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C-SYSTEMS ET 40 component B

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

1.1 Product identifier

Trade name : C-SYSTEMS ET 40 component B

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

Use of the : Adhesive

Substance/Mixture

1.3 Details of the supplier of the safety data sheet

Company Cecchi Gustavo & C. srl - Via M. Coppino 253,

55049 Viareggio (LU) ITALY www.cecchi.it - info@cecchi.it

Information in case of emergency: +39 0584 383694 - info@cecchi.it

From monday to friday office hours 8:30 – 12:30, 14:00 – 18:30

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Acute toxicity, Category 4 H302: Harmful if swallowed.

Skin corrosion, Category 1B H314: Causes severe skin burns and eye damage.

Serious eye damage, Category 1 H318: Causes serious eye damage.

Skin sensitisation, Category 1 H317: May cause an allergic skin reaction.

Chronic aquatic toxicity, Category 3 H412: Harmful to aquatic life with long lasting

effects.

2.2 Label elements

Signal word

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :

Hazard statements : H302 Harmful if swallowed

Danger

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	H314 H317 H412	Causes severe skin burns and eye damage. May cause an allergic skin reaction. Harmful to aquatic life with long lasting effects.
Precautionary statements :	Prevention:	
	P261	Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
	P273	Avoid release to the environment.
	P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
	Response:	
		353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
	P304 + P340 + P3	310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.
	P305 + P351 + P3	with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.

Hazardous components which must be listed on the label:

2-Propenenitrile, polymer with 1,3-butadiene, 1-cyano-1-methyl-4-oxo-4-[[2-(1-piperazinyl)ethyl]amino]butyl-terminated

3,6-dioxaoctamethylenediamine

2,4,6-tris(dimethylaminomethyl)phenol

2-piperazin-1-ylethylamine

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Chemical nature : Aliphatic Amine

Hazardous components

Chemical name	CAS-No. EC-No. Registration number	Classification (REGULATION (EC) No	Concentration (%)
		1272/2008)	
2-Propenenitrile, polymer with 1,3-	68683-29-4	Skin Irrit.2; H315	>= 30 - < 50

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butadiene, 1-cyano-1-methyl-4-oxo- 4-[[2-(1- piperazinyl)ethyl]amino]butyl- terminated		Eye Irrit.2; H319 Skin Sens.1; H317	
3,6-dioxaoctamethylenediamine	929-59-9 213-203-6	Acute Tox.4; H302 Skin Corr.1B; H314 Skin Sens.1; H317	>= 20 - < 25
Trimethylolpropane poly(oxypropylene)triamine	39423-51-3	Acute Tox.4; H302 Acute Tox.4; H312 Eye Dam.1; H318 Aquatic Chronic2; H411	>= 12,5 - < 20
Poly[oxy(methyl-1,2-ethanediyl)], .alpha(2-aminomethylethyl)omega(2-aminomethylethoxy)-	9046-10-0	Skin Corr.1C; H314 Eye Dam.1; H318 Aquatic Chronic3; H412	>= 7 - < 10
2,4,6- tris(dimethylaminomethyl)phenol	90-72-2 202-013-9 01-2119560597-27	1C; H314 1; H318 Skin Sens.1B; H317	>= 5 - < 7
2-piperazin-1-ylethylamine	140-31-8 205-411-0 01-2119471486-30	Acute Tox.4; H302 Skin Corr.1B; H314 Skin Sens.1; H317 Aquatic Chronic3; H412 Acute Tox.3; H311 1; H318	>= 1 - < 2,5

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice : Show this safety data sheet to the doctor in attendance.

Keep warm and in a quiet place.

Take off all contaminated clothing immediately.

If inhaled : Move to fresh air.

Keep patient warm and at rest.

If unconscious, place in recovery position and seek medical

advice.

If symptoms persist, call a physician.

If breathing is irregular or stopped, administer artificial

respiration.

In case of skin contact : Wash off immediately with soap and plenty of water.

Do NOT use solvents or thinners. If on clothes, remove clothes.

Burns must be treated by a physician.

In case of eye contact : Rinse immediately with plenty of water, also under the eyelids,

for at least 15 minutes.

If eye irritation persists, consult a specialist. If easy to do, remove contact lens, if worn.

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If swallowed : Do NOT induce vomiting.

If a person vomits when lying on his back, place him in the

recovery position.

Call a physician immediately.

Give small amounts of water to drink.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms : Burn

superficial burning sensation

Redness Severe irritation

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : The first aid procedure should be established in consultation

with the doctor responsible for industrial medicine.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Carbon dioxide (CO2)

Foam Dry powder Water mist

Unsuitable extinguishing

media

: None known.

5.2 Special hazards arising from the substance or mixture

Specific hazards during

firefighting

: The pressure in sealed containers can increase under the

influence of heat.

Cool closed containers exposed to fire with water spray. Hazardous decomposition products formed under fire

conditions.

5.3 Advice for firefighters

Special protective equipment

for firefighters

: In the event of fire, wear self-contained breathing apparatus.

Use personal protective equipment.

Further information : In the event of fire and/or explosion do not breathefumes.

Use extinguishing measures that are appropriate to local circumstances and the surroundingenvironment.

Immediately evacuate personnel to safe areas.

Prevent fire extinguishing water from contaminating surface

water or the ground water system.

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SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Refer to protective measures listed in sections 7 and 8.

Evacuate personnel to safe areas. Use personal protective equipment. Ensure adequate ventilation.

Inform the responsible authorities in case of gas leakage, or of

entry into waterways, soil or drains.

6.2 Environmental precautions

Environmental precautions : Do not allow uncontrolled discharge of product into the

environment.

Try to prevent the material from entering drains or water

courses.

Local authorities should be advised if significant spillages

cannot be contained.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel,

acid binder, universal binder, sawdust).

Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to

local / national regulations (see section 13).

Pick up and transfer to properly labelled containers.

6.4 Reference to other sections

For personal protection see section 8.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling : Provide sufficient air exchange and/or exhaust in work rooms.

Do not breathe vapours or spray mist.

Avoid inhalation, ingestion and contact with skin and eyes.

Wear personal protective equipment.

Persons with a history of skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is

being used.

Advice on protection against

fire and explosion

: Keep away from open flames, hot surfaces and sources of

ignition.

Hygiene measures : Provide adequate ventilation. Wash hands and face before

breaks and immediately after handling the product.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage : Keep containers tightly closed in a dry, cool and well-

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areas and containers ventilated place. Keep in properly labelled containers. To

maintain product quality, do not store in heat or direct sunlight.

Further information on storage conditions

: Protect from moisture.

Advice on common storage : Keep away from isocyanates.

Do not store near acids.

Keep away from oxidizing agents.

Other data : Stable at normal ambient temperature and pressure.

7.3 Specific end use(s)

Specific use(s) : Consult the technical guidelines for the use of this

substance/mixture.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis		
Silica, amorphous, fumed, crystfree	112945-52- 5	TWA (inhalable dust)	6 mg/m3 (Silica)	GB EH40		
Further information	For the purposes of these limits, respirable dust and inhalable dust are those fractions of airborne dust which will be collected when sampling is undertaken in accordance with the methods described in MDHS14/3 General methods for sampling and gravimetric analysis of respirable and inhalable dust, The COSHH definition of a substance hazardous to health includes dust of any kind when present at a concentration in air equal to or greater than 10 mg.m-3 8-hour TWA of inhalable dust or 4 mg.m-3 8-hour TWA of respirable dust. This means that any dust will be subject to COSHH if people are exposed above these levels. Some dusts have been assigned specific WELs and exposure to these must comply with the appropriate limit., Most industrial dusts contain particles of a wide range of sizes. The behaviour, deposition and fate of any particular particle after entry into the human respiratory system and the body response that it elicits, depend on the nature and size of the particle. HSE distinguishes two size fractions for limit-setting purposes termed 'inhalable' and 'respirable'., Inhalable dust approximates to the fraction of airborne material that enters the nose and mouth during breathing and is therefore available for deposition in the respiratory tract. Respirable dust approximates to the fraction that penetrates to the gas exchange region of the lung. Fuller definitions and explanatory material are given in MDHS14/3., Where dusts contain components that have their own assigned WEL, all the relevant limits should be complied with., Where no specific short-term exposure limit is listed, a figure three times the long-term exposure should be used					
		TWA (Respirable dust)	2,4 mg/m3 (Silica)	GB EH40		
Further information	For the purposes of these limits, respirable dust and inhalable dust are those fractions of airborne dust which will be collected when sampling is undertaken					

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in accordance with the methods described in MDHS14/3 General methods for sampling and gravimetric analysis of respirable and inhalable dust. The COSHH definition of a substance hazardous to health includes dust of any kind when present at a concentration in air equal to or greater than 10 mg.m-3 8-hour TWA of inhalable dust or 4 mg.m-3 8-hour TWA of respirable dust. This means that any dust will be subject to COSHH if people are exposed above these levels. Some dusts have been assigned specific WELs and exposure to these must comply with the appropriate limit. Most industrial dusts contain particles of a wide range of sizes. The behaviour, deposition and fate of any particular particle after entry into the human respiratory system and the body response that it elicits, depend on the nature and size of the particle. HSE distinguishes two size fractions for limit-setting purposes termed 'inhalable' and 'respirable'., Inhalable dust approximates to the fraction of airborne material that enters the nose and mouth during breathing and is therefore available for deposition in the respiratory tract. Respirable dust approximates to the fraction that penetrates to the gas exchange region of the lung. Fuller definitions and explanatory material are given in MDHS14/3. Where dusts contain components that have their own assigned WEL, all the relevant limits should be complied with., Where no specific short-term exposure limit is listed, a figure three times the long-term exposure should be used

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Trimethylolpropane poly(oxypropylene)triamine

: End Use: Workers

Exposure routes: Skin contact

Potential health effects: Long-term systemic effects

Value: 1,6 mg/kg End Use: Workers

Exposure routes: Inhalation

Potential health effects: Long-term systemic effects

Value: 14 mg/m3 End Use: Consumers Exposure routes: Inhalation

Potential health effects: Long-term systemic effects

Value: 3,48 mg/m3 End Use: Consumers

Exposure routes: Skin contact

Potential health effects: Long-term systemic effects

Value: 0,8 mg/kg : End Use: Workers

Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-(2-aminomethylethyl)-.omega.-(2-

aminomethylethoxy)-

Exposure routes: Skin contact

Potential health effects: Long-term systemic effects

Value: 2,5 mg/kg End Use: Workers

Exposure routes: Skin contact

Potential health effects: Long-term local effects

Value: 0,623 mg/cm2 End Use: Consumers

Exposure routes: Skin contact

Potential health effects: Long-term systemic effects

Value: 1,25 mg/kg End Use: Consumers

Exposure routes: Skin contact

Potential health effects: Long-term local effects

Value: 0,311 mg/cm2 End Use: Consumers

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Exposure routes: Ingestion

Potential health effects: Long-term systemic effects

Value: 0,04 mg/kg

Silica, amorphous, fumed,

cryst.-free

: End Use: Workers

Exposure routes: Inhalation

Potential health effects: Long-term local effects

Value: 4 mg/m3

2-piperazin-1-ylethylamine

: End Use: Workers Exposure routes: Skin contact

Potential health effects: Short-term exposure, Systemic effects

Value: 20 mg/kg End Use: Workers

Exposure routes: Skin contact

Potential health effects: Short-term exposure, Local effects

Value: 0,04 mg/cm2 End Use: Workers

Exposure routes: Skin contact

Potential health effects: Long-term systemic effects

Value: 3,3 mg/kg End Use: Workers

Exposure routes: Inhalation

Potential health effects: Long-term systemic effects

Value: 3,6 mg/m3 End Use: Workers

Exposure routes: Skin contact

Potential health effects: Long-term local effects

Value: 0,006 mg/cm2 End Use: Consumers

Exposure routes: Skin contact

Potential health effects: Short-term exposure, Systemic effects

Value: 10 mg/kg End Use: Consumers Exposure routes: Inhalation

Potential health effects: Short-term exposure, Systemic effects

Value: 5,3 mg/m3 End Use: Consumers Exposure routes: Ingestion

Potential health effects: Short-term exposure, Systemic effects

Value: 1,5 mg/kg End Use: Workers

Exposure routes: Inhalation

Potential health effects: Short-term exposure, Systemic effects

Value: 21,4 mg/m3 End Use: Consumers

Exposure routes: Skin contact

Potential health effects: Short-term exposure, Local effects

Value: 0,02 mg/cm2 End Use: Consumers

Exposure routes: Skin contact

Potential health effects: Long-term systemic effects

Value: 1,7 mg/kg End Use: Consumers Exposure routes: Inhalation

Potential health effects: Long-term systemic effects

Value: 0,9 mg/m3 End Use: Consumers

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Exposure routes: Ingestion

Potential health effects: Long-term systemic effects

Value: 0,3 mg/kg End Use: Consumers

Exposure routes: Skin contact

Potential health effects: Long-term local effects

Value: 0,003 mg/cm2

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Trimethylolpropane : Fresh water

poly(oxypropylene)triamine Value: 0,0044 mg/l

Marine water

Value: 0,00044 mg/l Intermittent releases Value: 0,044 mg/l Fresh water sediment Value: 0,02 mg/kg Marine sediment Value: 0,002 mg/kg

Soil

Value: 0,002 mg/kg Sewage treatment plant

Value: 10 mg/l : Fresh water Value: 0,015 mg/l

Poly[oxy(methyl-1,2ethanediyl)], .alpha.-(2aminomethylethyl)-.omega.-(2aminomethylethoxy)-

Marine water

Value: 0,0143 mg/l Fresh water sediment Value: 0,132 mg/kg Marine sediment Value: 0,125 mg/kg

Soil

Value: 0,0176 mg/kg Intermittent releases Value: 0,15 mg/l Sewage treatment plant

Value: 7,5 mg/l

2-piperazin-1-ylethylamine : Fresh water

Value: 0,058 mg/l Marine water Value: 0,0058 mg/l Intermittent releases Value: 0,58 mg/l Fresh water sediment Value: 215 mg/kg Marine sediment Value: 21,5 mg/kg

Soil

Value: 42,9 mg/kg Sewage treatment plant

Value: 250 mg/l

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8.2 Exposure controls

Engineering measures

Effective exhaust ventilation system effective ventilation in all processing areas

Personal protective equipment

Eye protection : Safety glasses with side-shields conforming to EN166

Do not wear contact lenses.

Ensure that eyewash stations and safety showers are close to

the workstation location.

Hand protection

Material : Chemical resistant gloves made of butyl rubber or nitrile

rubber category III according to EN374.

Skin and body protection : Protective suit

Respiratory protection : Use respirator when performing operations involving potential

exposure to vapour of the product.

The filter class for the respirator must be suitable for the

maximum expected contaminant concentration

(gas/vapour/aerosol/particulates) that may arise when handling the product. If this concentration is exceeded, self-

contained breathing apparatus must be used. Respirator with a vapour filter (EN 141)

Protective measures : Avoid contact with skin.

Wear suitable protective equipment.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance : liquid

Colour : orange

Odour : ammoniacal

Odour Threshold : not determined

pH : not determined

Melting point/freezing point : Not applicable

Boiling point/boiling range : > 100 °C

Flash point : 150 °C

Evaporation rate : not determined

Upper explosion limit : Not applicable

Lower explosion limit : Not applicable

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Vapour pressure : Not applicable

Relative vapour density : not determined

Density : 1 g/cm3 (25 °C)

Bulk density : not determined

Solubility(ies)

Solubility in other solvents : not determined

Partition coefficient: n-

octanol/water

: No data available

Auto-ignition temperature : Not applicable

Thermal decomposition : Method: No data available

Viscosity

Viscosity, dynamic : 85.000 - 130.000 mPa.s (25°C)

Viscosity, kinematic : not determined

Explosive properties : Not applicable

Oxidizing properties : Not applicable

9.2 Other information

Surface tension : not determined

Sublimation point : Not applicable

SECTION 10: Stability and reactivity

10.1 Reactivity

Stable under recommended storage conditions.

10.2 Chemical stability

No decomposition if stored and applied as directed.

10.3 Possibility of hazardous reactions

Hazardous reactions : Reacts with the following substances:

Acids

Strong oxidizing agents

10.4 Conditions to avoid

Conditions to avoid : No decomposition if used as directed.

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10.5 Incompatible materials

Materials to avoid : Strong acids

Strong oxidizing agents

10.6 Hazardous decomposition products

Hazardous decomposition

: This product may release the following:

products

Nitrogen oxides (NOx) Carbon monoxide Carbon dioxide (CO2)

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product:

Acute oral toxicity : Acute toxicity estimate : 1.198 mg/kg

Method: Calculation method

Acute dermal toxicity : Acute toxicity estimate : > 2.000 mg/kg

Method: Calculation method

Components:

Trimethylolpropane poly(oxypropylene)triamine:

Acute oral toxicity : LD50 (Rat, female): 550 mg/kg

Method: OECD Test Guideline 425

GLP: yes

Acute dermal toxicity : LD50 (Rat, male and female): > 1.000 mg/kg

Method: OECD Test Guideline 402

GLP: yes

Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-(2-aminomethylethyl)-.omega.-(2-

aminomethylethoxy)-

Acute oral toxicity : LD50 (Rat, male and female): 2.885,3 mg/kg

Method: OECD Test Guideline 401

GLP: yes

Acute dermal toxicity : LD50 (Rabbit, male and female): 2.979,7 mg/kg

Method: OECD Test Guideline 402

GLP: yes

2-piperazin-1-ylethylamine:

Acute oral toxicity : LD50 (Rat, male): 2.097 mg/kg

Acute dermal toxicity : LD50 (Rabbit, male): 866 mg/kg

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Skin corrosion/irritation

Product:

Remarks: Acute dermal irritation/corrosion

Components:

Trimethylolpropane poly(oxypropylene)triamine:

Species: Rabbit

Method: OECD Test Guideline 404

Result: Mild skin irritation

GLP: yes

Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-(2-aminomethylethyl)-.omega.-(2-aminomethylethoxy)-:

Species: Rabbit

Method: OECD Test Guideline 404

Result: Corrosive

2-piperazin-1-ylethylamine:

Species: Rabbit Result: Corrosive

Serious eye damage/eye irritation

Product:

Remarks: Severe eye irritation

Components:

Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-(2-aminomethylethyl)-.omega.-(2-aminomethylethoxy)-

Method: OECD Test Guideline 405 Result: Risk of serious damage to eyes.

2-piperazin-1-ylethylamine:

Species: Rabbit

Result: Risk of serious damage to eyes.

Respiratory or skin sensitisation

Product:

Remarks: No data available

Components:

Trimethylolpropane poly(oxypropylene)triamine:

Test Type: Buehler Test Exposure routes: Dermal Species: Guinea pig

Method: OECD Test Guideline 406 Result: Does not cause skin sensitisation.

GLP: yes

2-piperazin-1-ylethylamine:

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Test Type: Maximisation Test Exposure routes: Dermal Species: Guinea pig

Method: OECD Test Guideline 406

Result: May cause sensitisation by skin contact.

Germ cell mutagenicity

Carcinogenicity

Reproductive toxicity

STOT - single exposure

STOT - repeated exposure

Repeated dose toxicity

Product:

Remarks: No data available

Aspiration toxicity

Further information

Product:

Remarks: No data available

SECTION 12: Ecological information

12.1 Toxicity

Product:

Toxicity to fish : Remarks: No data available

Toxicity to daphnia and other

aquatic invertebrates

: Remarks: No data available

Components:

Trimethylolpropane poly(oxypropylene)triamine:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l

Exposure time: 96 h Test Type: static test

Method: OECD Test Guideline 203

GLP: yes

Toxicity to daphnia and other

aquatic invertebrates

: EC50 (Daphnia magna (Water flea)): 13 mg/l

Exposure time: 48 h Test Type: static test

Method: OECD Test Guideline 202

GLP: yes

Toxicity to algae : ErC50 (Pseudokirchneriella subcapitata (green algae)): 4,4

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mg/l

Exposure time: 72 h
Test Type: static test

Method: OECD Test Guideline 201

GLP: yes

NOEC (Pseudokirchneriella subcapitata (green algae)): 1 mg/l

Exposure time: 72 h Test Type: static test

Method: OECD Test Guideline 201

GLP: yes

Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-(2-aminomethylethyl)-.omega.-(2-aminomethylethoxy)-:

Toxicity to fish

: LC50 (Oncorhynchus mykiss (rainbow trout)): > 15 mg/l

Exposure time: 96 h
Test Type: semi-static test
Method: OECD Test Guideline 203

GLP: yes

Toxicity to daphnia and other

aquatic invertebrates

: EC50 (Daphnia magna (Water flea)): 80 mg/l

Exposure time: 48 h Test Type: static test

Method: OECD Test Guideline 202

GLP: yes

Toxicity to algae : NOEC (Pseudokirchneriella subcapitata (green algae)): 0,32

mg/l

Exposure time: 72 h Test Type: static test

Method: OECD Test Guideline 201

GLP: yes

2-piperazin-1-ylethylamine:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 2.190 mg/l

Exposure time: 96 h Test Type: static test

Toxicity to daphnia and other

aquatic invertebrates

: EC50 (Daphnia magna (Water flea)): 58 mg/l

Exposure time: 48 h

Method: OECD Test Guideline 202

GLP: yes

Toxicity to algae : ErC50 (Selenastrum capricornutum (green algae)): >1.000

mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201

GLP: yes

12.2 Persistence and degradability

Product:

Biodegradability : Remarks: No data available

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Components:

Trimethylolpropane poly(oxypropylene)triamine:

Biodegradability : Test Type: aerobic

Result: Not readily biodegradable. Method: OECD Test Guideline 301F

GLP: yes

Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-(2-aminomethylethyl)-.omega.-(2-

aminomethylethoxy)-

Biodegradability : Test Type: aerobic

Result: Not readily biodegradable. Method: OECD Test Guideline 301B

GLP: yes

2-piperazin-1-ylethylamine:

Biodegradability : Result: Not readily biodegradable.

Method: OECD Test Guideline 301F

GLP: yes

12.3 Bioaccumulative potential_

Product:

Bioaccumulation : Remarks: No data available

Components:

Trimethylolpropane poly(oxypropylene)triamine:

Partition coefficient: n- : log Pow: -1,13 (20 °C)

octanol/water pH: 12,7

GLP: yes

Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-(2-aminomethylethyl)-.omega.-(2-

aminomethylethoxy)-

Partition coefficient:n- : log Pow: 1,34 (25 °C)

octanol/water Method: OECD Test Guideline 117

GLP: yes

2-piperazin-1-ylethylamine:

Partition coefficient: n-

octanol/water

: log Pow: -1,48 (20 °C)

12.4 Mobility insoil

Components:

2-piperazin-1-ylethylamine:

12.5 Results of PBT and vPvB assessment

Product:

Assessment : This substance/mixture contains no components considered

to be either persistent, bioaccumulative and toxic (PBT), or

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very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher..

12.6 Other adverseeffects

Product:

Additional ecological

information

: Remarks: An environmental hazard cannot be excluded in the

event of unprofessional handling or disposal.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : In accordance with local and national regulations.

Container hazardous when empty.

Do not dispose of with domestic refuse.

Do not mix waste streams during collection.

Contaminated packaging : Empty containers should be taken to an approved waste

handling site for recycling or disposal.

SECTION 14: Transport information

14.1 UN number

ADR/RID/ADN : UN2735 IMDG : UN2735 IATA : UN2735

14.2 UN proper shipping name

ADR/RID/ADN : AMINES, LIQUID, CORROSIVE, N.O.S.

(Trimethylolpropane poly(oxypropylene)triamine,

Polyoxypropylene Diamine)

IMDG : AMINES, LIQUID, CORROSIVE, N.O.S.

(Trimethylolpropane poly(oxypropylene)triamine,

Polyoxypropylene Diamine)

IATA : Amines, liquid, corrosive, n.o.s.

(Trimethylolpropane poly(oxypropylene)triamine,

Polyoxypropylene Diamine)

14.3 Transport hazard class(es)

ADR/RID/ADN : 8
IMDG : 8
IATA : 8

14.4 Packing group

ADR/RID/ADN

Packing group : III

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Classification Code : C7 Hazard Identification Number : 80 Labels : 8

IMDG

Packing group : III
Labels : 8
EmS Code : F-A, S-B

Remarks : IMDG Code segregation group 18 - Alkalis

: 856

IATA

Packing instruction (cargo

aircraft)

Packing instruction : 852

(passenger aircraft)

Packing group : III Labels : 8

14.5 Environmental hazards

ADR/RID/ADN

Environmentally hazardous : no

IMDG

Marine pollutant : no

14.6 Special precautions for user

Not applicable

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

Not applicable for product as supplied.

SECTION 15: Regulatory information

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

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances,

preparations and articles (Annex XVII)

REACH - Candidate List of Substances of Very High

Concern for Authorisation (Article 59).

: This product does not contain substances of very high concern

(Regulation (EC) No

1907/2006 (REACH), Article 57).

REACH - List of substances subject to authorisation

(Annex XIV)

: Not applicable

: Not applicable

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

Not applicable

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15.2 Chemical safety assessment

Not applicable

SECTION 16: Other information

Full text of H-Statements

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.

H411 : Toxic to aquatic life with long lasting effects.
H412 : Harmful to aquatic life with long lasting effects.

Full text of other abbreviations

Acute Tox. : Acute toxicity

Aquatic Chronic : Chronic aquatic toxicity
Eye Dam. : Serious eye damage

Eye Irrit. : Eye irritation
Skin Corr. : Skin corrosion
Skin Irrit. : Skin irritation
Skin Sens. : Skin sensitisation

Further information

Training advice : Provide adequate information, instruction and training for

operators.

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