eye/face protection.

Wash face, hands and any exposed skin thoroughly after handling.

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

Use only outdoors or in a well-ventilated area.

Do not breathe dusts or mists.

**Precautionary Statements - Response**

Immediately call a POISON CENTER or doctor.

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.

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.

Wash contaminated clothing before reuse.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Immediately call a POISON CENTER or doctor.

IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell.

Rinse mouth.

Do NOT induce vomiting.

**Precautionary Statements - Storage**

Store locked up.

**Precautionary Statements - Disposal**

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

**Other information**

May be harmful in contact with skin. Very toxic to aquatic life with long lasting effects. Toxic to aquatic life.

**3. Composition/information on ingredients****Substance**

Not applicable.

**Mixture**

Chemical name	CAS No.	Weight-%	Trade secret
4-tert-Butylphenol	98-54-4	30 - 60	*
1,3-Benzenedimethanamine	1477-55-0	15 - 40	*
1,3-Cyclohexanedimethanamine	2579-20-6	10 - 30	*

\*The exact percentage (concentration) of composition has been withheld as a trade secret.

## 4. First-aid measures

### Description of first aid measures

<b>General advice</b>	Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.
<b>Inhalation</b>	Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur.
<b>Eye contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical attention.
<b>Skin contact</b>	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get immediate medical attention.
<b>Ingestion</b>	Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Get immediate medical attention.
<b>Self-protection of the first aider</b>	Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Avoid breathing vapors or mists. Use personal protective equipment as required. See section 8 for more information.

### Most important symptoms and effects, both acute and delayed

<b>Symptoms</b>	Burning sensation. Coughing and/ or wheezing. Difficulty in breathing.
<b>Effects of Exposure</b>	May cause adverse reproductive effects - such as birth defect, miscarriages, or infertility.

### Indication of any immediate medical attention and special treatment needed

<b>Note to physicians</b>	Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure.
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## 5. Fire-fighting measures

<b>Suitable Extinguishing Media</b>	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
<b>Large Fire</b>	CAUTION: Use of water spray when fighting fire may be inefficient.
<b>Unsuitable extinguishing media</b>	Do not scatter spilled material with high pressure water streams.
<b>Specific hazards arising from the chemical</b>	The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating gases and vapors.
<b>Explosion data</b>	
<b>Sensitivity to mechanical impact</b>	None.
<b>Sensitivity to static discharge</b>	None.

**Special protective equipment and precautions for fire-fighters** Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

## 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

**Personal precautions** Attention! Corrosive material. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Avoid breathing vapors or mists.

**Other information** Refer to protective measures listed in Sections 7 and 8.

### Methods and material for containment and cleaning up

**Methods for containment** Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up** Pick up and transfer to properly labeled containers.

**Prevention of secondary hazards** Clean contaminated objects and areas thoroughly observing environmental regulations.

## 7. Handling and storage

### Precautions for safe handling

**Advice on safe handling** Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. In case of insufficient ventilation, wear suitable respiratory equipment. Handle product only in closed system or provide appropriate exhaust ventilation. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Remove contaminated clothing and shoes. Avoid breathing vapors or mists.

### Conditions for safe storage, including any incompatibilities

**Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Protect from moisture. Store locked up. Store away from other materials.

## 8. Exposure controls/personal protection

### Control parameters

**Exposure Limits** The following ingredients are the only ingredients of the product above the cut-off level (or level that contributes to the hazard classification of the mixture) which have an exposure limit applicable in the region for which this safety data sheet is intended or other recommended limit. At this time, the other relevant constituents have no known exposure limits from the sources listed here.

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
1,3-Benzenedimethanamine 1477-55-0	Sk* Ceiling: 0.018 ppm	(vacated) Sk* (vacated) Ceiling: 0.1 mg/m <sup>3</sup>	Ceiling: 0.1 mg/m <sup>3</sup>

### Appropriate engineering controls

**Engineering controls** Showers

Eyewash stations  
Ventilation systems.

### **Individual protection measures, such as personal protective equipment**

<b>Eye/face protection</b>	Tight sealing safety goggles. Face protection shield.
<b>Hand protection</b>	Wear suitable gloves. Impervious gloves.
<b>Skin and body protection</b>	Wear suitable protective clothing. Long sleeved clothing. Chemical resistant apron.
<b>Respiratory protection</b>	Appropriate respiratory protection should be selected and used according to the chemical nature, hazards and use of this product and safety requirements of the local jurisdiction. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.
<b>General hygiene considerations</b>	Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product.

## **9. Physical and chemical properties**

### **Information on basic physical and chemical properties**

<b>Physical state</b>	Liquid
<b>Appearance</b>	Liquid
<b>Color</b>	Amber
<b>Odor</b>	Mild Pungent
<b>Odor threshold</b>	No information available

<b><u>Property</u></b>	<b><u>Values</u></b>	<b><u>Remarks • Method</u></b>
<b>pH</b>	No data available	None known
<b>pH (as aqueous solution)</b>		None known
<b>Melting point / freezing point</b>	No data available	None known
<b>Initial boiling point and boiling range</b>	No data available	None known
<b>Flash point</b>	> 93.33 °C / 200 °F	None known
<b>Evaporation rate</b>	No data available	None known
<b>Flammability</b>	No data available	None known
<b>Flammability Limit in Air</b>		None known
<b>Upper flammability or explosive limits</b>	No data available	
<b>Lower flammability or explosive limits</b>	No data available	
<b>Vapor pressure</b>	No data available	None known
<b>Relative vapor density</b>	No data available	None known
<b>Relative density</b>	1.007	None known
<b>Water solubility</b>	Insoluble in water	None known
<b>Solubility(ies)</b>	No data available	None known
<b>Partition coefficient</b>	No data available	None known
<b>Autoignition temperature</b>	No data available	None known
<b>Decomposition temperature</b>		None known
<b>Kinematic viscosity</b>	No data available	None known
<b>Dynamic viscosity</b>	No data available	None known
<b><u>Other information</u></b>		
<b>Explosive properties</b>	No information available	
<b>Oxidizing properties</b>	No information available	
<b>Softening point</b>	No information available	

Molecular weight	No information available
VOC content	No information available
Liquid Density	No information available
Bulk density	No information available

## 10. Stability and reactivity

Reactivity	No information available.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	None under normal processing.
Conditions to avoid	Exposure to air or moisture over prolonged periods. Excessive heat.
Incompatible materials	Acids. Bases. Oxidizing agent.
Hazardous decomposition products	None known based on information supplied.

## 11. Toxicological information

### Information on likely routes of exposure

#### Product Information

Inhalation	Specific test data for the substance or mixture is not available. Corrosive by inhalation. (based on components). Inhalation of corrosive fumes/gases may cause coughing, choking, headache, dizziness, and weakness for several hours. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure, and increased heart rate. Inhaled corrosive substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal. Harmful by inhalation.
Eye contact	Specific test data for the substance or mixture is not available. Causes serious eye damage. (based on components). Corrosive to the eyes and may cause severe damage including blindness. May cause irreversible damage to eyes.
Skin contact	Specific test data for the substance or mixture is not available. Corrosive. (based on components). Causes burns. May be harmful in contact with skin.
Ingestion	Specific test data for the substance or mixture is not available. Causes burns. (based on components). Ingestion causes burns of the upper digestive and respiratory tracts. May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking. May cause lung damage if swallowed. May be fatal if swallowed and enters airways.

### Symptoms related to the physical, chemical and toxicological characteristics

Symptoms	Redness. Burning. May cause blindness. Coughing and/ or wheezing.
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<u>Acute toxicity</u>	Harmful if swallowed. Harmful by inhalation.
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#### Numerical measures of toxicity

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)	774.50 mg/kg
ATEmix (dermal)	2,112.20 mg/kg
ATEmix (inhalation-dust/mist)	1.16 mg/l



**Component Information**

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
4-tert-Butylphenol 98-54-4	= 4000 mg/kg ( Rat )	= 2318 mg/kg ( Rabbit )	-
1,3-Benzenedimethanamine 1477-55-0	= 660 mg/kg ( Rat )	= 2 g/kg ( Rabbit )	= 1.38 mg/L ( Rat ) 4 h = 1.16 mg/L ( Rat ) 4 h
1,3-Cyclohexanedimethanamine 2579-20-6	200 - 2000 mg/kg ( Rat )	= 1700 mg/kg ( Rabbit )	-

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

<b>Skin corrosion/irritation</b>	Classification based on data available for ingredients. Causes severe skin burns and eye damage.
<b>Serious eye damage/eye irritation</b>	Classification based on data available for ingredients. Causes serious eye damage. Causes burns.
<b>Respiratory or skin sensitization</b>	No information available.
<b>Germ cell mutagenicity</b>	No information available.
<b>Carcinogenicity</b>	No information available.
<b>Reproductive toxicity</b>	Classification based on data available for ingredients. Suspected of damaging fertility or the unborn child.
<b>STOT - single exposure</b>	No information available.
<b>STOT - repeated exposure</b>	No information available.
<b>Target organ effects</b>	Liver, Kidney, Respiratory system, Eyes, Skin.
<b>Aspiration hazard</b>	No information available.
<b>Other adverse effects</b>	No information available.
<b>Interactive effects</b>	No information available.

**12. Ecological information**

**Ecotoxicity** Very toxic to aquatic life with long lasting effects. Toxic to aquatic life.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
4-tert-Butylphenol 98-54-4	EC50: =11.2mg/L (72h, Desmodesmus subspicatus)	LC50: 4.71 - 5.62mg/L (96h, Pimephales promelas) LC50: =6.9mg/L (96h,	-	EC50: =3.9mg/L (48h, Daphnia magna) EC50: 3.4 - 4.5mg/L (48h, Daphnia magna)

		Cyprinus carpio)		
1,3-Benzenedimethanamine 1477-55-0	-	LC50: =87.6mg/L (96h, Oryzias latipes)	-	-

**Persistence and degradability** No information available.

#### Bioaccumulation

##### Component Information

Chemical name	Partition coefficient
4-tert-Butylphenol 98-54-4	3
1,3-Benzenedimethanamine 1477-55-0	0.18
1,3-Cyclohexanedimethanamine 2579-20-6	0.783

**Other adverse effects** No information available.

### 13. Disposal considerations

#### Disposal methods

**Waste from residues/unused products** Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

**Contaminated packaging** Do not reuse empty containers.

### 14. Transport information

#### DOT

Regulated  
**UN number or ID number** 2735  
**Proper shipping name** Amines, liquid, corrosive, n.o.s. (1,3-Cyclohexanedimethanamine, Xylene Diamine)  
**Transport hazard class(es)** 8  
**Packing group** II

#### TDG

Regulated  
**UN number or ID number** 2735  
**UN proper shipping name** Amines, liquid, corrosive, n.o.s. (1,3-Cyclohexanedimethanamine, Xylene Diamine)  
**Transport hazard class(es)** 8  
**Packing group** II

#### IATA

Regulated  
**UN number or ID number** 2735  
**UN proper shipping name** Amines, liquid, corrosive, n.o.s. (1,3-Cyclohexanedimethanamine, Xylene Diamine)  
**Transport hazard class(es)** 8  
**Packing group** II

#### IMDG

Regulated  
**UN number or ID number** 2735  
**UN proper shipping name** Amines, liquid, corrosive, n.o.s. (1,3-Cyclohexanedimethanamine, Xylene Diamine)  
**Transport hazard class(es)** 8  
**Packing group** II

## 15. Regulatory information

### International Inventories

<b>TSCA</b>	Contact supplier for inventory compliance status.
<b>DSL/NDL</b>	Contact supplier for inventory compliance status.
<b>EINECS/ELINCS</b>	Contact supplier for inventory compliance status.
<b>ENCS</b>	Contact supplier for inventory compliance status.
<b>IECSC</b>	Contact supplier for inventory compliance status.
<b>KECI</b>	Contact supplier for inventory compliance status.
<b>PICCS</b>	Contact supplier for inventory compliance status.
<b>AIIC</b>	Contact supplier for inventory compliance status.
<b>NZIoC</b>	Contact supplier for inventory compliance status.

#### **Legend:**

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory  
**DSL/NDL** - Canadian Domestic Substances List/Non-Domestic Substances List  
**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances  
**ENCS** - Japan Existing and New Chemical Substances  
**IECSC** - China Inventory of Existing Chemical Substances  
**KECL** - Korean Existing and Evaluated Chemical Substances  
**PICCS** - Philippines Inventory of Chemicals and Chemical Substances  
**AIIC** - Australian Inventory of Industrial Chemicals  
**NZIoC** - New Zealand Inventory of Chemicals

### US Federal Regulations

#### **SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

#### **SARA 311/312 Hazard Categories**

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

#### **CWA (Clean Water Act)**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

#### **CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

### US State Regulations

#### U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
1,3-Benzenedimethanamine 1477-55-0	X	X	X

### U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

**16. Other information**

<b>NFPA</b>	<b>Health hazards</b> 3	<b>Flammability</b> 0	<b>Instability</b> 0	<b>Special hazards</b> -
<b>HMIS</b>	<b>Health hazards</b> 3 *	<b>Flammability</b> 0	<b>Physical hazards</b> 0	<b>Personal protection</b> X
<i>Chronic Hazard Star Legend</i>		<i>* = Chronic Health Hazard</i>		

**Key or legend to abbreviations and acronyms used in the safety data sheet****Legend**

SVHC: Substances of Very High Concern for Authorization:  
 PBT: Persistent, Bioaccumulative, and Toxic (PBT) Substances  
 vPvB: Very Persistent and very Bioaccumulative (vPvB) Substances  
 STOT: Specific Target Organ Toxicity  
 ATE: Acute Toxicity Estimate  
 LC50: 50% Lethal Concentration  
 LD50: 50% Lethal Dose

**Legend Section 8: Exposure controls/personal protection**

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	Sk*	Skin designation
+	Sensitizers		

**Key literature references and sources for data used to compile the SDS**

Agency for Toxic Substances and Disease Registry (ATSDR)  
 U.S. Environmental Protection Agency ChemView Database  
 European Food Safety Authority (EFSA)  
 Environmental Protection Agency  
 Acute Exposure Guideline Level(s) (AEGL(s))  
 U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act  
 U.S. Environmental Protection Agency High Production Volume Chemicals  
 Food Research Journal  
 Hazardous Substance Database  
 International Uniform Chemical Information Database (IUCLID)  
 National Institute of Technology and Evaluation (NITE)  
 Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)  
 NIOSH (National Institute for Occupational Safety and Health)  
 National Library of Medicine's ChemID Plus (NLM CIP)  
 National Library of Medicine's PubMed database (NLM PUBMED)  
 U.S. National Toxicology Program (NTP)  
 New Zealand's Chemical Classification and Information Database (CCID)  
 Organization for Economic Co-operation and Development Environment, Health, and Safety Publications  
 Organization for Economic Co-operation and Development High Production Volume Chemicals Program  
 Organization for Economic Co-operation and Development Screening Information Data Set  
 World Health Organization

**Revision date** 07-Mar-2025  
**Revision Note** No information available.

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**End of Safety Data Sheet**