

**SAFETY DATA SHEET**

**SECTION 1: Identification of the substance/mixture and of the company/undertaking**

**1.1. Product identifier**

Trade name or designation of the mixture TC-4 B  
 Registration number -  
 Synonyms None.  
 Product code 803-0009  
 Issue date 11-September-2013  
 Version number 00  
 Revision date 11-September-2013  
 Supersedes date -

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

Identified uses Industrial Leak Sealant.  
 Uses advised against None known.

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

Manufacturer/Supplier Team Industrial Services, Inc.  
 Address Postbus 37 4380 AA Vlissingen 3237  
 The Netherlands  
 Telephone +31 (0) 118 48 58 00  
 Fax +31 (0) 118 48 58 86  
 e-mail Not available.  
 Contact person Not available.

**1.4. Emergency telephone number** +(61)-290372994, +1 703-527-3887

**SECTION 2: Hazards identification**

**2.1. Classification of the substance or mixture**

The mixture has been assessed and/or tested for its physical, health and environmental hazards and the following classification applies.

**Classification according to Directive 67/548/EEC or 1999/45/EC as amended**

**Classification** Repr. Cat. 3;R62, C;R34, Xn;R21/22, Xi;R37, R43

The full text for all R-phrases is displayed in section 16.

**Classification according to Regulation (EC) No 1272/2008 as amended**

**Health hazards**

Skin corrosion/irritation	Category 1B	H314 - Causes severe skin burns and eye damage.
Skin sensitisation	Category 1	H317 - May cause an allergic skin reaction.
Reproductive toxicity	Category 2	H361f - Suspected of damaging fertility.
Specific target organ toxicity - single exposure	Category 3 respiratory tract irritation	H335 - May cause respiratory irritation.

**Hazard summary**

**Physical hazards** Not classified for physical hazards.  
**Health hazards** Harmful in contact with skin and if swallowed. Causes burns. Irritating to respiratory system. May cause sensitisation by skin contact. Possible risk of impaired fertility. Occupational exposure to the substance or mixture may cause adverse health effects.  
**Environmental hazards** Not classified for hazards to the environment.  
**Specific hazards** Ingestion causes burns of the upper digestive and respiratory tracts.  
**Main symptoms** Skin and eye burns. May cause severe irritation or burns to the eyes, skin, gastrointestinal tract, and respiratory system. Sensitisation. Ingestion may cause irritation and malaise.

**2.2. Label elements**

**Label according to Regulation (EC) No. 1272/2008 as amended****Contains:** 2-Ethylhexyl glycidyl ether, 2-Piperazin-1-ylethylamine, Amine Adduct, Bisphenol A, Diethylene triamine**Hazard pictograms****Signal word** Danger
**Hazard statements**  
 H314 - Causes severe skin burns and eye damage.  
 H317 - May cause an allergic skin reaction.  
 H335 - May cause respiratory irritation.  
 H361f - Suspected of damaging fertility.
**Precautionary statements**
**Prevention**  
 P264 - Wash thoroughly after handling.  
 P280 - Wear protective gloves/protective clothing/eye protection/face protection.

**Response**  
 P303 + P361 + P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.  
 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 CENTRE or doctor/physician.
**Storage** P405 - Store locked up.**Disposal** P501 - Dispose of contents/container in accordance with local/regional/national/international regulations.**Supplemental label information** Not applicable.**2.3. Other hazards** Not a PBT or vPvB substance or mixture.**SECTION 3: Composition/information on ingredients****3.2. Mixtures****General information**

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	INDEX No.	Notes
Bisphenol A	15	80-05-7 201-245-8	-	604-030-00-0	#
<b>Classification:</b>		<b>DSD:</b> Repr. Cat. 3;R62, Xi;R37-41, R43, R52			
		<b>CLP:</b> Skin Sens. 1;H317, Eye Dam. 1;H318, STOT SE 3;H335, Repr. 2;H361f, Aquatic Chronic 2;H411			
Modified polyamido amine	13	68953-36-6 273-201-6	-	-	
<b>Classification:</b>		<b>DSD:</b> -			
		<b>CLP:</b> -			
Diethylenetriamine	8	111-40-0 203-865-4	-	612-058-00-X	
<b>Classification:</b>		<b>DSD:</b> C;R34, Xn;R21/22, R43			
		<b>CLP:</b> Acute Tox. 4;H302, Acute Tox. 4;H312, Skin Corr. 1B;H314, Skin Sens. 1;H317			
2-Ethylhexyl glycidyl ether	7	2461-15-6 219-553-6	-	-	
<b>Classification:</b>		<b>DSD:</b> Xi;R36/38, R43			
		<b>CLP:</b> Skin Irrit. 2;H315, Skin Sens. 1;H317, Eye Irrit. 2;H319			
2-Piperazin-1-ylethylamine	6	140-31-8 205-411-0	-	612-105-00-4	
<b>Classification:</b>		<b>DSD:</b> C;R34, Xn;R21/22, R43, R52/53			
		<b>CLP:</b> Acute Tox. 4;H302, Acute Tox. 4;H312, Skin Corr. 1B;H314, Skin Sens. 1;H317, Aquatic Chronic 3;H412			

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	INDEX No.	Notes
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Amine Adduct	5	68605-86-7	-	-	
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**Classification:**     **DSD:** T;R24, C;R34  
**CLP:** Acute Tox. 3;H311, Skin Corr. 1B;H314, Eye Dam. 1;H318

DSD: Directive 67/548/EEC.  
CLP: Regulation No. 1272/2008.  
#: This substance has workplace exposure limit(s).

**Composition comments**     All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume. The full text for all R- and H-phrases is displayed in section 16.

## SECTION 4: First aid measures

**General information**     Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Chemical burns must be treated by a physician.

### 4.1. Description of first aid measures

**Inhalation**     Remove to fresh air. If breathing stops, provide artificial respiration. Get medical attention immediately.

**Skin contact**     Remove contaminated clothing. Wash immediately with soap and water for at least 15 minutes. Get medical attention immediately! In case of allergic reaction or other skin disorders: Seek medical attention and bring along these instructions.

**Eye contact**     Flush thoroughly with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Get medical attention immediately.

**Ingestion**     Immediately rinse mouth and drink plenty of water or milk. Keep person under observation. Do not induce vomiting. If vomiting occurs, keep head low. Transport immediately to hospital and take these instructions.

**4.2. Most important symptoms and effects, both acute and delayed**     Skin and eye burns. May cause severe irritation or burns to the eyes, skin, gastrointestinal tract, and respiratory system. Sensitisation. Upper respiratory tract irritation. Ingestion may cause irritation and malaise.

**4.3. Indication of any immediate medical attention and special treatment needed**     Treat symptomatically.

## SECTION 5: Firefighting measures

**General fire hazards**     No unusual fire or explosion hazards noted.

### 5.1. Extinguishing media

**Suitable extinguishing media**     Extinguish with foam, carbon dioxide or dry powder.

**Unsuitable extinguishing media**     No restrictions known.

**5.2. Special hazards arising from the substance or mixture**     During fire, gases hazardous to health may be formed.

### 5.3. Advice for firefighters

**Special protective equipment for firefighters**     Self-contained breathing apparatus and full protective clothing must be worn in case of fire. Selection of respiratory protection for firefighting: follow the general fire precautions indicated in the workplace.

**Special fire fighting procedures**     Use standard firefighting procedures and consider the hazards of other involved materials. Cool material exposed to heat with water spray and remove it if no risk is involved.

## SECTION 6: Accidental release measures

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

**For non-emergency personnel**     Avoid inhalation of vapours and contact with skin and eyes. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. For personal protection, see section 8 of the SDS.

**For emergency responders**     Keep unnecessary personnel away. Use personal protection recommended in Section 8 of the SDS.

**6.2. Environmental precautions**     Prevent entry into waterways, sewer, basements or confined areas. Environmental manager must be informed of all major spillages.

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

Collect and dispose of spillage as indicated in section 13 of the SDS. Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Wipe up with absorbent material (e.g. cloth, fleece). Should not be released into the environment. Never return spills in original containers for re-use. Prevent product from entering drains.

### 6.4. Reference to other sections

For personal protection, see section 8 of the SDS.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Provide adequate ventilation. Avoid inhalation of vapours and contact with skin and eyes. Wear personal protective equipment. Wash hands thoroughly after handling. Pregnant women should not work with the product, if there is the least risk of exposure. Persons susceptible for allergic reactions should not handle this product. Observe good industrial hygiene practices.

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

Store in tightly closed original container. Store in a cool and well-ventilated place. Store away from incompatible materials.

### 7.3. Specific end use(s)

Industrial Leak Sealant.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Occupational exposure limits

##### Austria. MAK List

Components	Type	Value	Form
Bisphenol A (CAS 80-05-7)	Ceiling	5 mg/m <sup>3</sup>	Inhalable fraction.
	MAK	5 mg/m <sup>3</sup>	Inhalable fraction.
Diethylenetriamine (CAS 111-40-0)	MAK	4 mg/m <sup>3</sup>	
		1 ppm	

##### Belgium. Exposure Limit Values.

Components	Type	Value
Bisphenol A (CAS 80-05-7)	TWA	10 mg/m <sup>3</sup>
Diethylenetriamine (CAS 111-40-0)	TWA	4,3 mg/m <sup>3</sup>
		1 ppm

##### Bulgaria. OELs. Regulation No 13 on protection of workers against risks of exposure to chemical agents at work

Components	Type	Value
Diethylenetriamine (CAS 111-40-0)	TWA	4 mg/m <sup>3</sup>

##### Cyprus. OELs. Control of factory atmosphere and dangerous substances in factories regulation, PI 311/73, as amended.

Components	Type	Value
Diethylenetriamine (CAS 111-40-0)	TWA	4 mg/m <sup>3</sup>
		1 ppm

##### Czech Republic. OELs. Government Decree 361

Components	Type	Value	Form
Bisphenol A (CAS 80-05-7)	Ceiling	5 mg/m <sup>3</sup>	Dust/aerosol.
	TWA	2 mg/m <sup>3</sup>	Dust/aerosol.
Diethylenetriamine (CAS 111-40-0)	Ceiling	8 mg/m <sup>3</sup>	
	TWA	4 mg/m <sup>3</sup>	

##### Denmark. Exposure Limit Values

Components	Type	Value	Form
Bisphenol A (CAS 80-05-7)	TLV	3 mg/m <sup>3</sup>	Particulate.
Diethylenetriamine (CAS 111-40-0)	TLV	4 mg/m <sup>3</sup>	
		1 ppm	

**Estonia. OELs. Occupational Exposure Limits of Hazardous Substances. (Annex of Regulation No. 293 of 18 September 2001)**

Components	Type	Value
Bisphenol A (CAS 80-05-7)	TWA	10 mg/m <sup>3</sup>
Diethylenetriamine (CAS 111-40-0)	STEL	10 mg/m <sup>3</sup>
	TWA	2 ppm 4,5 mg/m <sup>3</sup> 1 ppm

**Finland. Workplace Exposure Limits**

Components	Type	Value
Bisphenol A (CAS 80-05-7)	TWA	5 mg/m <sup>3</sup>
Diethylenetriamine (CAS 111-40-0)	STEL	13 mg/m <sup>3</sup>
	TWA	3 ppm 4,3 mg/m <sup>3</sup> 1 ppm

**France. Threshold Limit Values (VLEP) for Occupational Exposure to Chemicals in France, INRS ED 984**

Components	Type	Value	Form
Bisphenol A (CAS 80-05-7)	VME	10 mg/m <sup>3</sup>	Inhalable dust.
Diethylenetriamine (CAS 111-40-0)	VME	4 mg/m <sup>3</sup>	
		1 ppm	

**Germany. DFG MAK List (advisory OELs). Commission for the Investigation of Health Hazards of Chemical Compounds in the Work Area (DFG)**

Components	Type	Value	Form
Bisphenol A (CAS 80-05-7)	TWA	5 mg/m <sup>3</sup>	Inhalable fraction.

**Germany. TRGS 900, Limit Values in the Ambient Air at the Workplace**

Components	Type	Value	Form
Bisphenol A (CAS 80-05-7)	AGW	5 mg/m <sup>3</sup>	Inhalable fraction.

**Greece. OELs (Decree No. 90/1999, as amended)**

Components	Type	Value
Diethylenetriamine (CAS 111-40-0)	TWA	4 mg/m <sup>3</sup>
		1 ppm

**Hungary. OELs. Joint Decree on Chemical Safety of Workplaces**

Components	Type	Value
Bisphenol A (CAS 80-05-7)	TWA	10 mg/m <sup>3</sup>
Diethylenetriamine (CAS 111-40-0)	STEL	4 mg/m <sup>3</sup>
	TWA	4 mg/m <sup>3</sup>

**Iceland. OELs. Regulation 154/1999 on occupational exposure limits**

Components	Type	Value
Diethylenetriamine (CAS 111-40-0)	TWA	4 mg/m <sup>3</sup>
		1 ppm

**Ireland. Occupational Exposure Limits**

Components	Type	Value	Form
Bisphenol A (CAS 80-05-7)	TWA	10 mg/m <sup>3</sup>	Inhalable dust.
Diethylenetriamine (CAS 111-40-0)	TWA	4 mg/m <sup>3</sup>	
		1 ppm	

**Italy. OELs**

Components	Type	Value	Form
Bisphenol A (CAS 80-05-7)	TWA	10 mg/m <sup>3</sup>	Inhalable dust.

**Italy. OELs**

Components	Type	Value	Form
Diethylenetriamine (CAS 111-40-0)	TWA	1 ppm	

**Lithuania. OELs. Limit Values for Chemical Substances, General Requirements (Hygiene Norm HN 23:2007)**

Components	Type	Value	Form
Bisphenol A (CAS 80-05-7)	TWA	10 mg/m <sup>3</sup>	Respirable dust.
Diethylenetriamine (CAS 111-40-0)	STEL	10 mg/m <sup>3</sup>	
	TWA	2 ppm 4,5 mg/m <sup>3</sup> 1 ppm	

**Luxembourg. Binding Occupational exposure limit values (Annex I), Memorial A**

Components	Type	Value	Form
Bisphenol A (CAS 80-05-7)	TWA	10 mg/m <sup>3</sup>	Inhalable dust.

**Netherlands. OELs (binding)**

Components	Type	Value	Form
Bisphenol A (CAS 80-05-7)	TWA	10 mg/m <sup>3</sup>	Inhalable fraction.

**Norway. Administrative Norms for Contaminants in the Workplace**

Components	Type	Value	Form
Bisphenol A (CAS 80-05-7)	TLV	10 mg/m <sup>3</sup>	Inhalable fraction.
Diethylenetriamine (CAS 111-40-0)	TLV	4 mg/m <sup>3</sup> 1 ppm	

**Poland. MACs. Minister of Labour and Social Policy Regarding Maximum Allowable Concentrations and Intensities in Working Environment**

Components	Type	Value	Form
Bisphenol A (CAS 80-05-7)	STEL	10 mg/m <sup>3</sup>	Dust.
	TWA	5 mg/m <sup>3</sup>	Dust.
Diethylenetriamine (CAS 111-40-0)	STEL	12 mg/m <sup>3</sup>	
	TWA	4 mg/m <sup>3</sup>	

**Portugal. VLEs. Norm on occupational exposure to chemical agents (NP 1796)**

Components	Type	Value	Form
Diethylenetriamine (CAS 111-40-0)	TWA	1 ppm	

**Romania. OELs. Protection of workers from exposure to chemical agents at the workplace**

Components	Type	Value	Form
Diethylenetriamine (CAS 111-40-0)	STEL	4 mg/m <sup>3</sup>	
	TWA	1 ppm 2 mg/m <sup>3</sup> 0,5 ppm	

**Slovakia. OELs. Decree of the government of the Slovak Republic concerning protection of health in work with chemical agents**

Components	Type	Value	Form
Bisphenol A (CAS 80-05-7)	TWA	10 mg/m <sup>3</sup>	Inhalable fraction.

**Slovenia. OELs. Regulations concerning protection of workers against risks due to exposure to chemicals while working (Official Gazette of the Republic of Slovenia)**

Components	Type	Value	Form
Bisphenol A (CAS 80-05-7)	TWA	5 mg/m <sup>3</sup>	Inhalable fraction.

## Spain. Occupational Exposure Limits

Components	Type	Value
Diethylenetriamine (CAS 111-40-0)	TWA	4,3 mg/m <sup>3</sup> 1 ppm

## Sweden. Occupational Exposure Limit Values

Components	Type	Value
Diethylenetriamine (CAS 111-40-0)	STEL	10 mg/m <sup>3</sup>
	TWA	2 ppm 4,5 mg/m <sup>3</sup> 1 ppm

## Switzerland. SUVA Grenzwerte am Arbeitsplatz

Components	Type	Value	Form
Bisphenol A (CAS 80-05-7)	STEL	5 mg/m <sup>3</sup>	Inhalable dust.
	TWA	5 mg/m <sup>3</sup>	Inhalable dust.
Diethylenetriamine (CAS 111-40-0)	TWA	4 mg/m <sup>3</sup> 1 ppm	

## UK. EH40 Workplace Exposure Limits (WELs)

Components	Type	Value	Form
Bisphenol A (CAS 80-05-7)	TWA	10 mg/m <sup>3</sup>	Inhalable dust.
Diethylenetriamine (CAS 111-40-0)	TWA	4,3 mg/m <sup>3</sup> 1 ppm	

## EU. Indicative Exposure Limit Values in Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU

Components	Type	Value	Form
Bisphenol A (CAS 80-05-7)	TWA	10 mg/m <sup>3</sup>	Inhalable dust.

**Biological limit values** No biological exposure limits noted for the ingredient(s).

**Recommended monitoring procedures** Follow standard monitoring procedures.

**Derived no-effect level (DNEL)** Not available.

**Predicted no effect concentrations (PNECs)** Not available.

## 8.2. Exposure controls

**Appropriate engineering controls** General ventilation normally adequate. Ensure adequate ventilation, especially in confined areas. Provide easy access to water supply and eye wash facilities.

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

**General information** Personal protective equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.

**Eye/face protection** Wear approved chemical safety goggles. Use face shield in case of splash risk.

#### Skin protection

##### - Hand protection

Wear appropriate chemical resistant gloves. Be aware that the liquid may penetrate the gloves. Frequent change is advisable. Suitable gloves can be recommended by the glove supplier.

##### - Other

Wear appropriate chemical resistant clothing.

#### Respiratory protection

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.

In case of inadequate ventilation, use respiratory protection. Use respiratory equipment with combination filter, type A2/P2.

#### Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

#### Hygiene measures

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Observe any medical surveillance requirements.

#### Environmental exposure controls

Environmental manager must be informed of all major spillages.

## SECTION 9: Physical and chemical properties

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

<b>Appearance</b>	Blue liquid.
<b>Physical state</b>	Liquid.
<b>Form</b>	Liquid.
<b>Colour</b>	Blue.
<b>Odour</b>	Odourless.
<b>Odour threshold</b>	Not available.
<b>pH</b>	Not available.
<b>Melting point/freezing point</b>	Not available.
<b>Initial boiling point and boiling range</b>	> 65 °C (> 149 °F)
<b>Flash point</b>	> 100,0 °C (> 212,0 °F) Closed cup
<b>Evaporation rate</b>	Not available.
<b>Flammability (solid, gas)</b>	Not applicable.
<b>Upper/lower flammability or explosive limits</b>	
<b>Flammability limit - lower (%)</b>	Not available.
<b>Flammability limit - upper (%)</b>	Not available.
<b>Vapour pressure</b>	Not available.
<b>Vapour density</b>	Not available.
<b>Relative density</b>	1
<b>Solubility(ies)</b>	Not available.
<b>Partition coefficient (n-octanol/water)</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	5500 cSt
<b>Explosive properties</b>	Not available.
<b>Oxidizing properties</b>	Not available.
<b>9.2. Other information</b>	No relevant additional information available.

## SECTION 10: Stability and reactivity

<b>10.1. Reactivity</b>	Stable at normal conditions.
<b>10.2. Chemical stability</b>	The product is stable and non reactive under normal conditions of use, storage and transport.
<b>10.3. Possibility of hazardous reactions</b>	Hazardous polymerisation does not occur.
<b>10.4. Conditions to avoid</b>	Exposure to temperatures of 572 °F (300°C) and above.
<b>10.5. Incompatible materials</b>	Strong acids. Strong oxidising agents. Aldehydes. Ketones. Organic halides.
<b>10.6. Hazardous decomposition products</b>	Carbon dioxide. Carbon oxides. Nitrogen oxides. Ammonia.

## SECTION 11: Toxicological information

<b>General information</b>	Occupational exposure to the substance or mixture may cause adverse effects.
<b>Information on likely routes of exposure</b>	
<b>Ingestion</b>	Causes digestive tract burns.
<b>Inhalation</b>	Causes respiratory tract burns.
<b>Skin contact</b>	May cause an allergic skin reaction. Causes skin burns.
<b>Eye contact</b>	Causes eye burns.
<b>Symptoms</b>	Skin and eye burns. May cause severe irritation or burns to the eyes, skin, gastrointestinal tract, and respiratory system. Sensitisation. Upper respiratory tract irritation. Ingestion may cause irritation and malaise.

### 11.1. Information on toxicological effects



<b>Components</b>	<b>Species</b>	<b>Test results</b>
<b>Acute toxicity</b>	Causes skin, eye and digestive tract burns.	
Bisphenol A (CAS 80-05-7)		
<b>Acute</b>		
<i>Oral</i>		
LD50	Rat	3300 mg/kg
<b>Skin corrosion/irritation</b>	Causes skin burns.	
<b>Serious eye damage/eye irritation</b>	Causes eye burns.	
<b>Respiratory sensitisation</b>	No data available.	
<b>Skin sensitisation</b>	May cause allergic skin reaction.	
<b>Germ cell mutagenicity</b>	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.	
<b>Carcinogenicity</b>	Not classified.	
<b>Reproductive toxicity</b>	Suspected of damaging fertility.	
<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>	Not classified.	
<b>Mixture versus substance information</b>	Not available.	
<b>Other information</b>	No data available.	

## SECTION 12: Ecological information

**12.1. Toxicity** The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

<b>Components</b>	<b>Species</b>	<b>Test results</b>
2-Piperazin-1-ylethylamine (CAS 140-31-8)		
<b>Aquatic</b>		
Fish	LC50	Fathead minnow ( <i>Pimephales promelas</i> ) 1950 - 2460 mg/l, 96 hours
Bisphenol A (CAS 80-05-7)		
<b>Aquatic</b>		
Crustacea	EC50	Water flea ( <i>Daphnia magna</i> ) 9,2 - 11,4 mg/l, 48 hours
Fish	LC50	Fathead minnow ( <i>Pimephales promelas</i> ) 3,6 - 5,4 mg/l, 96 hours
<b>12.2. Persistence and degradability</b>	No data available.	
<b>12.3. Bioaccumulative potential</b>		
<b>Partition coefficient n-octanol/water (log Kow)</b>		
Bisphenol A (CAS 80-05-7)	3,32	
<b>Bioconcentration factor (BCF)</b>	Not available.	
<b>12.4. Mobility in soil</b>	Not available.	
<b>Mobility in general</b>	The product is soluble in water.	
<b>12.5. Results of PBT and vPvB assessment</b>	Not a PBT or vPvB substance or mixture.	
<b>12.6. Other adverse effects</b>	The product contains a substance which is harmful to aquatic organisms and which may cause long-term adverse effects in the aquatic environment.	

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

<b>Residual waste</b>	Dispose of in accordance with local regulations.
<b>Contaminated packaging</b>	Since emptied containers may retain product residue, follow label warnings even after container is emptied.
<b>EU waste code</b>	08 04 09*
<b>Disposal methods/information</b>	Dispose in accordance with all applicable regulations.

## SECTION 14: Transport information

<b>ADR</b>	
14.1. UN number	UN2735
14.2. UN proper shipping name	POLYAMINES, LIQUID, CORROSIVE, N.O.S. (Modified polyamido amine, Diethylenetriamine)
14.3. Transport hazard class(es)	8
Subsidiary class(es)	-
14.4. Packing group	III
14.5. Environmental hazards	No
Tunnel restriction code	E
Labels required	8
14.6. Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
<b>RID</b>	
14.1. UN number	UN2735
14.2. UN proper shipping name	POLYAMINES, LIQUID, CORROSIVE, N.O.S. (Modified polyamido amine, Diethylenetriamine)
14.3. Transport hazard class(es)	8
Subsidiary class(es)	-
14.4. Packing group	III
14.5. Environmental hazards	No
Labels required	8
14.6. Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
<b>ADN</b>	
14.1. UN number	UN2735
14.2. UN proper shipping name	POLYAMINES, LIQUID, CORROSIVE, N.O.S. (Modified polyamido amine, Diethylenetriamine)
14.3. Transport hazard class(es)	8
Subsidiary class(es)	-
14.4. Packing group	III
14.5. Environmental hazards	No
Labels required	8
14.6. Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
<b>IATA</b>	
14.1. UN number	UN2735
14.2. UN proper shipping name	POLYAMINES, LIQUID, CORROSIVE, N.O.S. (Modified polyamido amine, Diethylenetriamine)
14.3. Transport hazard class(es)	8
Subsidiary class(es)	-
14.4. Packing group	III
14.5. Environmental hazards	No
Labels required	8
ERG code	8L
14.6. Special precautions for user	Read safety instructions, MSDS and emergency procedures before handling.
<b>IMDG</b>	
14.1. UN number	UN2735
14.2. UN proper shipping name	POLYAMINES, LIQUID, CORROSIVE, N.O.S. (Modified polyamido amine, Diethylenetriamine)
14.3. Transport hazard class(es)	8
Subsidiary class(es)	-
14.4. Packing group	III
14.5. Environmental hazards	
Marine pollutant	No
Labels required	8
EmS	F-A, S-B
14.6. Special precautions for user	Read safety instructions, MSDS and emergency procedures before handling.

**14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

This substance/mixture is not intended to be transported in bulk.

## **SECTION 15: Regulatory information**

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

#### **EU regulations**

F - Highly flammable

**Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I**

Not listed.

**Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex II**

Not listed.

**Regulation (EC) No. 850/2004 On persistent organic pollutants, Annex I as amended**

Not listed.

**Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 1 as amended**

Not listed.

**Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 2 as amended**

Not listed.

**Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 3 as amended**

Not listed.

**Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex V as amended**

Not listed.

**Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry**

Not listed.

**Regulation (EC) No. 1907/2006, REACH Article 59(1) Candidate List as currently published by ECHA**

Not listed.

#### **Authorisations**

**Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorisation, as amended**

Not listed.

#### **Restrictions on use**

**Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended**

Bisphenol A (CAS 80-05-7)

**Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work**

Not regulated.

**Directive 92/85/EEC: on the safety and health of pregnant workers and workers who have recently given birth or are breastfeeding**

Not regulated.

#### **Other EU regulations**

**Directive 96/82/EC (Seveso II) on the control of major-accident hazards involving dangerous substances**

Not regulated.

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

2-Piperazin-1-ylethylamine (CAS 140-31-8)

Bisphenol A (CAS 80-05-7)

Diethylenetriamine (CAS 111-40-0)

**Directive 94/33/EC on the protection of young people at work**

2-Piperazin-1-ylethylamine (CAS 140-31-8)

Bisphenol A (CAS 80-05-7)

Diethylenetriamine (CAS 111-40-0)

#### **Other regulations**

The product is classified and labelled in accordance with Regulation (EC) 1272/2008 (CLP Regulation) as amended and respective national laws implementing EC directives. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006.

#### **National regulations**

Young people under 18 years old are not allowed to work with this product according to the EU Directive 94/33/EC on the protection of young people at work. Pregnant women should not work with the product, if there is the least risk of exposure. Follow national regulation for work with chemical agents.

#### **15.2. Chemical safety assessment**

No Chemical Safety Assessment has been carried out.

## SECTION 16: Other information

### List of abbreviations

DNEL: Derived No-Effect Level.  
PNEC: Predicted No-Effect Concentration. PBT:  
Persistent, bioaccumulative and toxic. vPvB:  
Very Persistent and very Bioaccumulative.  
DSD: Directive 67/548/EEC. CLP: Regulation No. 1272/2008.

### References

ESIS (European chemical Substances Information System)  
HSDB® - Hazardous Substances Data Bank  
IARC Monographs. Overall Evaluation of Carcinogenicity

### Information on evaluation method leading to the classification of mixture

The mixture is classified based on test data for physical hazards. The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available. For details, refer to Sections 9, 11 and 12.

### Full text of any statements or R-phrases and H-statements under Sections 2 to 15

R21/22 Harmful in contact with skin and if swallowed.  
R24 Toxic in contact with skin.  
R34 Causes burns.  
R36/38 Irritating to eyes and skin.  
R37 Irritating to respiratory system.  
R41 Risk of serious damage to eyes.  
R43 May cause sensitisation by skin contact.  
R52 Harmful to aquatic organisms.  
R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.  
R62 Possible risk of impaired fertility.  
H302 Harmful if swallowed.  
H311 Toxic in contact with skin.  
H312 Harmful in contact with skin.  
H314 Causes severe skin burns and eye damage.  
H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.  
H318 Causes serious eye damage.  
H319 Causes serious eye irritation.  
H335 May cause respiratory irritation.  
H361f Suspected of damaging fertility.  
H411 Toxic to aquatic life with long lasting effects.  
H412 Harmful to aquatic life with long lasting effects.

### Training information

Follow training instructions when handling this material.

### Disclaimer

The information in the sheet was written based on the best knowledge and experience currently available.