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C-SYSTEMS 10 10 CFS comp. B FAST

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

1.1 Product identifier

Trade name: **C-SYSTEMS 10 10 CFS component B FAST**

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.
Skin sensitisation, Category 1	H317: May cause an allergic skin reaction.
Reproductive toxicity, Category 2	H361fd: Suspected of damaging fertility. Suspected of damaging the unborn child.
Chronic aquatic toxicity, Category 2	H411: Toxic to aquatic life with long lasting effects.

Classification (67/548/EEC, 1999/45/EC)

Corrosive R34: Causes burns.
Harmful R20/21/22: Harmful by inhalation, in contact with skin and if swallowed.
Toxic to Reproduction Category 3 R62: Possible risk of impaired fertility.
R63: Possible risk of harm to the unborn child.
Sensitising R43: May cause sensitisation by skin contact.
Dangerous for the environment R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

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.
H361fd Suspected of damaging fertility. Suspected of damaging the unborn child.
H411 Toxic to aquatic life with long lasting effects.
Supplemental Hazard
Statements: EUH071 Corrosive to the respiratory tract.
Precautionary statements : **Prevention:**
P201 Obtain special instructions before use.
P280 Wear protective gloves/ protective clothing/eye protection/ face protection.
P281 Use personal protective equipment as required.
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 CENTER or doctor/ physician.
Hazardous components which must be listed on the label:
3-aminomethyl-3,5,5-trimethylcyclohexylamine

Epichlorohydrin-formaldehyde-phenol polymer number average molecular weight # 700
4-nonylphenol, branched
4,4'-isopropylidenediphenol
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 : Cycloaliphatic amine based mixture

Hazardous components

Chemical Name	CAS-No. EC-No. Registration number	Classification (67/548/EEC)	Classification (REGULATION (EC) No 1272/2008)	Concentration %)
3-aminomethyl-3,5,5-trimethylcyclohexylamine	2855-13-2 220-666-8 01-2119514687-32	C; R34 Xn; R21/22 R43 R52-R53	Acute Tox. 4; H312 Acute Tox. 4; H302 Skin Corr. 1B; H314 Skin Sens. 1; H317 Aquatic Chronic 3; H412	>= 30 - < 50
benzyl alcohol	100-51-6 202-859-9 01-2119492630-38	Xn; R20/22	Acute Tox. 4; H332 Acute Tox. 4; H302	>= 20 - < 25
4-tert-butylphenol	98-54-4 202-679-0 01-2119489419-21	N; R51/53 Xi; R37/38 Xi; R41 R62	Skin Irrit. 2; H315 Eye Dam. 1; H318 Repr. 2; H361f STOT SE 3; H335 Aquatic Chronic 1; H410	>= 10 - < 12,5
mphenylenebis(methylamine)	1477-55-0 216-032-5 01-2119480150-50	C; R34 R52/53 Xn; R20/22 R43	Acute Tox. 4; H302 Acute Tox. 4; H332 Skin Corr. 1B; H314 Aquatic Chronic 3; H412 Skin Sens. 1B; H317	>= 7 - < 10
Epichlorohydrinformaldehyde-phenol polymer number average molecular weight # 700	9003-36-5	Xi; R36/38 R43 N; R51/53	Skin Irrit. 2; H315 Eye Irrit. 2; H319 Skin Sens. 1; H317 Aquatic Chronic 2; H411	>= 5 - < 7
4-nonylphenol, branched	84852-15-3 284-325-5 /	Repr.Cat.3; R62-R63 C; R34 Xn; R22	Repr. 2; H361fd Acute Tox. 4; H302 Skin Corr. 1B; H314	>= 5 - < 7

		N; R50-R53	Aquatic Acute 1; H400 Aquatic Chronic 1; H410	
4,4'-isopropylidenediphenol	80-05-7 201-245-8 01-2119529244-43	Repr.Cat.3; R62 Xi; R37-R41 R43 R52	Repr. 2; H361f STOT SE 3; H335 Eye Dam. 1; H318 Skin Sens. 1; H317 Aquatic Chronic 2; H411	>= 3 - < 5
2-piperazin-1-ylethylamine	140-31-8 205-411-0 01-2119471486-30	C; R34 Xn; R21/22 R43 R52-R53	Acute Tox. 4; H312 Acute Tox. 4; H302 Skin Corr. 1B; H314 Skin Sens. 1; H317 Aquatic Chronic 3; H412	>= 1 - < 2,5
nonylphenol	25154-52-3 246-672-0 /	Repr.Cat.3; R62-R63 C; R34 Xn; R22 N; R50-R53	Repr. 2; H361 Acute Tox. 4; H302 Skin Corr. 1B; H314 Aquatic Acute 1; H400 Aquatic Chronic 1; H410	>= 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.
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 : corrosive effects

Burn
4.3 Indication of any immediate medical attention and special treatment needed
Treatment : No information available.

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 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

8.1 Control parameters

Occupational Exposure Limits

Components	N. CAS	Value type (Form of exposure)	Control parameters	Basis
4,4'-isopropylidenediphenol	80-05-7	TWA (inhalable dust)	10 mg/m3	GB EH40
Further information	Where no specific short-term exposure limit is listed, a figure three times the long-term exposure should be used			
		TWA (inhalable dust)	10 mg/m3	2009/161/EU

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/m3
End Use: Workers
Exposure routes: Inhalation
Potential health effects: Long-term exposure, Systemic effects
Value: 90 mg/m3
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/m3
End Use: Consumers
Exposure routes: Inhalation
Potential health effects: Long-term exposure, Systemic effects
Value: 8,11 mg/m3
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
4-nonylphenol, branched : End Use: Workers
Exposure routes: Inhalation
Potential health effects: Long-term exposure
Value: 0,5 mg/m3
End Use: Workers
Exposure routes: Skin contact
Potential health effects: Long-term exposure
Value: 7,5 mg/kg
4,4'-isopropylidenediphenol : End Use: Consumers
Exposure routes: Inhalation
Potential health effects: Acute local effects
Value: 5 mg/m3
End Use: Consumers
Exposure routes: Inhalation
Potential health effects: Acute systemic effects
Value: 5 mg/m3
End Use: Consumers
Exposure routes: Inhalation
Potential health effects: Long-term local effects
Value: 5 mg/m3
End Use: Consumers
Exposure routes: Ingestion
Potential health effects: Long-term systemic effects
Value: 0,05 mg/kg
End Use: Consumers
Exposure routes: Inhalation
Potential health effects: Long-term systemic effects
Value: 0,25 mg/m3
End Use: Consumers
Exposure routes: Skin contact
Potential health effects: Long-term systemic effects
Value: 0,7 mg/kg
End Use: Workers
Exposure routes: Inhalation
Potential health effects: Acute local effects
Value: 10 mg/m3
End Use: Workers
Exposure routes: Inhalation
Potential health effects: Acute systemic effects
Value: 10 mg/m3
End Use: Workers
Exposure routes: Inhalation
Potential health effects: Long-term local effects
Value: 10 mg/m3
End Use: Workers
Exposure routes: Inhalation
Potential health effects: Long-term systemic effects
Value: 10 mg/m3
End Use: Workers
Exposure routes: Skin contact
Potential health effects: Long-term systemic effects

Value: 1,4 mg/kg
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
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:

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
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
4-nonylphenol, branched : Fresh water
Value: 0,000614 mg/l
Marine water
Value: 0,000527 mg/l
Fresh water sediment
Value: 4,62 mg/kg
Marine sediment
Value: 1,23 mg/kg
Soil
Value: 2,3 mg/kg
4,4'-isopropylidenediphenol : Fresh water
Value: 0,018 mg/l
Intermittent releases
Value: 0,01 mg/l
Marine water
Value: 0,016 mg/l
Fresh water sediment
Value: 2,2 mg/kg
Marine sediment
Value: 0,44 mg/kg
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

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 :	light yellow
Odour :	ammoniacal
Odour Threshold :	not determined
pH :	not determined
Melting point/freezing point :	Not applicable
Boiling point/boiling range :	> 200 °C
Flash point :	150 °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 :	1,01 g/cm3 (25 °C)
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 (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.
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 (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 : 687,29 mg/kg
Method: Calculation method
Remarks: No data available
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:
3-aminomethyl-3,5,5-trimethylcyclohexylamine:
Acute oral toxicity : Acute toxicity estimate : 500 mg/kg
Method: Converted acute toxicity point estimate
Acute dermal toxicity : Acute toxicity estimate : 1.100 mg/kg
Method: Converted acute toxicity point estimate
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
2-piperazin-1-ylethylamine:
Acute oral toxicity : LD50 (Rat, male): 2.097 mg/kg
Acute dermal toxicity : LD50 (Rabbit, male): 866 mg/kg
Skin corrosion/irritation
Product:
Remarks: Acute dermal irritation/corrosion
Components:
benzyl alcohol:
Species: Rabbit
Method: OECD Test Guideline 404
Result: No skin irritation
GLP: yes
4,4'-isopropylidenediphenol:
Species: Rabbit
Method: OECD Test Guideline 404

Result: No skin irritation
GLP: yes
2-piperazin-1-ylethylamine:
Species: Rabbit
Result: Corrosive
Serious eye damage/eye irritation
Product:
Remarks: Severe eye irritation
Components:
benzyl alcohol:
Species: Rabbit
Method: OECD Test Guideline 405
Result: Eye irritation
GLP: yes
4,4'-isopropylidenediphenol:
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:
2-piperazin-1-ylethylamine:
Test Type: Maximisation Test (GPMT)
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
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:
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.
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

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

4,4'-isopropylidenediphenol:
Toxicity to fish : LC50 (Menidia menidia (Atlantic silverside)): 9,4 mg/l
Exposure time: 96 h
Test Type: flow-through test
Method: OECD Test Guideline 203
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

4,4'-isopropylidenediphenol:
Biodegradability : Test Type: aerobic
Result: Readily biodegradable.
Method: OECD Test Guideline 301F
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 : log Pow: 0,99
Method: OECD Test Guideline 107
GLP: yes

4,4'-isopropylidenediphenol:
Partition coefficient: noctanol/water: log Pow: 3,4 (21,5 °C)
pH: 6,4
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. (Isophorone diamine)
IMDG :	AMINES, LIQUID, CORROSIVE, N.O.S. (Isophorone diamine)
IATA :	Amines, liquid, corrosive, n.o.s. (Isophorone diamine)

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
Hazard Identification Number :	80
Labels :	8

IMDG

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

IATA

Packing instruction (cargoaircraft): 856
Packing instruction (passenger aircraft): 852

Packing group :	III
Labels :	8

14.5 Environmental hazards

ADR/RID

Environmentally hazardous : yes

IMDG

Marine pollutant : yes

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) : nonylphenol
REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59).

: 4-nonylphenol, branched nonylphenol
REACH - List of substances subject to authorisation(Annex XIV) : Not applicable
Seveso II - Directive 2003/105/EC amending Council Directive 96/82/EC on the control of majoraccident hazards involving dangerous substances
Quantity 1 Quantity 2
9b Dangerous for the environment
200 t 500 t

15.2 Chemical Safety Assessment
Not applicable

SECTION 16: Other information
Full text of R-Phrases
R20/22 : Harmful by inhalation and if swallowed.
R21/22 : Harmful in contact with skin and if swallowed.
R22 : Harmful if swallowed.
R34 : Causes burns.
R36/38 : Irritating to eyes and skin.
R37 : Irritating to respiratory system.
R37/38 : Irritating to respiratory system and skin.
R41 : Risk of serious damage to eyes.
R43 : May cause sensitisation by skin contact.
R50 : Very toxic to aquatic organisms.
R51/53 : Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R52 : Harmful to aquatic organisms.
R52/53 : Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R53 : May cause long-term adverse effects in the aquatic environment.
R62 : Possible risk of impaired fertility.
R63 : Possible risk of harm to the unborn child.

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.
H332 : Harmful if inhaled.
H335 : May cause respiratory irritation.
H361 : Suspected of damaging fertility or the unborn child.
H361f : Suspected of damaging fertility.
H361fd : Suspected of damaging fertility. Suspected of damaging the unborn child.
H400 : Very toxic to aquatic life.
H410 : Very toxic to aquatic life with long lasting effects.
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 Acute : Acute aquatic toxicity
Aquatic Chronic : Chronic aquatic toxicity
Eye Dam. : Serious eye damage
Eye Irrit. : Eye irritation
Repr. : Reproductive toxicity
Skin Corr. : Skin corrosion
Skin Irrit. : Skin irritation

Skin Sens. : Skin sensitisation
STOT SE : Specific target organ toxicity - single exposure
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.