



# SAFETY DATA SHEET

according to Regulation (EU) No. 453/2010

**E:1500**

## **1. Identification of the substance/mixture and of the company/undertaking**

### **1.1. Product identifier**

**Product code** E:1500

**Synonyms** None.

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

**Use of the Substance/Preparation** Industrial uses  
A component of a polyurethane system.

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

**Company/Undertaking Identification** PUR-Systems GmbH  
Werner-von-Siemens-Str. 22  
D-49124 Georgsmarienhütte  
Germany  
Tel +49 5401 8355 - 0  
Fax +49 5401 8355 83  
e-mail info@pursystems.de

**1.4. Emergency telephone number** +49 174 975 1711  
+49 172 999 3193

**Issuing date** 25.06.2013

**Version** REACH GHS/CLP

## 2. Hazards identification

### 2.1. Classification of the substance or mixture

**Classification according to Regulation (EC) No. 1272/2008 (GHS/CLP)**

Acute toxicity, oral, Cat. 4, H302  
Acute toxicity, inhal., Gases, Cat. 4, H332  
Skin corrosion/irritation, Cat. 1B, H314  
Reproductive toxicity, Cat. 1B (FD), H360  
Hazardous to the aquatic environment, chronic, Cat. 3, H412  
Contains . May produce an allergic reaction.  
Can become flammable in use.

**Classification according to EU Directives 67/548/EEC or 1999/45/EC**

Xn; R20  
Xi; R36/37/38

**Additional information**

For the full text of the phrases mentioned in this Section, see Section 16.

### 2.2. Label elements



**Signal Word  
Hazard Statements**

Danger  
H302+H332: Harmful if swallowed or if inhaled.  
H314: Causes severe skin burns and eye damage.  
H360FFDD: May damage fertility. May damage the unborn child.  
H412: Harmful to aquatic life with long lasting effects.

**Precautionary statements**

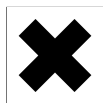
P201: Obtain special instructions before use.  
P202: Do not handle until all safety precautions have been read and understood.  
P260: Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.  
P264a: Wash skin thoroughly after handling.  
P273: Avoid release to the environment.  
P280: Wear protective gloves/ protective clothing/ eye protection/ face protection.  
P301+P312: IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell.  
P301+P330+P331: IF SWALLOWED: rinse mouth. Do NOT induce vomiting.  
P303+P361+P353: IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.  
P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P308+P313: IF exposed or concerned: Get medical advice/ attention.  
P310: Immediately call a POISON CENTER or doctor/ physician.  
P363: Wash contaminated clothing before reuse.  
P405: Store locked up.  
P501: Dispose of contents/ container to an approved waste disposal plant.

**Additional advice**

Contains . May produce an allergic reaction.  
Can become flammable in use.

**GHS product identifier**

Tris(2-chlor-1-methylethyl)phosphat, CAS-No. 13674-84-5, EC-No. 237-158-7, REACH No. 01-2119486772-26-0000  
Dibutylzinndilaurat, CAS-No. 77-58-7, EC-No. 201-039-8, REACH No. 01-2119496068-27  
2-Dimethylaminoethanol, CAS-No. 108-01-0, REACH No. 01-2119492298-24-0001

**Labelling according to Directives 67/548/EEC or 1999/45/EC**

Xn - Harmful.

**R-phrases(s)**

R20: Harmful by inhalation.  
R36/37/38: Irritating to eyes, respiratory system and skin.

**S-phrases(s)**

S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
S28: After contact with skin, wash immediately with plenty of water.  
S45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

**Hazardous component(s) which must be listed on the label**

None.

**2.3. Other hazards**

No hazards to be especially mentioned.

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**3. Composition/information on ingredients****Chemical characterization**

Mixture.

Components		CLP Classification	DSD/DPD Classification	Product identifier
Tris(2-chlor-1-methylethyl)phosphat	10% - 25%	Acute Tox. 4 H302	Xn; R-22	CAS-No.: 13674-84-5 EC-No.: 237-158-7 REACH No.: 01-2119486772-26-0000
N,N-Dimethylbenzylamin	1% - 5%	Acute Tox. 4 H302, Acute Tox. 4 H312, Acute Tox. 3 H331, Skin Corr. 1B H314, Aquatic Chronic 3 H412, Flam. Liq. 3 H226	C,Xn; R-10-34-20/21/22-52/53	CAS-No.: 103-83-3 Index-No: 203-149-1 REACH No.: 01-2119529232-48-0000
N,N-Bis(2-Dimethylaminoäthyl)Met hylamin	< 1%	Acute Tox. 3 H301, Acute Tox. 3 H311, Skin Corr. 1B H314	T,C,Xn; R-22-24-34	CAS-No.: 3030-47-5 EC-No.: 221-201-1 Index-No: 612-109-00-6

N,N-Bis[3-(dimethylamino)propyl]-N',N'-dimethylpropan-1,3-diamin	1% - 5%	Acute Tox. 4 H312, Skin Corr. 1B H314, Eye Dam. 1 H318	C; R-21-34	CAS-No.: 33329-35-0 EC-No.: 251-459-0
Dibutylzinndilaurat	< 1%	Skin Corr. 1B H314, Repr. 1B H360 (FD), Muta. 2 H341, Skin Sens. 1 H317, STOT SE 1 H370, STOT RE 1 H372, Aquatic Acute 1 H400, Aquatic Chronic 1 H410		CAS-No.: 77-58-7 EC-No.: 201-039-8 REACH No.: 01-2119496068-27
2-Dimethylaminoethanol	1% - 5%	Acute Tox. 4 H302, Acute Tox. 4 H312, Acute Tox. 4 H332, Skin Corr. 1B H314, Acute Tox. 3 H331, STOT SE 3 H335, Flam. Liq. 3 H226	Xn,C; R-10-20/21/22-34	CAS-No.: 108-01-0 Index-No: 2035428 REACH No.: 01-2119492298-24-0001
Formic acid	< 1%	Skin Corr. 1A H314 [CSk1A: C ≥ 90 % ; CSk1B: 10 % ≤ C < 90 % ; CSk2: 2 % ≤ C < 10 % ; CEy2: 2 % ≤ C < 10 %] , Notes B	C; R-35, Notes B [C ≥ 90 % \ C; R-35 ; 10 % ≤ C < 90 % \ C; R-34 ; 2 % ≤ C < 10 % \ Xi; R-36/38]	CAS-No.: 64-18-6 EC-No.: 200-579-1 Index-No: 607-001-00-0

For the full text of the phrases mentioned in this Section, see Section 16.

**Hazardous impurities** None known.

## 4. First aid measures

### 4.1. Description of first aid measures

<b>Inhalation</b>	Call a physician or Poison Control Center immediately. Move to fresh air in case of accidental inhalation of fumes from overheating or combustion.
<b>Skin contact</b>	Immediate medical treatment necessary as untreated skin corrosions are slow and bad healing wounds.
<b>Eye contact</b>	Rinse thoroughly with plenty of water, also under the eyelids. Protect unharmed eye. If eye irritation persists, consult a specialist.
<b>Ingestion</b>	Rinse the mouth thoroughly with water. Consult a physician if necessary. Prevent vomiting if possible. If swallowed, seek medical advice immediately and show this container or label.

**4.2. Most important symptoms and effects, both acute and delayed** Causes severe burns.

**4.3. Indication of any immediate medical attention and special treatment needed** None known.



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## 5. Firefighting measures

### 5.1. Extinguishing media

**Suitable extinguishing media** Use dry chemical, CO<sub>2</sub>, water spray or alcohol foam.

**Extinguishing media which must not be used for safety reasons** High volume water jet.

**5.2. Special hazards arising from the substance or mixture** Liberates poisonous gas. In the event of fire the following can be released: CO<sub>x</sub>, NO<sub>x</sub>, SiO<sub>x</sub>, PO<sub>x</sub>, HX. Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

### 5.3. Advice for firefighters

**Special protective equipment for firefighters** Standard procedure for chemical fires. In case of fire and/or explosion do not breathe fumes. In the event of fire, wear self contained breathing apparatus. Complete suit protecting against chemicals.

**Specific methods** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

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## 6. Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

**Advice for non-emergency personnel** Use personal protective equipment. Avoid contact with skin and eyes.

**Advice for emergency responders** Use personal protective equipment. Avoid contact with skin and eyes.

**6.2. Environmental precautions** Prevent product from entering surface water or sewage.

**6.3. Methods and material for containment and cleaning up** Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).

**6.4. Reference to other sections** See chapter 8 and 13.

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## 7. Handling and storage

**7.1. Precautions for safe handling** Wear personal protective equipment. Use only in area provided with appropriate exhaust ventilation. Ingestion, exposure to skin and eyes and inhalation of any generated vapours should be avoided.

**7.2. Conditions for safe storage, including any incompatibilities** The product is hygroscopic. Keep container tightly closed. Store at room temperature in the original container. Keep away from food and drink.



7.3. Specific end use(s) No information available.

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## 8. Exposure controls/personal protection

### 8.1. Control parameters

**Exposure limit(s)** No data is available on the product itself.

#### 2-(Dimethylamino)ethanol (CAS 108-01-0)

United Kingdom - Workplace 6 ppm STEL  
Exposure Limits (WELs) - STELs 22 mg/m<sup>3</sup> STEL  
United Kingdom - Workplace 2 ppm TWA  
Exposure Limits (WELs) - TWAs 7.4 mg/m<sup>3</sup> TWA

#### Formic acid (CAS 64-18-6)

EU - Occupational Exposure 5 ppm TWA  
(2006/15/EC) - Second List of 9 mg/m<sup>3</sup> TWA  
Indicative Occupational Exposure  
Limit Values - TWAs  
Ireland - Occupational Exposure 5 ppm TWA  
Limits - TWAs 9 mg/m<sup>3</sup> TWA  
United Kingdom - Workplace 15 ppm STEL (calculated)  
Exposure Limits (WELs) - STELs 28.8 mg/m<sup>3</sup> STEL (calculated)  
United Kingdom - Workplace 5 ppm TWA  
Exposure Limits (WELs) - TWAs 9.6 mg/m<sup>3</sup> TWA

### 8.2. Exposure controls

**Occupational exposure controls** General industrial hygiene practice. Ensure adequate ventilation, especially in confined areas.

#### Personal protection equipment

*Respiratory protection* In case of insufficient ventilation, wear suitable respiratory equipment.

*Hand protection* The selected protective gloves have to satisfy the specifications of EU Directive 89/689/EEC and the standard EN 374 derived from it.

*Eye protection* Safety glasses with side-shields. Avoid contact with eyes.

*Skin and body protection* Long sleeved clothing. Remove and wash contaminated clothing before re-use.

**Thermal hazards** No special measures required.

**Environmental exposure controls** Dispose of waste product or used containers according to local regulations. Prevent product from entering surface water or sewage.

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## 9. Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

<b>Form</b>	Liquid.
<b>Colour</b>	colorless to yellowish
<b>Odour</b>	Characteristic.
<b>Odour Threshold</b>	not determined
<b>pH:</b>	not applicable
<b>Melting point/range:</b>	< 0 °C
<b>Boiling point/range:</b>	not determined
<b>Flash point:</b>	not applicable
<b>Evaporation Rate:</b>	not determined
<b>Flammability:</b>	not applicable
<b>Explosion limits:</b>	not determined
<b>Vapour pressure:</b>	not determined
<b>Vapor density:</b>	not determined
<b>Relative density:</b>	1,16 g/cm <sup>3</sup> (25 °C)
<b>Water solubility:</b>	partly soluble
<b>Partition coefficient (n-octanol/water):</b>	not determined
<b>Autoignition temperature:</b>	not determined
<b>Decomposition temperature:</b>	not determined
<b>Viscosity:</b>	270 mPas (25 °C)
<b>Combustion/explosion hazards:</b>	not determined
<b>Oxidizing properties:</b>	None

### 9.2. Other information

**General Product Characteristics** No information available.

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## 10. Stability and reactivity

<b>10.1. Reactivity</b>	Reagiert mit Isocyanat.
<b>10.2. Chemical stability</b>	No decomposition if used as directed.
<b>10.3. Possibility of hazardous reactions</b>	No if used as directed.
<b>10.4. Conditions to avoid</b>	Burning produces obnoxious and toxic fumes.
<b>10.5. Incompatible materials</b>	ferrous metals, alloys and galvanized surfaces
<b>10.6. Hazardous decomposition products</b>	None under normal use. In the event of fire the following can be released: CO <sub>x</sub> , NO <sub>x</sub> , SiO <sub>x</sub> , PO <sub>x</sub> , HX.

## 11. Toxicological information

### 11.1. Information on toxicological effects

<b>Acute toxicity</b>	<p><b>2-Propanol, 1-chloro-, phosphate (3:1) (CAS 13674-84-5)</b>            Dermal LD50 Rabbit = 1230 mg/kg (IUCLID)            Dermal LD50 Rat &gt; 5000 mg/kg (IUCLID)            Inhalation LC50 Rat = 5 mg/L 4 h (IUCLID)            Inhalation LC50 Rat &gt; 17.8 mg/L 1 h (IUCLID)            Oral LD50 Rat = 500 mg/kg (IUCLID)</p> <p><b>2-(Dimethylamino)ethanol (CAS 108-01-0)</b>            Inhalation LC50 Rat = 1641 ppm 4 h (NLM_CIP)            Oral LD50 Rat = 1803 mg/kg (IUCLID)</p> <p><b>Formic acid (CAS 64-18-6)</b>            Inhalation LC50 Rat = 15 g/m<sup>3</sup> 15 min (NLM_CIP)            Oral LD50 Rat = 730 mg/kg (IUCLID)</p>
<b>Skin corrosion/irritation</b>	Causes burns.
<b>Serious eye damage/eye irritation</b>	Corrosive.
<b>Respiratory / Skin Sensitisation</b>	None known.
<b>Carcinogenicity</b>	Carcinogenicity classification not possible from current data.
<b>Germ cell mutagenicity</b>	Classification not possible from current data.
<b>Reproductive toxicity</b>	Classification not possible from current data.
<b>Specific target organ toxicity (single exposure)</b>	No data available.
<b>Specific target organ toxicity (repeated exposure)</b>	No data available.
<b>Aspiration hazard</b>	No data available.
<b>Human experience</b>	This product has no known adverse effect on human health.
<b>Symptoms related to the physical, chemical and toxicological characteristics</b>	Causes burns.

## 12. Ecological information

**12.1. Toxicity** No data available.

<b>2-Propanol, 1-chloro-, phosphate (3:1) (CAS 13674-84-5)</b>	
Ecotoxicity - Freshwater Fish - Acute Toxicity Data	96 h LC50 Brachydanio rerio: 56.2 mg/L [static] 96 h LC50 Leuciscus idus: 180 mg/L [static] 96 h LC50 Pimephales promelas: 98 mg/L [static] 96 h LC50 Poecilia reticulata: 30 mg/L [static]
Ecotoxicity - Water Flea - Acute Toxicity Data	48 h EC50 Daphnia magna: 63 mg/L





Ecotoxicity - Freshwater Algae - Acute Toxicity Data	72 h EC50 <i>Desmodesmus subspicatus</i> : 45 mg/L 96 h EC50 <i>Pseudokirchneriella subcapitata</i> : 4 mg/L
<b>Benzyldimethylamine (CAS 103-83-3)</b>	
Ecotoxicity - Freshwater Fish - Acute Toxicity Data	96 h LC50 <i>Pimephales promelas</i> : 35.8 - 39.9 mg/L [flow-through]
<b>Dibutyltin dilaurate (CAS 77-58-7)</b>	
Ecotoxicity - Freshwater Fish - Acute Toxicity Data	48 h LC50 <i>Oryzias latipes</i> : 2 mg/L
<b>2-(Dimethylamino)ethanol (CAS 108-01-0)</b>	
Ecotoxicity - Freshwater Fish - Acute Toxicity Data	96 h LC50 <i>Pimephales promelas</i> : 81 mg/L [static]
Ecotoxicity - Water Flea - Acute Toxicity Data	48 h EC50 <i>Daphnia magna</i> : 98.77 mg/L
Ecotoxicity - Freshwater Algae - Acute Toxicity Data	72 h EC50 <i>Desmodesmus subspicatus</i> : 35 mg/L
<b>Formic acid (CAS 64-18-6)</b>	
Ecotoxicity - Freshwater Fish - Acute Toxicity Data	24 h LC50 <i>Lepomis macrochirus</i> : 175 mg/L [static]
Ecotoxicity - Water Flea - Acute Toxicity Data	48 h EC50 <i>Daphnia magna</i> : 120 mg/L 48 h EC50 <i>Daphnia magna</i> : 138 - 165.6 mg/L [Static]
Ecotoxicity - Freshwater Algae - Acute Toxicity Data	96 h EC50 <i>Desmodesmus subspicatus</i> : 25 mg/L 72 h EC50 <i>Desmodesmus subspicatus</i> : 26.9 mg/L
<b>12.2. Persistence and degradability</b>	No data is available on the product itself. Expected to be biodegradable.
<b>12.3. Bioaccumulative potential</b>	No data is available on the product itself. Bioaccumulation is unlikely.
<b>12.4. Mobility in soil</b>	No data available.
<b>12.5. Results of PBT and vPvB assessment</b>	No information available.
<b>12.6. Other adverse effects</b>	No information available.

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## 13. Disposal considerations

### 13.1. Waste treatment methods

<b>Waste from residues / unused products</b>	Dispose of in accordance with local regulations.
<b>Contaminated packaging</b>	Offer rinsed packaging material to local recycling facilities.

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## 14. Transport information

<b>ADR/RID</b>	Not required.
<b>IMO</b>	Not required.



ICAO

Not required.

Further Information

Not classified as dangerous in the meaning of transport regulations.

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## 15. Regulatory information

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

#### Regulatory Information

The product contains organic halogens.

#### **2-Propanol, 1-chloro-, phosphate (3:1) (CAS 13674-84-5)**

EU - REACH (1907/2006) - List of Registered Substances Present

#### **Benzyl dimethylamine (CAS 103-83-3)**

EU - REACH (1907/2006) - List of Registered Substances Present

#### **N-[2-(Dimethylamino)ethyl]-N,N,N'-trimethyl-1,2-ethanediamine (CAS 3030-47-5)**

EU - Seveso III Directive (2012/18/EU) - Qualifying Quantities of Dangerous Substances - Lower-Tier Requirements 50 tonne

EU - Seveso III Directive (2012/18/EU) - Qualifying Quantities of Dangerous Substances - Higher-Tier Requirements 200 tonne

#### **Dibutyltin dilaurate (CAS 77-58-7)**

EU - REACH (1907/2006) - List of Registered Substances Present

#### **2-(Dimethylamino)ethanol (CAS 108-01-0)**

EU - REACH (1907/2006) - List of Registered Substances Present

#### **Formic acid (CAS 64-18-6)**

EU - Biocides (1451/2007) - Existing Active Substances Present

EU - REACH (1907/2006) - Article 15(1) - Substances Regarded as Being Registered - Plant Health Products Present

EU - REACH (1907/2006) - List of Registered Substances Present

### 15.2. Chemical safety assessment

A Chemical Safety Assessment is not required for this substance when it is used in the specified applications.

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## 16. Other information

#### Revision Note

Safety datasheet sections which have been updated: .



**Key or legend to abbreviations and acronyms**

None.

**Full text of phrases referred to under sections 2 and 3**

H226: Flammable liquid and vapour.  
H301: Toxic if swallowed.  
H302: Harmful if swallowed.  
H311: Toxic in contact with skin.  
H312: Harmful in contact with skin.  
H314: Causes severe skin burns and eye damage.  
H317: May cause an allergic skin reaction.  
H318: Causes serious eye damage.  
H331: Toxic if inhaled.  
H332: Harmful if inhaled.  
H335: May cause respiratory irritation.  
H341: Suspected of causing genetic defects.  
H360: May damage fertility or the unborn child.  
H360F: May damage fertility.  
H360FD: May damage fertility. May damage the unborn child.  
H360FFDD: May damage fertility. May damage the unborn child.  
H370: Causes damage to organs.  
H372: Causes damage to organs through prolonged or repeated exposure.  
H400: Very toxic to aquatic life.  
H410: Very toxic to aquatic life with long lasting effects.  
H412: Harmful to aquatic life with long lasting effects.

R10: Flammable.  
R20/21/22: Harmful by inhalation, in contact with skin and if swallowed.  
R20: Harmful by inhalation.  
R21: Harmful in contact with skin.  
R22: Harmful if swallowed.  
R24: Toxic in contact with skin.  
R34: Causes burns.  
R36/37/38: Irritating to eyes, respiratory system and skin.  
R52/53: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**Further information**

Take notice of the directions of use on the label.

**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. It 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. This safety datasheet only contains information relating to safety and does not replace any product information or product specification.