

TEAM[®] Industrial Services

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	B-220 BONDER
Registration number	-
Synonyms	None.
Product code	903-0017
Issue date	15-November-2012
Version number	01
Revision date	15-November-2012
Supersedes date	13-January-2012

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

Supplier

Company name	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 +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 Muta. Cat. 3;R68, C;R34, Xn;R20/21/22, 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

Acute toxicity, oral	Category 4	H302 - Harmful if swallowed.
Skin corrosion/irritation	Category 1B	H314 - Causes severe skin burns and eye damage.
Skin sensitisation	Category 1	H317 - May cause an allergic skin reaction.
Germ cell mutagenicity	Category 2	H341 - Suspected of causing genetic defects.

Hazard summary

Physical hazards	Not classified for physical hazards.
Health hazards	Harmful by inhalation, in contact with skin and if swallowed. Causes burns. May cause sensitisation by skin contact. Possible risk of irreversible effects. Occupational exposure to the substance or mixture may cause adverse health effects.
Environmental hazards	Not classified for hazards to the environment.
Specific hazards	May cause blood damage. May cause lung oedema. May cause damage to the liver and kidneys. High concentrations may lead to central nervous system effects (drowsiness, dizziness, nausea, headaches, paralysis and loss of consciousness).
Main symptoms	Unconsciousness. Coughing. Shortness of breath. Discomfort in the chest. Irritation of nose and throat. Symptoms include itching, burning, redness and tearing. Skin irritation.

2.2. Label elements

Label according to Regulation (EC) No. 1272/2008 as amended

Contains: 2-piperazin-1-ylethylamine, Diethylenetriamine, Phenol, [(Dimethylamino)methyl]phenol

Hazard pictograms



Signal word

Warning

Hazard statements

H302 - Harmful if swallowed.
H314 - Causes severe skin burns and eye damage.
H317 - May cause an allergic skin reaction.
H341 - Suspected of causing genetic defects.

Precautionary statements

Prevention

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
Polymer	50-80	68683-29-4	-	-	
Classification:	DSD: -				
	CLP: -				
Phenol	5-10	108-95-2 203-632-7	-	604-001-00-2	#
Classification:	DSD: Muta. Cat. 3;R68, T;R23/24/25, C;R34, Xn;R48/20/21/22				
	CLP: Acute Tox. 3;H301, Acute Tox. 3;H311, Skin Corr. 1B;H314, Acute Tox. 3;H331, Muta. 2;H341, STOT RE 2;H373				
2-piperazin-1-ylethylamine	1-5	140-31-8 205-411-0	-	612-105-00-4	
Classification:	DSD: C;R34, Xn;R21/22, R43, R52/53				
	CLP: Acute Tox. 4;H302, Acute Tox. 4;H312, Skin Corr. 1B;H314, Skin Sens. 1;H317, Aquatic Chronic 3;H412				
Diethylenetriamine	1-5	111-40-0 203-865-4	-	612-058-00-X	
Classification:	DSD: C;R34, Xn;R21/22, R43				
	CLP: Acute Tox. 4;H302, Acute Tox. 4;H312, Skin Corr. 1B;H314, Skin Sens. 1;H317				

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	INDEX No.	Notes
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[(Dimethylamino)methyl]phenol	<1	25338-55-0 246-866-5	-	-	
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Classification: **DSD:** Xn;R22, R43
 CLP: Acute Tox. 4;H302, Skin Sens. 1;H317

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

Composition comments The full text for all R- and H-phrases is displayed in section 16. All concentrations are in percent by weight.

SECTION 4: First aid measures

General information Chemical burns must be treated by a physician.

4.1. Description of first aid measures

Inhalation	If breathing stops, provide artificial respiration. Get medical attention immediately.
Skin contact	Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. 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. Get immediate medical assistance. If medical assistance is not immediately available, flush an additional 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Ingestion	Rinse mouth thoroughly with water and give large amounts of milk or water to people not unconscious. Only induce vomiting at the instruction of medical personnel. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Get medical attention immediately.

4.2. Most important symptoms and effects, both acute and delayed Unconsciousness. Coughing. Shortness of breath. Irritation of nose and throat. Symptoms include itching, burning, redness and tearing. Skin irritation.

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

SECTION 5: Firefighting measures

General fire hazards Combustible liquid. Heated material: vapours may travel to a source of ignition and flash back. If heated, volume and pressure increases strongly, resulting in explosion of container.

5.1. Extinguishing media

Suitable extinguishing media	Extinguish with alcohol-resistant foam, carbon dioxide or dry powder.
Unsuitable extinguishing media	No restrictions known.

5.2. Special hazards arising from the substance or mixture Solvent vapours may form explosive mixtures with air. 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	Ventilate closed spaces before entering them. Containers should be cooled with water to prevent vapor pressure build up. Prevent runoff from fire control or dilution from entering streams, sewers or drinking water supply. Evacuate area and fight fire from a safe distance. Stop leak if you can do so without risk. Move containers from fire area if you can do it without risk.

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. Extinguish all ignition sources. Avoid sparks, flames, heat and smoking. Ventilate closed spaces before entering them. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. For personal protection, see section 8.
For emergency responders	Use personal protection as recommended in section 8 of the SDS.

6.2. Environmental precautions Prevent further leakage or spillage if safe to do so. Do not contaminate water. Environmental manager must be informed of all major spillages.

6.3. Methods and material for containment and cleaning up

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Stop leak if you can do so without risk. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Clean contaminated surface thoroughly. Sweep up or vacuum up spillage and collect in suitable container for disposal. Never return spills in original containers for re-use. This material and its container must be disposed of as hazardous waste.

6.4. Reference to other sections

For personal protection, see section 8. For waste disposal, see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid inhalation of vapours and contact with skin and eyes. Avoid contact during pregnancy/while nursing. The product is combustible, and heating may generate vapours which may form explosive vapour/air mixtures. Vapours are heavier than air and may travel along the floor and in the bottom of containers. Use personal protective equipment as required. Use only with adequate ventilation.

7.2. Conditions for safe storage, including any incompatibilities

Keep away from heat, spark, open flames and other sources of ignition. Keep away from sources of ignition - No smoking. Store in a cool, dry, well-ventilated place.

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, OEL Ordinance (GwV), BGBl. II, no. 184/2001

Components	Type	Value
Diethylenetriamine (CAS 111-40-0)	MAK	4 mg/m ³
Phenol (CAS 108-95-2)		1 ppm
	MAK	8 mg/m ³
		2 ppm
	STEL	6 mg/m ³
		4 ppm

Belgium. Exposure Limit Values.

Components	Type	Value
Diethylenetriamine (CAS 111-40-0)	TWA	4,3 mg/m ³
Phenol (CAS 108-95-2)		1 ppm
	STEL	16 mg/m ³
		4 ppm
	TWA	8 mg/m ³
		2 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 ³
Phenol (CAS 108-95-2)	TWA	7,8 mg/m ³

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 ³
Phenol (CAS 108-95-2)		1 ppm
	TWA	19 mg/m ³
		5 ppm

Czech Republic. OELs. Government Decree 361

Components	Type	Value
Diethylenetriamine (CAS 111-40-0)	Ceiling	8 mg/m ³
	TWA	4 mg/m ³
Phenol (CAS 108-95-2)	Ceiling	15 mg/m ³
	TWA	7,5 mg/m ³

Denmark. Exposure Limit Values

Components	Type	Value
Diethylenetriamine (CAS 111-40-0)	TLV	4 mg/m3 1 ppm
Phenol (CAS 108-95-2)	TLV	4 mg/m3 1 ppm

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

Components	Type	Value
Diethylenetriamine (CAS 111-40-0)	STEL	10 mg/m3 2 ppm
	TWA	4,5 mg/m3 1 ppm
Phenol (CAS 108-95-2)	STEL	16 mg/m3 4 ppm
	TWA	8 mg/m3 2 ppm

Finland. Workplace Exposure Limits

Components	Type	Value
Diethylenetriamine (CAS 111-40-0)	STEL	13 mg/m3 3 ppm
	TWA	4,3 mg/m3 1 ppm
Phenol (CAS 108-95-2)	STEL	20 mg/m3 5 ppm
	TWA	8 mg/m3 2 ppm

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

Components	Type	Value
Diethylenetriamine (CAS 111-40-0)	VME	4 mg/m3 1 ppm
Phenol (CAS 108-95-2)	VLE	15,6 mg/m3 4 ppm
	VME	7,8 mg/m3 2 ppm

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

Components	Type	Value
Phenol (CAS 108-95-2)	AGW	8 mg/m3 2 ppm

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

Components	Type	Value
Diethylenetriamine (CAS 111-40-0)	TWA	4 mg/m3 1 ppm
Phenol (CAS 108-95-2)	STEL	38 mg/m3 10 ppm
	TWA	19 mg/m3 5 ppm

Hungary. OELs. Joint Decree on Chemical Safety of Workplaces

Components	Type	Value
Diethylenetriamine (CAS 111-40-0)	STEL	4 mg/m3
	TWA	4 mg/m3
Phenol (CAS 108-95-2)	STEL	16 mg/m3

Hungary. OELs. Joint Decree on Chemical Safety of Workplaces

Components	Type	Value
	TWA	8 mg/m3

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

Components	Type	Value
Diethylenetriamine (CAS 111-40-0)	TWA	4 mg/m3 1 ppm
Phenol (CAS 108-95-2)	TWA	4 mg/m3 1 ppm

Ireland. Occupational Exposure Limits

Components	Type	Value
Diethylenetriamine (CAS 111-40-0)	TWA	4 mg/m3 1 ppm
Phenol (CAS 108-95-2)	STEL	16 mg/m3 4 ppm
	TWA	8 mg/m3 2 ppm

Italy. Occupational Exposure Limits

Components	Type	Value
Diethylenetriamine (CAS 111-40-0)	TWA	1 ppm
Phenol (CAS 108-95-2)	TWA	7,8 mg/m3 2 ppm

Latvia. OELs. Occupational exposure limit values of chemical substances in work environment

Components	Type	Value
Phenol (CAS 108-95-2)	STEL	16 mg/m3 4 ppm
	TWA	8 mg/m3 2 ppm

Lithuania. OELs. Limit Values for Chemical Substances, General Requirements

Components	Type	Value
Diethylenetriamine (CAS 111-40-0)	STEL	10 mg/m3 2 ppm
	TWA	4,5 mg/m3 1 ppm
Phenol (CAS 108-95-2)	STEL	16 mg/m3 4 ppm
	TWA	8 mg/m3 2 ppm

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

Components	Type	Value
Phenol (CAS 108-95-2)	STEL	16 mg/m3 4 ppm
	TWA	8 mg/m3 2 ppm

Malta. OELs. Occupational Exposure Limit Values (L.N. 227. of Occupational Health and Safety Authority Act (CAP. 424), Schedules I and V)

Components	Type	Value
Phenol (CAS 108-95-2)	TWA	7,8 mg/m3 2 ppm

Netherlands. OELs (binding)

Components	Type	Value
Phenol (CAS 108-95-2)	TWA	8 mg/m ³

Norway. Administrative Norms for Contaminants in the Workplace

Components	Type	Value
Diethylenetriamine (CAS 111-40-0)	TLV	4 mg/m ³ 1 ppm
Phenol (CAS 108-95-2)	STEL	12 mg/m ³ 3 ppm
	TLV	4 mg/m ³ 1 ppm

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

Components	Type	Value
Diethylenetriamine (CAS 111-40-0)	STEL	12 mg/m ³
	TWA	4 mg/m ³
Phenol (CAS 108-95-2)	STEL	16 mg/m ³
	TWA	7,8 mg/m ³

Portugal. OELs. Decree-Law n. 290/2001 (Journal of the Republic - 1 Series A, n.266)

Components	Type	Value
Phenol (CAS 108-95-2)	TWA	7,8 mg/m ³ 2 ppm

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

Components	Type	Value
Diethylenetriamine (CAS 111-40-0)	TWA	1 ppm
Phenol (CAS 108-95-2)	TWA	5 ppm

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

Components	Type	Value
Diethylenetriamine (CAS 111-40-0)	STEL	4 mg/m ³ 1 ppm
	TWA	2 mg/m ³ 0,5 ppm
	TWA	7,8 mg/m ³ 2 ppm

Slovakia. OELs. Regulation No. 300/2007 concerning protection of health in work with chemical agents

Components	Type	Value
Phenol (CAS 108-95-2)	TWA	8 mg/m ³ 2 ppm

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
Phenol (CAS 108-95-2)	TWA	8 mg/m ³ 2 ppm

Spain. Occupational Exposure Limits

Components	Type	Value
Diethylenetriamine (CAS 111-40-0)	TWA	4,3 mg/m ³ 1 ppm
	STEL	16 mg/m ³ 4 ppm
Phenol (CAS 108-95-2)	TWA	8 mg/m ³ 2 ppm

Sweden. Occupational Exposure Limit Values

Components	Type	Value
Diethylenetriamine (CAS 111-40-0)	STEL	10 mg/m ³
	TWA	2 ppm 4,5 mg/m ³
Phenol (CAS 108-95-2)	STEL	1 ppm 8 mg/m ³
	TWA	2 ppm 4 mg/m ³ 1 ppm

Switzerland. SUVA Grenzwerte am Arbeitsplatz

Components	Type	Value
Diethylenetriamine (CAS 111-40-0)	TWA	4 mg/m ³ 1 ppm
Phenol (CAS 108-95-2)	STEL	19 mg/m ³ 5 ppm
	TWA	19 mg/m ³ 5 ppm

UK. EH40 Workplace Exposure Limits (WELs)

Components	Type	Value
Diethylenetriamine (CAS 111-40-0)	TWA	4,3 mg/m ³ 1 ppm
Phenol (CAS 108-95-2)	STEL	16 mg/m ³ 4 ppm
	TWA	7,8 mg/m ³ 2 ppm

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

Components	Type	Value
Phenol (CAS 108-95-2)	STEL	16 mg/m ³ 4 ppm
	TWA	8 mg/m ³ 2 ppm

Biological limit values**Finland. HTP-arvot, App 2., Biological Limit Values, (BRA/BGV) , Social Affairs and Ministry of Health**

Components	Value	Determinant	Specimen	Sampling time
Phenol (CAS 108-95-2)	1,3 mmol/l	Total phenol	Urine	*

* - For sampling details, please see the source document.

France. Biological indicators of exposure (IBE) (National Institute for Research and Security (INRS, ND 2065)

Components	Value	Determinant	Specimen	Sampling time
Phenol (CAS 108-95-2)	250 mg/g	Phenol total	Creatinine in urine	*

* - For sampling details, please see the source document.

Germany. TRGS 903, BAT List (Biological Limit Values)

Components	Value	Determinant	Specimen	Sampling time
Phenol (CAS 108-95-2)	300 mg/l	Phenol	Urine	*

* - For sampling details, please see the source document.

Hungary. Chemical Safety at Workplace Ordinance Joint Decree No. 25/2000 (Annex 2): Permissible limit values of biological exposure (effect) indices

Components	Value	Determinant	Specimen	Sampling time
Phenol (CAS 108-95-2)	300 mg/g	Phenol	Creatinine in urine	*

* - For sampling details, please see the source document.

Switzerland. BAT-Werte (Biological Limit Values in the Workplace as per SUVA)

Components	Value	Specimen	Sampling time
Phenol (CAS 108-95-2)	250 mg/g	Creatinine in urine	*

* - For sampling details, please see the source document.

Recommended monitoring procedures Follow standard monitoring procedures.

Derived no-effect level (DNEL)

Components	Type	Route	Value	Form
2-piperazin-1-ylethylamine (CAS 140-31-8)	Workers	Dermal	3,3 mg/kg	Long term exposure systemic effects
		Dermal	20 mg/kg	Acute exposure systemic effect
		Dermal	0,04 mg/kg	Acute exposure local effects
		Dermal	0,006 mg/kg	Long term exposure local effects
		Inhalation	3,6 mg/m3	Long term exposure systemic effects
		Inhalation	21,4 mg/m3	Acute exposure systemic effect
Diethylenetriamine (CAS 111-40-0)	Workers	Dermal	11,4 mg/kg	Long term exposure systemic effects
		Dermal	1,1 mg/kg	Long term exposure local effects
		Inhalation	92,1 mg/m3	Acute exposure systemic effect
		Inhalation	2,6 mg/m3	Acute exposure local effects
		Inhalation	15,4 mg/m3	Long term exposure systemic effects
		Inhalation	0,87 mg/m3	Long term exposure local effects
Phenol (CAS 108-95-2)	Workers	Inhalation	343 mg/m3	Acute exposure systemic effect
		Inhalation	3,5 mg/m3	Long term exposure systemic effects
		Inhalation	0,9 mg/m3	Acute exposure local effects
		Inhalation	0,9 mg/m3	Long term exposure local effects

Predicted no effect concentrations (PNECs)

Components	Type	Route	Value	Form
2-piperazin-1-ylethylamine (CAS 140-31-8)	Aqua (freshwater)	Not applicable	0,058 mg/l	
	Aqua (intermittent releases)	Not applicable	0,58 mg/l	
	Aqua (marine water)	Not applicable	0,0058 mg/l	
	Sediment (freshwater)	Not applicable	215 mg/kg	
	Sediment (marine water)	Not applicable	21,5 mg/kg	
	Sewage Treatment Plant	Not applicable	250 mg/l	
Diethylenetriamine (CAS 111-40-0)	Soil	Not applicable	42,9 mg/kg	
	Aqua (freshwater)	Not applicable	0,56 mg/l	
	Aqua (intermittent releases)	Not applicable	0,32 mg/l	
	Aqua (marine water)	Not applicable	0,056 mg/l	
	Sediment (freshwater)	Not applicable	1072 mg/kg	
	Sediment (marine water)	Not applicable	107,2 mg/kg	
Sewage Treatment Plant	Not applicable	6 mg/l		

Components	Type	Route	Value	Form
Phenol (CAS 108-95-2)	Soil	Not applicable	214 mg/kg	
	Aqua (freshwater)	Not applicable	0,1 mg/l	
	Aqua (intermittent releases)	Not applicable	0,076 mg/l	
	Aqua (marine water)	Not applicable	0,01 mg/l	
	Sediment (freshwater)	Not applicable	0,154 mg/kg	
	Sewage Treatment Plant	Not applicable	1,14 mg/l	
	Soil	Not applicable	0,073 mg/kg	

8.2. Exposure controls

Appropriate engineering controls Provide adequate ventilation. Observe occupational exposure limits and minimise the risk of exposure. An eye wash and safety shower must be available in the immediate work area.

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 safety glasses with side shields (or goggles) and a face shield.
Skin protection	
- Hand protection	Wear suitable gloves. Butyl rubber gloves are recommended. Be aware that the liquid may penetrate the gloves. Frequent change is advisable.
- Other	Wear appropriate clothing to prevent possibility of skin contact.
Respiratory protection	In case of inadequate ventilation or risk of inhalation of vapours, use suitable 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.

Environmental exposure controls Environmental manager must be informed of all major releases.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Viscous, caramel - colored liquid with ammonia odor.
Physical state	Liquid.
Form	Viscous liquid.
Colour	Caramel. Odour Ammonia-like.
Odour threshold	5 ppm (Ammonia)
pH	Not applicable.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	Not available.
Flash point	92,2 °C (198 °F) Closed cup
Evaporation rate	Not applicable.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Vapour pressure	Not applicable.
Vapour density	Not applicable.
Relative density	Not available.
Solubility(ies)	Slight.
Partition coefficient (n-octanol/water)	No data available.
Decomposition temperature	Not available.

Viscosity	Not applicable.
Explosive properties	Not available.
Oxidizing properties	Not available.
9.2. Other information	No relevant additional information available.

SECTION 10: Stability and reactivity

10.1. Reactivity	The product is non-reactive under normal conditions of use, storage and transport.
10.2. Chemical stability	Material is stable under normal conditions.
10.3. Possibility of hazardous reactions	Hazardous polymerisation does not occur.
10.4. Conditions to avoid	Flames and sparks. Avoid static discharge and uncontrolled exposure to high temperatures. Contact with incompatible materials.
10.5. Incompatible materials	Strong oxidizers, strong acids, and strong bases. Strong reducing agents.
10.6. Hazardous decomposition products	Carbon oxides. Nitrogen oxides (NOx).

SECTION 11: Toxicological information

General information Occupational exposure to the substance or mixture may cause adverse effects.

Information on likely routes of exposure

Ingestion	Harmful if swallowed. May cause digestive tract burns.
Inhalation	May cause severe respiratory tract irritation. May cause burns in mucous membranes, throat, oesophagus and stomach. When cured: Elevated temperatures or mechanical action may form dust and fumes which may be irritating to the respiratory tract.
Skin contact	May be harmful in contact with skin. May cause skin burns. Components of the product may be absorbed into the body through the skin.
Eye contact	May cause eye burns. Risk of serious damage to eyes.

Symptoms Corrosive. Prolonged contact causes serious eye and tissue damage. Symptoms include itching, burning, redness and tearing. Prolonged or repeated inhalation/ingestion may cause central nervous system, blood, lung, liver or kidney damage.

11.1. Information on toxicological effects

Acute toxicity May cause eye, skin and respiratory tract irritation. May cause severe respiratory tract irritation. Harmful by inhalation, in contact with skin and if swallowed. Contains material which may cause lung, liver, kidney, heart, blood and central nervous system damage.

Components	Species	Test results
Phenol (CAS 108-95-2)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	850 mg/kg
<i>Oral</i>		
LD50	Rat	530 mg/kg

Skin corrosion/irritation	May cause skin burns.
Serious eye damage/irritation	May cause eye burns. Risk of serious damage to eyes.
Respiratory sensitisation	Not available.
Skin sensitisation	May cause allergic skin reaction.
Germ cell mutagenicity	Suspected of causing genetic defects.
Carcinogenicity	Not classified.

IARC Monographs. Overall Evaluation of Carcinogenicity

Phenol (CAS 108-95-2) 3 Not classifiable as to carcinogenicity to humans.

Reproductive toxicity	No data available.
Specific target organ toxicity - single exposure	Not available.
Specific target organ toxicity - repeated exposure	Not available.
Aspiration hazard	Not available.
Mixture versus substance information	Not available.
Other information	No other specific acute or chronic health impact noted.

SECTION 12: Ecological information

12.1. Toxicity The product contains a substance which is harmful to aquatic organisms and which may cause long-term adverse effects in the aquatic environment. The product contains a substance which is toxic to aquatic organisms and which may cause long-term adverse effects in the aquatic environment.

Components	Species	Test results
2-piperazin-1-ylethylamine (CAS 140-31-8)		
Aquatic		
Fish	LC50	Fathead minnow (<i>Pimephales promelas</i>) 1950 - 2460 mg/l, 96 hours
12.2. Persistence and degradability	No data available.	
12.3. Bioaccumulative potential	No data available.	
Partition coefficient n-octanol/water (log Kow)	No data available.	
Phenol	1,46	
Bioconcentration factor (BCF)	Not available.	
12.4. Mobility in soil	No data available.	
Mobility in general	The product is slightly soluble in water. The product contains volatile organic compounds (VOC) which will evaporate easily from all surfaces.	
12.5. Results of PBT and vPvB assessment	Not a PBT or vPvB substance or mixture.	
12.6. Other adverse effects	The product contains volatile organic compounds which have a photochemical ozone creation potential. 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

Residual waste	Dispose of in accordance with local regulations.
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied.
EU waste code	08 04 09*
Disposal methods/information	Disposal recommendations are based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal.

SECTION 14: Transport information

ADR

The product is not covered by international regulation on the transport of dangerous goods.

RID

The product is not covered by international regulation on the transport of dangerous goods.

ADN

The product is not covered by international regulation on the transport of dangerous goods.

IATA

The product is not covered by international regulation on the transport of dangerous goods.

IMDG

The product is not covered by international regulation on the transport of dangerous goods.

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

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. 143/2011 Annex XIV Substances Subject to Authorisation
Not listed.

Restrictions on use

Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended
Not listed.

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)
Diethylenetriamine (CAS 111-40-0)
Phenol (CAS 108-95-2)

Directive 94/33/EC on the protection of young people at work
2-piperazin-1-ylethylamine (CAS 140-31-8)
Diethylenetriamine (CAS 111-40-0)
Phenol (CAS 108-95-2)

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 as amended.

National regulations

Young people under 18 years old are not allowed to work with this product according to 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.

References

Not available.

Information on evaluation method leading to the classification of mixture

The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available.

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

R20/21/22 Harmful by inhalation, in contact with skin and if swallowed.
R21/22 Harmful in contact with skin and if swallowed.
R22 Harmful if swallowed.
R23/24/25 Toxic by inhalation, in contact with skin and if swallowed.
R34 Causes burns.
R43 May cause sensitisation by skin contact.
R48/20/21/22 Harmful: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed.
R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R68 Possible risk of irreversible effects.
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.
H331 - Toxic if inhaled.
H341 - Suspected of causing genetic defects.
H373 - May cause damage to organs through prolonged or repeated exposure.
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.