

## C-SYSTEMS 10 10 UV PROTECTION component B

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

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

Trade name: **C-SYSTEMS 10 10 UV PROTECTION component B**

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

Use of the Substance/Mixture: Epoxy Hardener

#### 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

Hazard pictograms :



Signal word : Danger

Hazard statements :

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

H317 May cause an allergic skin reaction.

H412 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:**

P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing.

Rinse skin with water/ shower.

P304+P340+P310: IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Immediately call a POISON CENTER or doctor/ physician.

P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously 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:

4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane,  
reaction products with 3-aminomethyl-3,5,5

Amines, polyethylenepoly-, triethylenetetramine fraction

3-aminomethyl-3,5,5-trimethylcyclohexylamine

m-phenylenebis(methylamine)

2-piperazin-1-ylethylamine

2,4,6-tris(dimethylaminomethyl)phenol

#### 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 : Cycloaliphatic amine based mixture

**Hazardous components**

Chemical Name	CAS-No. EC-No. Registration number	Classification (REGULATION (EC) No 1272/2008)	Concentration (%)
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1- chloro-2,3-epoxypropane, reaction products with 3-aminomethyl-3,5,5	38294-64-3	Acute Tox.4; H302 Acute Tox.4; H312 Skin Corr.1B; H314 Skin Sens.1; H317 Aquatic Chronic3; H412	>= 30 - < 50
benzyl alcohol	100-51-6 202-859-9 01-2119492630-38	Acute Tox. 4; H332 Acute Tox. 4; H302 Eye Irrit.2; H319	>= 25 - < 30
Amines, polyethylenepoly-, triethylenetetramine fraction	90640-67-8 292-588-2 01-2119487919-13	Acute Tox.4; H302 Acute Tox.4; H312 Skin Corr.1B; H314 Skin Sens.1B; H317 Aquatic Chronic3; H412	>= 5 - < 7
3-aminomethyl-3,5,5- trimethylcyclohexylamine	2855-13-2 220-666-8 01-2119514687-32	Acute Tox. 4; H312 Acute Tox. 4; H302 Skin Corr. 1B; H314 Skin Sens. 1; H317 Aquatic Chronic 3; H412	>= 3 - < 5
m-phenylenebis(methylamine)	1477-55-0 216-032-5 01-2119480150-50	Acute Tox.4; H302 Acute Tox.4; H332 Skin Corr.1B; H314 Skin Sens.1B; H317 Aquatic Chronic3; H412	>= 2,5 - < 3
salicylic acid	69-72-7 200-712-3 01-2119472428-31	Acute Tox.4; H302 Eye Dam.1; H318	>= 1 - < 3
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
2,4,6- tris(dimethylaminomethyl)phenol	90-72-2 202-013-9 01-2119560597-27	1C; H314 1; H318 Skin Sens.1B; H317	>= 1 - < 3
Toluene-4-sulphonic acid, monohydrate	6192-52-5	Skin Irrit.2; H315 Eye Irrit.2; H319	>= 1 - < 5

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		STOT SE3; H335	
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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.

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 (CO<sub>2</sub>)

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:

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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 breathe fumes.

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

Immediately evacuate personnel to safe areas.

Prevent fire extinguishing water from contaminating surface water or the ground water system.

### 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 areas and containers:

Keep containers tightly closed in a dry, cool and wellventilated 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

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### 8.1 Control parameters

Contains no substances with occupational exposure limit values.

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

benzyl alcohol : End Use: Workers

Exposure routes: Inhalation

Potential health effects: Short-term exposure, Systemic effects

Value: 450 mg/m<sup>3</sup>

End Use: Workers

Exposure routes: Inhalation

Potential health effects: Long-term exposure, Systemic effects

Value: 90 mg/m<sup>3</sup>

End Use: Workers

Exposure routes: Skin contact

Potential health effects: Short-term exposure, Systemic effects

Value: 47 mg/kg

End Use: Workers

Exposure routes: Skin contact

Potential health effects: Long-term exposure, Systemic effects

Value: 9,5 mg/kg

End Use: Consumers

Exposure routes: Ingestion

Potential health effects: Short-term exposure, Systemic effects

Value: 25 mg/kg

End Use: Consumers

Exposure routes: Ingestion

Potential health effects: Long-term exposure, Systemic effects

Value: 5 mg/kg

End Use: Consumers

Exposure routes: Inhalation

Potential health effects: Short-term exposure, Systemic effects

Value: 40,55 mg/m<sup>3</sup>

End Use: Consumers

Exposure routes: Inhalation

Potential health effects: Long-term exposure, Systemic effects

Value: 8,11 mg/m<sup>3</sup>

End Use: Consumers

Exposure routes: Skin contact

Potential health effects: Short-term exposure, Systemic effects

Value: 28,5 mg/kg

End Use: Consumers

Exposure routes: Skin contact

Potential health effects: Long-term exposure, Systemic effects

Value: 5,7 mg/kg

Amines, polyethylenepoly-,  
triethylenetetramine fraction

: End Use: Workers

Exposure routes: Skin contact

Potential health effects: Long-term systemic effects

Value: 0,57 mg/kg

End Use: Workers

Exposure routes: Inhalation

Potential health effects: Long-term systemic effects

Value: 1 mg/m<sup>3</sup>

End Use: Consumer use

Exposure routes: Skin contact

Potential health effects: Long-term systemic effects

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Value: 0,25 mg/kg  
End Use: Consumers  
Exposure routes: Inhalation  
Potential health effects: Long-term systemic effects  
Value: 0,29 mg/m<sup>3</sup>  
End Use: Workers  
Exposure routes: Inhalation  
Potential health effects: Short-term exposure  
Value: 5380 mg/m<sup>3</sup>  
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/cm<sup>2</sup>  
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/m<sup>3</sup>  
End Use: Workers  
Exposure routes: Skin contact  
Potential health effects: Long-term local effects  
Value: 0,006 mg/cm<sup>2</sup>  
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/m<sup>3</sup>  
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/m<sup>3</sup>  
End Use: Consumers  
Exposure routes: Skin contact  
Potential health effects: Short-term exposure, Local effects  
Value: 0,02 mg/cm<sup>2</sup>  
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/m<sup>3</sup>

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End Use: Consumers  
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/cm<sup>2</sup>

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

benzyl alcohol : Fresh water

Value: 1 mg/l

Marine water

Value: 0,1 mg/l

Fresh water sediment

Value: 5,27 mg/kg

Marine sediment

Value: 0,527 mg/kg

Soil

Value: 0,456 mg/kg

Sewage treatment plant

Value: 39 mg/l

Intermittent releases

Value: 2,3 mg/l

Amines, polyethylenepoly-,  
triethylenetetramine fraction

: Sewage treatment plant

Value: 4,25 mg/l

Fresh water

Value: 0,135 mg/l

Fresh water sediment

Value: 2,08 mg/kg

Marine water

Value: 0,0027 mg/l

Marine sediment

Value: 0,123 mg/kg

Soil

Value: 1,67 mg/kg

Intermittent releases

Value: 0,2 mg/l

3-aminomethyl-3,5,5-  
trimethylcyclohexylamine

: Fresh water

Value: 0,06 mg/l

Marine water

Value: 0,006 mg/l

Intermittent releases

Value: 0,23 mg/l

Fresh water sediment

Value: 5,784 mg/kg

Marine sediment

Value: 0,578 mg/kg

Sewage treatment plant

Value: 3,18 mg/l

Soil

Value: 1,121 mg/kg

2-piperazin-1-ylethylamine : Fresh water

Value: 0,058 mg/l

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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

### 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 EN 374.

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, selfcontained 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 :	amber
Odour :	ammoniacal
Odour Threshold :	not determined
pH :	not determined
Melting point/freezing point :	Not applicable
:	> 150 °C
Flash point :	100 °C
Evaporation rate :	not determined
Upper explosion limit :	Not applicable
Lower explosion limit :	Not applicable
Vapour pressure :	Not applicable
Relative vapour density :	not determined
Density :	1,02 g/cm <sup>3</sup>
Bulk density :	not determined
Solubility(ies)	
Solubility in other solvents :	not determined
Partition coefficient: noctanol/ water:	No data available
Auto-ignition temperature :	Not applicable
Thermal decomposition : Method:	No data available
Viscosity	
Viscosity, dynamic :	450 - 650 mPa.s



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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.

### 10.5 Incompatible materials

Materials to avoid : Strong acids

Strong oxidizing agents

### 10.6 Hazardous decomposition products

Hazardous decomposition products: This product may release the following:

Nitrogen oxides (NO<sub>x</sub>)

Carbon monoxide

Carbon dioxide (CO<sub>2</sub>)

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

##### Product:

Acute oral toxicity : Remarks: No data available

Acute toxicity estimate : 595,57 mg/kg

Method: Calculation method

Acute inhalation toxicity : Acute toxicity estimate : > 5 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Method: Calculation method

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

Method: Calculation method

##### Components:

#### benzyl alcohol:

Acute inhalation toxicity : LC50 (Rat, male and female): > 4.178 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Method: OECD Test Guideline 403

GLP: yes

#### Amines, polyethylenepoly-, triethylenetetramine fraction:

Acute oral toxicity : LD50 (Rat, male and female): 1.716 mg/kg

Method: OECD Test Guideline 401

GLP: yes

Acute dermal toxicity : LD50 (Rabbit, male and female): 1.465 mg/kg

Method: OECD Test Guideline 402

GLP: yes

#### 3-aminomethyl-3,5,5-trimethylcyclohexylamine:

Acute oral toxicity : Acute toxicity estimate : 500 mg/kg

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Method: Converted acute toxicity point estimate  
Acute dermal toxicity : Acute toxicity estimate : 1.100 mg/kg

Method: Converted acute toxicity point estimate

### **2-piperazin-1-ylethylamine:**

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

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

### **2,4,6-tris(dimethylaminomethyl)phenol:**

Acute oral toxicity : Acute toxicity estimate : 500 mg/kg

Method: Converted acute toxicity point estimate

### **Skin corrosion/irritation**

#### **Product:**

Remarks: No data available

#### **Components:**

##### **benzyl alcohol:**

Species: Rabbit

Method: OECD Test Guideline 404

Result: No skin irritation

GLP: yes

##### **Amines, polyethylenepoly-, triethylenetetramine fraction:**

Species: Rabbit

Method: OECD Test Guideline 404

Result: Corrosive

GLP: yes

##### **2-piperazin-1-ylethylamine:**

Species: Rabbit

Result: Corrosive

### **Serious eye damage/eye irritation**

#### **Product:**

Remarks: No data available

#### **Components:**

##### **benzyl alcohol:**

Species: Rabbit

Method: OECD Test Guideline 405

Result: Eye irritation

GLP: yes

##### **Amines, polyethylenepoly-, triethylenetetramine fraction:**

Species: Rabbit

Method: OECD Test Guideline 405

Result: Risk of serious damage to eyes.

GLP: yes

##### **2-piperazin-1-ylethylamine:**

Species: Rabbit

Result: Risk of serious damage to eyes.

### **Respiratory or skin sensitisation**

#### **Product:**

Remarks: No data available

Components:

Amines, polyethylenepoly-, triethylenetetramine fraction:

Test Type: Buehler Test

Species: Guinea pig

Method: OECD Test Guideline 406

Result: May cause sensitisation by skin contact.

GLP: yes

##### **2-piperazin-1-ylethylamine:**

Test Type: Maximisation Test

Exposure routes: Dermal

Species: Guinea pig

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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**

#### **Components:**

#### **3-aminomethyl-3,5,5-trimethylcyclohexylamine:**

No aspiration toxicity classification

#### **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:**

#### **benzyl alcohol:**

Toxicity to daphnia and other  
aquatic invertebrates

: EC50 (Daphnia magna (Water flea)): 230 mg/l

Exposure time: 48 h

Method: OECD Test Guideline 202

GLP: yes

Toxicity to algae : ErC50 (Pseudokirchneriella subcapitata (green algae)): 770  
mg/l

Exposure time: 72 h

Test Type: static test

Method: OECD Test Guideline 201

GLP: yes

#### **Amines, polyethylenepoly-, triethylenetetramine fraction:**

Toxicity to daphnia and other  
aquatic invertebrates

: EC50 (Daphnia magna (Water flea)): 31,1 mg/l

Exposure time: 48 h

Test Type: static test

Method: Directive 67/548/EEC, Annex V, C.2.

GLP: yes

Toxicity to algae : ErC50 (Selenastrum capricornutum (green algae)): 20 mg/l

Exposure time: 72 h

Test Type: semi-static test

Method: OECD Test Guideline 201

GLP: yes

#### **3-aminomethyl-3,5,5-trimethylcyclohexylamine:**

Toxicity to fish : LC50 (Leuciscus idus (Golden orfe)): 110 mg/l

Exposure time: 96 h

Test Type: semi-static test

Method: Directive 67/548/EEC, Annex V, C.1.

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GLP: yes

Toxicity to daphnia and other  
aquatic invertebrates

: EC50 (Daphnia magna (Water flea)): 23 mg/l

Exposure time: 48 h

Test Type: static test

Method: OECD Test Guideline 202

GLP: yes

Toxicity to algae : ErC50 (Scenedesmus capricornutum (fresh water algae)): >  
50 mg/l

Exposure time: 72 h

Test Type: static test

Method: Directive 67/548/EEC, Annex V, C.3.

GLP: yes

Toxicity to daphnia and other  
aquatic invertebrates

(Chronic toxicity)

: NOEC: 3 mg/l

Exposure time: 21 d

Species: Daphnia magna (Water flea)

Test Type: semi-static test

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

#### **Components:**

##### **3-aminomethyl-3,5,5-trimethylcyclohexylamine:**

Biodegradability : Test Type: aerobic

Result: Not readily biodegradable.

Method: Directive 67/548/EEC Annex V, C.4.A.

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:**

##### **3-aminomethyl-3,5,5-trimethylcyclohexylamine:**

Partition coefficient: noctanol/  
water

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: log Pow: 0,99  
Method: OECD Test Guideline 107  
GLP: yes

### 2-piperazin-1-ylethylamine:

Partition coefficient: noctanol/  
water

: log Pow: -1,48 (20 °C)

### 12.4 Mobility in soil

#### Components:

### 2-piperazin-1-ylethylamine:

Distribution among  
environmental compartments

: Medium:Soil

Koc: 37000

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

### 12.6 Other adverse effects

#### 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 : UN 2735

IMDG : UN 2735

IATA : UN 2735

### 14.2 UN proper shipping name

ADR/RID : AMINES, LIQUID, CORROSIVE, N.O.S.  
(octahydro-4,7-methano-1H-indenedimethylamine)

IMDG : AMINES, LIQUID, CORROSIVE, N.O.S.  
(octahydro-4,7-methano-1H-indenedimethylamine)

IATA : Amines, liquid, corrosive, n.o.s.  
(octahydro-4,7-methano-1H-indenedimethylamine)

### 14.3 Transport hazard class(es)

ADR/RID : 8

IMDG : 8

IATA : 8

### 14.4 Packing group

#### ADR/RID

Packing group : III

Classification Code : C7

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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

### **IATA**

Packing instruction (cargo aircraft) : 856  
Packing instruction (passenger aircraft) : 852  
Packing group : III  
Labels : 8

### **14.5 Environmental hazards**

#### **ADR/RID**

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)

: Not applicable

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

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

### **15.2 Chemical Safety Assessment**

Not applicable

## **SECTION 16: Other information**

### **Full text of R-Phrases**

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.

H332 : Harmful if inhaled.

H335 : May cause respiratory irritation.

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

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Eye Irrit. : Eye irritation  
Skin Corr. : Skin corrosion  
Skin Irrit. : Skin irritation  
Skin Sens. : Skin sensitisation  
STOT SE : Specific target organ toxicity - single exposure

### **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.