

This safety data sheet was created pursuant to the requirements of:  
Regulation (EC) No. 1907/2006 and Regulation (EC) No. 1272/2008

**Issuing Date** No data available

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EGHS / English

## Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

### 1.1. Product identifier

**Product Name** EpoHeat CLR Hardener

**Product Code(s)** 20-3424-016

**(M)SDS Number** 1346413\_E

**Chemical name**

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

**Recommended Use** Laboratory Use Only.

**Uses advised against** No information available.

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

**Manufacturer** ITW Test & Measurement GmbH

**Manufacturer Address** Boschstraße 10  
73734 Esslingen am Neckar / GERMANY  
[www.buehler-met.de](http://www.buehler-met.de) [www.buehler.fr](http://www.buehler.fr) [www.buehler.co.uk](http://www.buehler.co.uk)

**Phone number** +49 (0) 711 4904690-0

**E-mail Address** [lab.eu@buehler.com](mailto:lab.eu@buehler.com)

For further information, please contact.

### 1.4. Emergency telephone number

Global Access Code: 334545

Europe: +1 760 476 3961

Americas: +1 760 476 3962

Middle East/Africa: +1 760 476 3959

Asia Pacific: +1 760 476 3960

UK local: +44 8 08 189 0979

Europe	112
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## Section 2: HAZARDS IDENTIFICATION

### 2.1. Classification of the substance or mixture

#### Regulation (EC) No 1272/2008

Acute toxicity - Oral	Category 4 - (H302)
Acute toxicity - Dermal	Category 4 - (H312)
Skin corrosion/irritation	Category 1 Sub-category A - (H314)
Serious eye damage/eye irritation	Category 1 - (H318)
Respiratory sensitization	Category 1 - (H334)
Reproductive Toxicity	Category 2 - (H361)
Acute aquatic toxicity	Category 2 - (H411)
Chronic aquatic toxicity	Category 2 - (H411)
Flammable liquids	Category 4

### 2.2. Label elements



Signal word

Danger

#### Hazard Statements

H227 - Combustible liquid  
 H302 - Harmful if swallowed  
 H312 - Harmful in contact with skin  
 H314 - Causes severe skin burns and eye damage  
 H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled  
 H361fd - Suspected of damaging fertility. Suspected of damaging the unborn child  
 H411 - Toxic to aquatic life with long lasting effects

#### Precautionary Statements - EU (§28, 1272/2008)

P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking  
 P264 - Wash hands thoroughly after handling  
 P270 - Do not eat, drink or smoke when using this product  
 P272 - Contaminated work clothing should not be allowed out of the workplace  
 P273 - Avoid release to the environment  
 P280 - Wear protective gloves/protective clothing/eye protection/face protection  
 P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell  
 P302 + P352 - IF ON SKIN: Wash with plenty of soap and water  
 P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
 P310 - Immediately call a POISON CENTER or doctor/physician  
 P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention

### 2.3. Other hazards

No information available

### Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

#### 3.1 Substances

Not applicable.

#### 3.2 Mixtures

Chemical name	EC No	CAS No	Weight-%	Classification according to Regulation (EC) No. 1272/2008 [CLP]	REACH Reg. No.
1,2-Cyclohexanediamine	211-776-7	694-83-7	40 - 70%	Acute Tox. 4 (H302)Acute Tox. 4 (H312)Skin Corr. 1A (H314)Eye Dam. 1 (H318)Acute Tox. 4 (H332)	No data available
Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-hydro-.omega.-(2-aminomethylethoxy)-, ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol (3:1)	-	39423-51-3	20 - 50%	No data available	No data available
2,2',2''-nitrilotriethanol	203-049-8	102-71-6	0 - 5%	No data available	No data available
Piperazine	203-808-3	110-85-0	0 - 2%	Skin Corr. 1B (H314) Repr. 2 (H361fd) Resp. Sens. 1 (H334) Skin Sens. 1 (H317)	No data available

#### Full text of H- and EUH-phrases: see section 16

This product does not contain candidate substances of very high concern at a concentration  $\geq 0.1\%$  (Regulation (EC) No. 1907/2006 (REACH), Article 59)

Chemical name	CAS No	SVHC candidates
1,2-Cyclohexanediamine	694-83-7	-
Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-hydro-.omega.-(2-aminomethylethoxy)-, ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol (3:1)	39423-51-3	-
2,2',2''-nitrilotriethanol	102-71-6	-
Piperazine	110-85-0	-

### Section 4: FIRST AID MEASURES

#### 4.1. Description of first aid measures

##### General advice

Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

##### Inhalation

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. Get immediate medical advice/attention. May cause allergic respiratory reaction. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation.

**Skin contact**

Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get immediate medical advice/attention. May cause an allergic skin reaction.

**Eye contact**

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 advice/attention.

**Ingestion**

Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Get immediate medical advice/attention. May produce an allergic reaction.

**Self-protection of the first aider**

Remove all sources of ignition. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Wear personal protective clothing (see section 8). Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Use personal protective equipment as required. See section 8 for more information. Avoid breathing vapors or mists.

**4.2. Most important symptoms and effects, both acute and delayed****Symptoms**

Burning sensation. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Coughing and/ or wheezing. Itching. Rashes. Hives. Difficulty in breathing.

**4.3. Indication of any immediate medical attention and special treatment needed****Note to physicians**

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. May cause sensitization in susceptible persons. Treat symptomatically.

**Section 5: FIRE FIGHTING MEASURES****5.1. Extinguishing media**

**Suitable Extinguishing Media** Dry chemical, Carbon dioxide (CO<sub>2</sub>), Water spray, Alcohol resistant foam.

**Unsuitable extinguishing media** No information available.

**5.2. Special hazards arising from the substance or mixture****Specific hazards arising from the chemical**

Keep product and empty container away from heat and sources of ignition. In the event of fire, cool tanks with water spray. The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating gases and vapors. Product is or contains a sensitizer. May cause sensitization by inhalation and skin contact. May cause sensitization by skin contact.

**Hazardous Combustion Products**

Carbon oxides.

**5.3. Advice for firefighters****Special protective equipment for fire-fighters**

Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

**Section 6: ACCIDENTAL RELEASE MEASURES****6.1. Personal precautions, protective equipment and emergency procedures****Personal precautions**

Evacuate personnel to safe areas. Use personal protective equipment as required. See section 8 for more information. Take precautionary measures against static discharges. Do not touch or walk through spilled material. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Attention! Corrosive material. 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.

**For emergency responders**

Use personal protection recommended in Section 8.

**6.2. Environmental precautions****Environmental precautions**

Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so. Should not be released into the environment. Do not allow to enter into soil/subsoil. Prevent product from entering drains.

**6.3. Methods and material for containment and cleaning up****Methods for containment**

Stop leak if you can do it without risk. Do not touch or walk through spilled material. Dike far ahead of liquid spill for later disposal.

**Methods for cleaning up**

Take precautionary measures against static discharges. Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers.

**6.4. Reference to other sections****Reference to other sections**

See section 8 for more information. See section 13 for more information.

**Section 7: HANDLING AND STORAGE****7.1. Precautions for safe handling****Advice on safe handling**

Use personal protection equipment. Do not breathe vapor or mist. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Take precautionary measures against static discharges. 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. Provide extract ventilation to points where emissions occur. Remove contaminated clothing and shoes.

**General Hygiene Considerations** Do not eat, drink or smoke when using this product. 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. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Remove and wash contaminated clothing and gloves, including the inside, before re-use.

### 7.2. Conditions for safe storage, including any incompatibilities

**Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Keep in properly labeled containers. Store in accordance with the particular national regulations. Store in accordance with local regulations. Keep out of the reach of children. Store locked up. Protect from moisture. Store away from other materials.

### 7.3. Specific end use(s)

**Risk Management Methods (RMM)** The information required is contained in this Material Safety Data Sheet.

## Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. Control parameters

#### Exposure Limits

Chemical name	EU	United Kingdom	France	Spain	Germany
2,2',2''-nitrioltriethanol 102-71-6	-	-	-	TWA: 5 mg/m <sup>3</sup>	-
Piperazine 110-85-0	TWA: 0.1 mg/m <sup>3</sup> STEL: 0.3 mg/m <sup>3</sup>	STEL: 0.3 mg/m <sup>3</sup> TWA: 0.1 mg/m <sup>3</sup>	TWA: 0.1 mg/m <sup>3</sup> STEL: 0.3 mg/m <sup>3</sup>	STEL: 0.3 mg/m <sup>3</sup> TWA: 0.1 mg/m <sup>3</sup>	TWA: 0.1 mg/m <sup>3</sup>
Chemical name	Italy	Portugal	Netherlands	Finland	Denmark
2,2',2''-nitrioltriethanol 102-71-6	-	TWA: 5 mg/m <sup>3</sup>	-	TWA: 5 mg/m <sup>3</sup>	TWA: 0.5 ppm TWA: 3.1 mg/m <sup>3</sup>
Piperazine 110-85-0	TWA: 0.1 mg/m <sup>3</sup> STEL: 0.3 mg/m <sup>3</sup>	-	STEL: 0.3 mg/m <sup>3</sup> TWA: 0.1 mg/m <sup>3</sup>	TWA: 0.028 ppm TWA: 0.1 mg/m <sup>3</sup> STEL: 0.084 ppm STEL: 0.3 mg/m <sup>3</sup>	TWA: 0.003 ppm TWA: 0.1 mg/m <sup>3</sup>
Chemical name	Austria	Switzerland	Poland	Norway	Ireland
2,2',2''-nitrioltriethanol 102-71-6	STEL 1.6 ppm STEL 10 mg/m <sup>3</sup> TWA: 0.8 ppm TWA: 5 mg/m <sup>3</sup>	STEL: 20 mg/m <sup>3</sup> TWA: 5 mg/m <sup>3</sup>	-	TWA: 5 mg/m <sup>3</sup> STEL: 10 mg/m <sup>3</sup>	TWA: 5 mg/m <sup>3</sup> STEL: 15 mg/m <sup>3</sup>
Piperazine 110-85-0	STEL 0.3 mg/m <sup>3</sup> TWA: 0.1 mg/m <sup>3</sup>	-	STEL: 0.3 mg/m <sup>3</sup> TWA: 0.1 mg/m <sup>3</sup>	TWA: 0.1 ppm TWA: 0.3 mg/m <sup>3</sup> STEL: 0.3 ppm STEL: 0.9 mg/m <sup>3</sup>	TWA: 0.1 mg/m <sup>3</sup> STEL: 0.3 mg/m <sup>3</sup>

**Derived No Effect Level (DNEL)** No information available

**Predicted No Effect Concentration (PNEC)** No information available

**8.2. Exposure controls****Personal protective equipment**

<b>Eye/face protection</b>	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.

**Environmental exposure controls** No information available.

**Section 9: PHYSICAL AND CHEMICAL PROPERTIES****9.1. Information on basic physical and chemical properties**

<b>Physical state</b>	Liquid
<b>Appearance</b>	Clear
<b>Odor</b>	Amine
<b>Color</b>	No information available
<b>Odor Threshold</b>	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks Method</u>
pH	No data available	
Melting / freezing point	No data available	None known
Boiling point / boiling range	No data available	None known
Flash Point	> 70°C C	
Evaporation Rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limit in Air		None known
Upper flammability limit	No data available	
Lower flammability limit	No data available	
Vapor pressure	No data available	None known
Vapor density	No data available	None known
Relative density	0.97	
Water Solubility	Partially soluble	
Solubility(ies)	No data available	None known
Partition coefficient: n-octanol/water	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature	No data available	None known
Kinematic viscosity	No data available	None known
Viscosity	20 - 60 cps	None known

**9.2. Other information**

<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
<b>Particle Size</b>	No information available
<b>Particle Size Distribution</b>	No information available

**Section 10: STABILITY AND REACTIVITY****10.1. Reactivity**

No data available.

### **10.2. Chemical stability**

Stable under normal conditions.

#### Explosion Data

Sensitivity to Mechanical Impact

None.

Sensitivity to Static Discharge

None.

### **10.3. Possibility of hazardous reactions**

**Possibility of Hazardous Reactions**            None under normal processing.

**Hazardous Polymerization**            Hazardous polymerization does not occur.

### **10.4. Conditions to avoid**

Heat, flames and sparks, Exposure to air or moisture over prolonged periods, Excessive heat.

### **10.5. Incompatible materials**

Acids, Bases, Oxidizing agent.

### **10.6. Hazardous decomposition products**

Carbon oxides.

## Section 11: TOXICOLOGICAL INFORMATION

### **11.1. Information on toxicological effects**

#### **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. May cause irritation of respiratory tract. May cause sensitization in susceptible persons. Harmful by inhalation.

#### **Eye contact**

Specific test data for the substance or mixture is not available. Causes burns. (based on components). Corrosive to the eyes and may cause severe damage including blindness. Causes serious eye damage. 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. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. May be absorbed through the skin in harmful amounts. 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. May cause additional affects as listed under "Inhalation".

**Information on toxicological effects****Symptoms**

Redness. Burning. May cause blindness. Coughing and/ or wheezing. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing. Itching. Rashes. Hives.

**Numerical measures of toxicity****Acute Toxicity**

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

<b>ATEmix (oral)</b>	525.00 mg/kg
<b>ATEmix (dermal)</b>	1,106.00 mg/kg
<b>ATEmix (inhalation-vapor)</b>	11.00 mg/L

**Unknown acute toxicity**

- 100 % of the mixture consists of ingredient(s) of unknown toxicity
- 41 % of the mixture consists of ingredient(s) of unknown acute oral toxicity
- 44 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity
- 100 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)
- 45 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)
- 100 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

**Component Information**

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
1,2-Cyclohexanediamine	= 4556 mg/kg ( Rat )	-	-
2,2',2''-nitriлотriethanol	= 4190 mg/kg ( Rat )	> 16 mL/kg ( Rat ) > 20 mL/kg ( Rabbit )	-
Piperazine	= 600 mg/kg ( Rat )	= 1590 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 burns.

**Serious eye damage/eye irritation**

Classification based on data available for ingredients. Risk of serious damage to eyes. Causes burns.

**Respiratory or skin sensitization** May cause sensitization by inhalation. May cause sensitization by skin contact.

**Germ cell mutagenicity**

No information available.

**Carcinogenicity**

No information available.

**Reproductive Toxicity** No information available.

The table below indicates ingredients above the cut-off threshold considered as relevant which are listed as reproductive toxins.

Chemical name	EU - Annex VI Reproductive
Piperazine	Repr. 2

**STOT - single exposure** May cause respiratory irritation.

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

**Aspiration hazard** No information available.

## Section 12: ECOLOGICAL INFORMATION

### 12.1. Toxicity

#### Ecotoxicity

Chemical name	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
2,2',2''-nitrilotriethanol	96h EC50: = 169 mg/L (Desmodesmus subspicatus) 72h EC50: = 216 mg/L (Desmodesmus subspicatus)	96h LC50: 10600 - 13000 mg/L (Pimephales promelas) 96h LC50: > 1000 mg/L (Pimephales promelas) 96h LC50: 450 - 1000 mg/L (Lepomis macrochirus)	EC50 > 10000 mg/L 30 min	24h EC50: = 1386 mg/L
Piperazine	-	96h LC50: > 10000 mg/L (Lepomis macrochirus)	EC50 = 430 mg/L 30 min	96h EC50: = 6915 mg/L

### 12.2. Persistence and degradability

**Persistence and Degradability** No information available.

### 12.3. Bioaccumulative potential

#### Bioaccumulation

Chemical name	Log Pow
2,2',2''-nitrilotriethanol	-2.53

### 12.4. Mobility in soil

**Mobility in soil** No information available.

### 12.5. Results of PBT and vPvB assessment

**PBT and vPvB assessment** No information available.

### 12.6. Other adverse effects

Other adverse effects No information available.

### Section 13: DISPOSAL CONSIDERATIONS

#### 13.1. Waste treatment methods

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

**Contaminated packaging** No information available.

### Section 14: TRANSPORT INFORMATION

#### IMDG/IMO

**14.1 UN-No.** UN2735

**14.2 Proper Shipping Name** AMINES, LIQUID, CORROSIVE, N.O.S.  
**Description** UN2735, AMINES, LIQUID, CORROSIVE, N.O.S. (PIPERAZINE), 8, II

**14.3 Hazard Class** 8

**14.4 Packing Group** II

**14.5 Marine Pollutant** Not applicable

**14.6 Special Provisions** None

**EmS-No.** F-A, S-B

**14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** No information available

#### RID

**14.1 UN-No.** UN2735

**14.2 Proper Shipping Name** AMINES, LIQUID, CORROSIVE, N.O.S.  
**Description** UN2735, AMINES, LIQUID, CORROSIVE, N.O.S. (PIPERAZINE), 8, II

**14.3 Hazard Class** 8

**ADR/RID-Labels** 8

**14.4 Packing Group** II

**14.5 Environmental hazard** Not applicable

**14.6 Special Provisions** None

**Classification code** C7

#### ADR

**14.1 UN-No.** UN2735

**14.2 Proper Shipping Name** AMINES, LIQUID, CORROSIVE, N.O.S.  
**Description** UN2735, AMINES, LIQUID, CORROSIVE, N.O.S. (PIPERAZINE), 8, II, (E)

**14.3 Hazard Class** 8

**14.4 Packing Group** II

**14.5 Environmental hazard** Not applicable

**14.6 Special Provisions** None 274

**Classification code** C7

**Tunnel restriction code** (E)

#### IATA

**14.1 UN-No.** UN2735

<b>14.2 Proper Shipping Name</b>	AMINES, LIQUID, CORROSIVE, N.O.S.
<b>Description</b>	UN2735, AMINES, LIQUID, CORROSIVE, N.O.S. (PIPERAZINE), 8, II
<b>14.3 Hazard Class</b>	8
<b>14.4 Packing Group</b>	II
<b>14.5 Environmental hazard</b>	Not applicable
<b>14.6 Special Provisions</b>	None

## Section 15: REGULATORY INFORMATION

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

#### National regulations

##### France

##### Occupational Illnesses (R-463-3, France)

Chemical name	French RG number	Title
2,2',2''-nitrotriethanol 102-71-6	RG 49 RG 49,RG 49bis	-
Piperazine 110-85-0	RG 49,RG 49bis,RG 65,RG 66	-

##### European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work .

#### **Authorizations and/or restrictions on use:**

This product does not contain substances subject to authorization (Regulation (EC) No. 1907/2006 (REACH), Annex XIV). This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII).

#### **Persistent Organic Pollutants**

Not applicable.

#### **Ozone-depleting substances (ODS) regulation (EC) 1005/2009**

Not applicable.

#### International Inventories

<b>TSCA</b>	Contact supplier for inventory compliance status.
<b>DSL/NDSL</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>KECL</b>	Contact supplier for inventory compliance status.
<b>PICCS</b>	Contact supplier for inventory compliance status.
<b>AICS</b>	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**AICS** - Australian Inventory of Chemical Substances**15.2. Chemical safety assessment**

No information available.

**Section 16: OTHER INFORMATION****Key or legend to abbreviations and acronyms used in the safety data sheet****Full text of H-Statements referred to under sections 2 and 3**

H314 - Causes severe skin burns and eye damage

H361fd - Suspected of damaging fertility. Suspected of damaging the unborn child

H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled

H317 - May cause an allergic skin reaction

H302 - Harmful if swallowed

H312 - Harmful in contact with skin

H318 - Causes serious eye damage

H332 - Harmful if inhaled

H335 - May cause respiratory irritation

**Legend**

SVHC: Substances of Very High Concern for Authorization:

**Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

TWA TWA (time-weighted average)

STEL

STEL (Short Term Exposure Limit)

Ceiling Maximum limit value

-

Skin designation

**Key literature references and sources for data**[www.ChemADVISOR.com/](http://www.ChemADVISOR.com/)

Revision Date 26-Aug-2016

This safety data sheet complies with the requirements of: Regulation (EC) No. 1907/2006.

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End of Safety Data Sheet