

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 : 10 10 CFS BFast

UFI : C250-60DW-X001-33GW

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

Use of the Substance/Mixture : hardener for epoxy resin

1.3 Details of the supplier of the safety data sheet

Company Cecchi Gustavo & C. srl - Via M. Coppino 253,
55049 Viareggio (LU) ITALYe-mail of the competent person responsible for the safety data sheet: info@cecchi.itResponsible for placing on the market: **CECCHI GUSTAVO & C. srl**

1.4. Emergency telephone number

For urgent information please contact: 0584/383694 office hours 8.30-12.30, 14.00-18.30 Monday to Friday

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, Sub-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.

Long-term (chronic) aquatic hazard,
Category 2

H411: Toxic to aquatic life with long lasting effects.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms



Signal word

: Danger



Hazard statements	:	H302 H314 H317 H411	Harmful if swallowed. Causes severe skin burns and eye damage. May cause an allergic skin reaction. Toxic to aquatic life with long lasting effects.
Precautionary statements	:	Prevention: P273 P280 Response: P303 + P361 + P353 P304 + P340 + P310 P305 + P351 + P338 + P310 P391	Avoid release to the environment. Wear protective gloves/ protective clothing/ eye protection/ face protection/ hearing protection. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor. 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. Collect spillage.

Hazardous components which must be listed on the label:

Polymer of MXDA

Poly[oxy(methyl-1,2-ethanediyl)], α -hydro- ω -(2-aminomethylethoxy)-, ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol (3:1)

3-aminomethyl-3,5,5-trimethylcyclohexylamine

4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with m-phenylenebis(methylamine)

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

m-phenylenebis(methylamine)

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 : Amine Solution

Hazardous components

Chemical name	CAS-No. EC-No./List Registration number	Classification (REGULATION (EC) No 1272/2008)	Concentration (%)
Polymer of MXDA	Not Assigned /	Acute Tox.4; H302 Acute Tox.4; H332 Skin Sens.1; H317 Aquatic Chronic3; H412	>= 25 - < 30
Poly[oxy(methyl-1,2-ethanediyl)], α -hydro- ω -(2-aminomethylethoxy)-, ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol (3:1)	39423-51-3 01-2119556886-20	Acute Tox.4; H302 Acute Tox.4; H312 Eye Dam.1; H318 Aquatic Chronic2; H411	>= 20 - < 25
benzyl alcohol	100-51-6 202-859-9 01-2119492630-38	Acute Tox.4; H302 Acute Tox.4; H332 Eye Irrit.2; H319	>= 12,5 - < 20
3-aminomethyl-3,5,5-trimethylcyclohexylamine	2855-13-2 220-666-8 01-2119514687-32	Acute Tox.4; H302 Acute Tox.4; H312 Skin Corr.1B; H314 Eye Dam.1; H318 Skin Sens.1; H317 Aquatic Chronic3; H412	>= 10 - < 12,5
bicyclo[2.2.1]heptanebis(methylamine)	56602-77-8 260-280-7 01-2120752792-48	Acute Tox.4; H302 Skin Corr.1C; H314 Eye Dam.1; H318 Aquatic Chronic3; H412	>= 7 - < 10
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with m-phenylenebis(methylamine)	113930-69-1 01-2119965162-39	Eye Dam.1; H318 Skin Corr.1B; H314 Skin Sens.1; H317 Aquatic Chronic2; H411 Aquatic Acute2; H401	>= 7 - < 10
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with 3-aminomethyl-3,5,5-trimethylcyclohexylamine	38294-64-3 01-2119965165-33-0011	Skin Corr.1B; H314 Eye Dam.1; H318 Skin Sens.1; H317 Aquatic Chronic3; H412	>= 5 - < 7
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	>= 3 - < 5
2,4,6-	90-72-2	Acute Tox.4; H302	>= 1 - < 3



tris(dimethylaminomethyl)phenol	202-013-9 01-2119560597-27	Skin Irrit.2; H315 Eye Irrit.2; H319	
salicylic acid	69-72-7 200-712-3 01-2119486984-17	Acute Tox.4; H302 Eye Dam.1; H318 Repr.2; H361d	>= 1 - < 3
Phenol, styrenated	61788-44-1 262-975-0	Aquatic Chronic2; H411	>= 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 : 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 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 well-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

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 ³ End Use: Workers Exposure routes: Inhalation Potential health effects: Long-term exposure, Systemic effects Value: 90 mg/m ³ 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 ³ End Use: Consumers Exposure routes: Inhalation Potential health effects: Long-term exposure, Systemic effects Value: 8,11 mg/m ³ 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
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

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

: End Use: Workers
 Exposure routes: Inhalation
 Potential health effects: Long-term systemic effects
 Value: 0,493 mg/m³

End Use: Workers
 Exposure routes: Dermal
 Potential health effects: Long-term systemic effects
 Value: 0,14 mg/kg

End Use: Consumers
 Exposure routes: Inhalation
 Potential health effects: Long-term systemic effects
 Value: 0,074 mg/m³

End Use: Consumers
 Exposure routes: Dermal
 Potential health effects: Long-term systemic effects
 Value: 0,05 mg/m³

End Use: Consumers
 Exposure routes: Oral
 Potential health effects: Long-term systemic effects
 Value: 0,05 mg/m³

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

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
Trimethylolpropane poly(oxypropylene)triamine	: Fresh water 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
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3- epoxypropane, reaction products with 3-aminomethyl- 3,5,5	: Fresh water Value: 0,011 mg/l
	Marine water Value: 0,001 mg/l
	Sewage treatment plant Value: 10 mg/l
	Fresh water sediment Value: 4320 mg/kg
	Marine sediment Value: 432 mg/kg
	Soil Value: 864 mg/kg

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	: Protective gloves complying with EN 374.



Remarks	: Nitrile rubber
Skin and body protection	: Protective suit Recommended preventive skin protection
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. Recommended Filter type: ABEK-filter Equipment should conform to EN 14387
Protective measures	: Avoid contact with skin. Wear suitable protective equipment.

Environmental exposure controls

General advice	: 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.
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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	: 11, 1 %
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 ³
Bulk density	: not determined
Solubility(ies) Solubility in other solvents	: not determined
Partition coefficient: n- octanol/water	: No data available
Ignition temperature	: Not applicable
Auto-ignition temperature	: Not applicable
Thermal decomposition	: Method: No data available
Viscosity Viscosity, dynamic	: 450 - 650 mPa.s
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
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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_x)
Carbon monoxide
Carbon dioxide (CO₂)

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product:

Acute oral toxicity : Acute toxicity estimate : 601,53 mg/kg
Method: Calculation method

Acute inhalation toxicity : Acute toxicity estimate : > 20 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Method: Calculation method

Acute dermal toxicity : Acute toxicity estimate : > 2.000 mg/kg
Method: Calculation method

Acute toxicity (other routes of administration) :
Remarks: No data available

Components:

Poly[oxy(methyl-1,2-ethanediyl)], α -hydro- ω -(2-aminomethylethoxy)-, ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol (3:1):

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

Skin corrosion/irritation

Product:

Remarks: No data available

**Components:****Poly[oxy(methyl-1,2-ethanediyl)], α -hydro- ω -(2-aminomethylethoxy)-, ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol (3:1):**

Species: Rabbit

Method: OECD Test Guideline 404

Result: Mild skin irritation

GLP: yes

benzyl alcohol:

Species: Rabbit

Method: OECD Test Guideline 404

Result: No skin irritation

GLP: yes

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

Species: human skin

Assessment: Causes burns.

Method: OECD Test Guideline 431

Result: Causes burns.

GLP: yes

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

Respiratory or skin sensitisation**Product:**

Remarks: No data available

Components:**Poly[oxy(methyl-1,2-ethanediyl)], α -hydro- ω -(2-aminomethylethoxy)-, ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol (3:1):**

Test Type: Buehler Test

Exposure routes: Dermal

Species: Guinea pig

Method: OECD Test Guideline 406

Result: Does not cause skin sensitisation.

GLP: yes

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



Assessment: May cause sensitisation by skin contact.

Germ cell mutagenicity

Components:

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

Genotoxicity in vitro : Test Type: Ames test
Test species: Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
GLP: yes

Carcinogenicity

Product:

Remarks: No data available

Reproductive toxicity

Product:

Effects on fertility : Remarks: No data available
Remarks: No data available

Effects on foetal development : Remarks: No data available
Remarks: No data available

Components:

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

Effects on foetal development : Test Type: Pre-natal
Species: Rat
Strain: Sprague-Dawley
Application Route: Oral
General Toxicity Maternal: No observed adverse effect level: 100 mg/kg body weight
Teratogenicity: No observed adverse effect level: 250 mg/kg body weight
Developmental Toxicity: No observed adverse effect level: 250 mg/kg body weight
Embryo-foetal toxicity: No observed adverse effect level: 250 mg/kg body weight
Method: OECD Test Guideline 414
GLP: yes

STOT - single exposure

Product:

Remarks: No data available



STOT - repeated exposure

Repeated dose toxicity

Product:

Remarks: No data available

Components:

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

Species: Rat, male and female

NOAEL: 10 mg/kg

LOAEL: 100 mg/kg

Application Route: Oral

Exposure time: 90 d

Method: OECD Test Guideline 408

GLP: yes

Species: Rat, male and female

NOAEL: 30 mg/kg

Application Route: Oral

Exposure time: 28 d

Method: OECD Test Guideline 407

GLP: yes

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:

**Poly[oxy(methyl-1,2-ethanediyl)], α -hydro- ω -(2-aminomethylethoxy)-, ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol (3:1):**

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 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

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

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

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

Toxicity to fish	: LL50 (Oncorhynchus mykiss (rainbow trout)): 70,7 mg/l Exposure time: 96 h Test Type: static test Method: OECD Test Guideline 203 GLP: yes
Toxicity to daphnia and other aquatic invertebrates	: EL50 (Daphnia magna (Water flea)): 11,1 mg/l Exposure time: 48 h Test Type: static test Method: OECD Test Guideline 202 GLP: yes
Toxicity to algae	: EL50 (Pseudokirchneriella subcapitata (green algae)): 79,4 mg/l Exposure time: 72 h Test Type: static test Method: OECD Test Guideline 201 GLP: yes
Toxicity to bacteria	: (activated sludge): > 1.000 mg/l Exposure time: 3 h Test Type: Respiration inhibition Method: OECD Test Guideline 209 GLP: yes

12.2 Persistence and degradability.**Product:**

Biodegradability : Remarks: No data available

Physico-chemical removability : Remarks: No data available

Components:**Poly[oxy(methyl-1,2-ethanediyl)], α -hydro- ω -(2-aminomethylethoxy)-, ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol (3:1):**

Biodegradability : Test Type: aerobic



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

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, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with 3-aminomethyl-3,5,5:

Biodegradability : Test Type: aerobic
Inoculum: activated sludge
Result: Not biodegradable
Biodegradation: 0 %
Exposure time: 28 d
Method: OECD Test Guideline 301F
GLP: yes

12.3 Bioaccumulative potential**Product:**

Bioaccumulation : Remarks: No data available

Components:**Poly[oxy(methyl-1,2-ethanediyl)], α -hydro- ω -(2-aminomethylethoxy)-, ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol (3:1):**

Partition coefficient: n- : log Pow: -1,13 (20 °C)
octanol/water pH: 12,7
GLP: yes

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

Partition coefficient: n- : log Pow: 0,99
octanol/water Method: OECD Test Guideline 107
GLP: yes

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

Bioaccumulation : Species: Fish
Bioconcentration factor (BCF): 5,13
Method: estimated

Partition coefficient: n- : log Pow: 3,6 (25 °C)
octanol/water pH: 7
Method: Regulation (EC) No. 440/2008, Annex, A.8
GLP: no

12.4 Mobility in soil**Components:**

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

Distribution among environmental compartments : log K_{oc}: > 5,16
Method: OECD Test Guideline 121

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:**

Further information : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

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 : UN 2735
IMDG : UN 2735
IATA : UN 2735

14.2 UN proper shipping name

ADR/RID/ADN : AMINES, LIQUID, CORROSIVE, N.O.S.
(Isophorone diamine, Trimethylolpropane poly(oxypropylene)triamine)



IMDG : AMINES, LIQUID, CORROSIVE, N.O.S.
(ISOPHORONEDIAMINE, Trimethylolpropane poly(oxypropylene)triamine)

IATA : Amines, liquid, corrosive, n.o.s.
(Isophorone diamine, Trimethylolpropane poly(oxypropylene)triamine)

14.3 Transport hazard class(es)

ADR/RID/ADN : 8

IMDG : 8

IATA : 8

14.4 Packing group

ADR/RID/ADN

Packing group : III
Classification Code : C7
Hazard Identification Number : 80
Labels : 8
Tunnel restriction code : E

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/ADN

Environmentally hazardous : yes

IMDG

Marine pollutant : yes

IATA

Environmentally hazardous : yes

14.6 Special precautions for user

Remarks : The transport of dangerous goods, including their loading and unloading, must be done by people who received the necessary training required by Modal Regulations.

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
- Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals : 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.

		Quantity 1	Quantity 2
E2	ENVIRONMENTAL HAZARDS	200 t	500 t

- Other regulations : For the product composition, we do not add any of the substances listed in the European Directive 2011/65/EU (RoHS 2, RoHS 3, and China RoHS).
The product is thus in line with those directives.
We do not add Conflict minerals to the product.

15.2 Chemical safety assessment

Not applicable

SECTION 16: Other information

Items where relevant changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

Full text of H-Statements

- H302 : Harmful if swallowed.
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.
H361d	:	Suspected of damaging the unborn child.
H401	:	Toxic to aquatic life.
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	:	Short-term (acute) aquatic hazard
Aquatic Chronic	:	Long-term (chronic) aquatic hazard
Eye Dam.	:	Serious eye damage
Eye Irrit.	:	Eye irritation
Repr.	:	Reproductive toxicity
Skin Corr.	:	Skin corrosion
Skin Irrit.	:	Skin irritation
Skin Sens.	:	Skin sensitisation

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TECl - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

Training advice	:	Provide adequate information, instruction and training for operators.
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Classification of the mixture:

Acute Tox. 4	H302
Skin Corr. 1B	H314
Eye Dam. 1	H318
Skin Sens. 1	H317
Aquatic Chronic 2	H411

Classification procedure:

Calculation method
Calculation method
Calculation method
Calculation method
Calculation method

The information contained herein is based on the present state of our knowledge and does therefore not guarantee certain properties.

GB / EN