

C-SYSTEMS 10 10 CFS component A

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

1.1 Product identifier

Trade name : C-10 10 CFS A

UFI : XX00-W08V-7008-AQHT

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

Use of the Substance/Mixture : Casting Resin

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

1.1 Emergency telephone number

+39 0584 383694

SECTION 2: Hazards identification


2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Skin irritation, Category 2	H315: Causes skin irritation.
Eye irritation, Category 2	H319: Causes serious eye irritation.
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	:	Warning
Hazard statements	:	H315 Causes skin irritation. H317 May cause an allergic skin reaction.

	H319	Causes serious eye irritation.
	H411	Toxic to aquatic life with long lasting effects.
Precautionary statements	: Prevention:	
	P261	Avoid breathing mist or vapours.
	P264	Wash skin thoroughly after handling.
	P273	Avoid release to the environment.
	P280	Wear protective gloves/ eye protection/ face protection.
	Response:	
	P333 + P313	If skin irritation or rash occurs: Get medical advice/ attention.
	P391	Collect spillage.

Hazardous components which must be listed on the label:

bis-[4-(2,3-epoxypropoxy)phenyl]propane

1,6-bis(2,3-epoxypropoxy)hexane

Phenolic epoxy resin F-44

Reaction mass of bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and methyl 1,2,2,6,6-pentamethyl-4-piperidyl Sebacate

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 : Modified epoxy resin

Hazardous components

Chemical name	CAS-No. EC-No./List Registration number	Classification (REGULATION (EC) No 1272/2008)	Concentration (%)
bis-[4-(2,3-epoxypropoxy)phenyl]propane	1675-54-3 216-823-5 01-2119456619-26	Skin Irrit.2; H315 Eye Irrit.2; H319 Skin Sens.1; H317 Aquatic Chronic2; H411	>= 50 - <= 100
1,6-bis(2,3-epoxypropoxy)hexane	933999-84-9 01-2119463471-41	Skin Irrit.2; H315 Eye Irrit.2; H319 Skin Sens.1; H317 Aquatic Chronic3; H412	>= 12,5 - < 20

Phenolic epoxy resin F-44	9003-36-5 01-2119454392-40	Skin Irrit.2; H315 Skin Sens.1; H317 Aquatic Chronic2; H411	>= 3 - < 5
benzyl alcohol	100-51-6 202-859-9 01-2119492630-38	Acute Tox.4; H302 Acute Tox.4; H332 Eye Irrit.2; H319	>= 3 - < 5
Reaction mass of bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and methyl 1,2,2,6,6-pentamethyl-4-piperidyl Sebacate	1065336-91-5 01-2119491304-40	Skin Sens.1A; H317 Repr.2; H361f Aquatic Acute1; H400 Aquatic Chronic1; H410	>= 0,25 - < 0,5

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

- General advice : Keep warm and in a quiet place.
Show this safety data sheet to the doctor in attendance.
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.
If skin irritation persists, call 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 : Keep at rest.
Do not induce vomiting without medical advice.
Keep respiratory tract clear.
If symptoms persist, call a physician.

4.2 Most important symptoms and effects, both acute and delayed

- Symptoms : irritant effects
Redness

sensitising effects

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 : Foam
Sand
Carbon dioxide (CO₂)
Water mist

Unsuitable extinguishing media : Water spray jet

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.

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.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

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.
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.
- Advice on common storage : Keep away from oxidizing agents, strongly acid or alkaline materials and amines.
Keep product and empty container away from heat and sources of ignition.
Keep away from food and drink.
- 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:

bis-[4-(2,3-epoxipropoxy)phenyl]propane	: End Use: Workers Exposure routes: Skin contact Potential health effects: Acute systemic effects, Long-term systemic effects Value: 8,33 mg/kg End Use: Workers Exposure routes: Inhalation Potential health effects: Acute systemic effects, Long-term local effects Value: 12,25 mg/m ³ End Use: Consumers Exposure routes: Skin contact Potential health effects: Acute systemic effects, Long-term systemic effects Value: 3,571 mg/kg End Use: Consumers Exposure routes: Ingestion Potential health effects: Acute systemic effects, Long-term systemic effects Value: 0,75 mg/kg
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
1,6-bis(2,3-epoxypropoxy)hexane	: End Use: Workers
	Exposure routes: Skin contact
	Potential health effects: Long-term systemic effects
	Value: 2,8 mg/kg
	End Use: Workers
	Exposure routes: Inhalation
	Potential health effects: Long-term systemic effects
	Value: 4,9 mg/m ³

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

bis-[4-(2,3-epoxypropoxy)phenyl]propane	: Fresh water
	Value: 0,006 mg/l
	Marine water
	Value: 0,0006 mg/l
	Intermittent releases
	Value: 0,018 mg/l
	Sewage treatment plant
	Value: 10 mg/l
	Fresh water sediment
	Value: 0,996 mg/kg
	Marine sediment
	Value: 0,0996 mg/kg
	Soil
	Value: 0,196 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

1,6-bis(2,3-epoxypropoxy)hexane	Value: 2,3 mg/l
	: Sewage treatment plant
	Value: 1 mg/l
	Fresh water
	Value: 0,0115 mg/l
	Fresh water sediment
	Value: 0,283 mg/kg
	Marine water
	Value: 0,00115 mg/l
	Marine sediment
Value: 0,0283 mg/kg	
Soil	
Value: 0,223 mg/kg	

8.2 Exposure controls

Engineering measures

Effective exhaust ventilation system
effective ventilation in all processing areas

Personal protective equipment

Eye protection	: Do not wear contact lenses. Safety glasses with side-shields conforming to EN166 Ensure that eyewash stations and safety showers are close to the workstation location.
Hand protection	
Material	: Protective gloves complying with EN 374.
Skin and body protection	: Protective suit
Respiratory protection	: Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines. In the case of vapour formation use a respirator with an approved filter. Equipment should conform to EN 14387 Apply technical measures to comply with the occupational exposure limits. This should be achieved by a good general extraction and -if practically feasible- by the use of a local exhaust ventilation.
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	: purple
Odour	: slight
Odour Threshold	: not determined
pH	: 4 - 6, 1 %
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	: 1,12 g/cm ³ (25 °C)
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	: 600 - 900 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:
Bases
Strong oxidizing agents
Avoid amines.

10.4 Conditions to avoid

Conditions to avoid : No decomposition if used as directed.

10.5 Incompatible materials

Materials to avoid : Incompatible with oxidizing agents.

10.6 Hazardous decomposition products

Hazardous decomposition products : This product may release the following:
Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke).

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product:

Acute oral toxicity : Acute toxicity estimate : > 2.000 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 : Remarks: No data available

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

Components:**|| bis-[4-(2,3-epoxipropoxy)phenyl]propane:**

Acute oral toxicity : LD50 (Rat, female): > 2.000 mg/kg
Method: OECD Test Guideline 420
GLP: yes

Acute dermal toxicity : LD50 (Rat, male and female): > 2.000 mg/kg
Method: OECD Test Guideline 402
GLP: yes

|| 1,6-bis(2,3-epoxypropoxy)hexane:

Acute oral toxicity : LD50 (Rat): 2.900 mg/kg
Method: OECD Test Guideline 401
GLP: yes

Acute dermal toxicity : LD50 (Rabbit): > 2.000 mg/kg
Method: OECD Test Guideline 402
GLP: yes

Skin corrosion/irritation**Product:**

Remarks: No data available

Components:**|| bis-[4-(2,3-epoxipropoxy)phenyl]propane:**

Species: Rabbit
Exposure time: 4 h
Method: OECD Test Guideline 404
Result: Skin irritation
GLP: yes

|| benzyl alcohol:

Species: Rabbit
Method: OECD Test Guideline 404
Result: No skin irritation
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:

|| bis-[4-(2,3-epoxypropoxy)phenyl]propane:

Test Type: Mouse Local Lymph Node assay (LLNA)
Species: Mouse
Method: OECD Test Guideline 429
Result: May cause sensitisation by skin contact.
GLP: yes

|| 1,6-bis(2,3-epoxypropoxy)hexane:

Test Type: Mouse Local Lymph Node assay (LLNA)
Exposure routes: Dermal
Species: Mouse
Method: OECD Test Guideline 429
Result: May cause sensitisation by skin contact.
GLP: yes

Germ cell mutagenicity

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

STOT - single exposure

Product:

Remarks: No data available

STOT - repeated exposure**Repeated dose toxicity****Product:**

Remarks: No data available

Aspiration toxicity**Components:****|| bis-[4-(2,3-epoxipropoxy)phenyl]propane:**

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:**|| bis-[4-(2,3-epoxipropoxy)phenyl]propane:**Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia (water flea)): 1,7 mg/l
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202
GLP: yesToxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 0,3 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)
Test Type: semi-static test
Method: OECD Test Guideline 211
GLP: yes**|| 1,6-bis(2,3-epoxypropoxy)hexane:**Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 30 mg/l
Exposure time: 96 h
Test Type: semi-static test
Method: OECD Test Guideline 203
GLP: yes

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 39 mg/l
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202
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

Reaction mass of bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and methyl 1,2,2,6,6-pentamethyl-4-piperidyl Sebacate:

M-Factor (Short-term (acute) aquatic hazard) : 1

M-Factor (Long-term (chronic) aquatic hazard) : 1

12.2 Persistence and degradability**Product:**

Biodegradability : Remarks: No data available

Physico-chemical removability : Remarks: No data available

Components:**bis-[4-(2,3-epoxypropoxy)phenyl]propane:**

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

1,6-bis(2,3-epoxypropoxy)hexane:

Biodegradability : Test Type: aerobic
Result: Inherently biodegradable.
Method: OECD Test Guideline 301D
GLP: yes

12.3 Bioaccumulative potential**Product:**

Bioaccumulation : Remarks: No data available

Components:**|| bis-[4-(2,3-epoxypropoxy)phenyl]propane:**

Partition coefficient: n-octanol/water : log Pow: 3,242 (25 °C)
pH: 7,1
Method: OECD Test Guideline 117
GLP: yes

|| 1,6-bis(2,3-epoxypropoxy)hexane:

Partition coefficient: n-octanol/water : log Pow: 0,822 (20 °C)
pH: 6 - 8
Method: OECD Test Guideline 107
GLP: yes

12.4 Mobility in soil**Components:****|| 1,6-bis(2,3-epoxypropoxy)hexane:**

Distribution among environmental compartments : log Koc: 2,98
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 3082
IMDG : UN 3082
IATA : UN 3082

14.2 UN proper shipping name

ADR/RID/ADN : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,
N.O.S.
(bis-[4-(2,3-epoxipropoxi)phenyl]propane)
IMDG : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,
N.O.S.
(bis-[4-(2,3-epoxipropoxi)phenyl]propane)
IATA : Environmentally hazardous substance, liquid, n.o.s.
(bis-[4-(2,3-epoxipropoxi)phenyl]propane)

14.3 Transport hazard class(es)

ADR/RID/ADN : 9
IMDG : 9
IATA : 9

14.4 Packing group

ADR/RID/ADN
Packing group : III
Classification Code : M6
Hazard Identification Number : 90
Labels : 9
Tunnel restriction code : -
Remarks :
IMDG
Packing group : III
Labels : 9
EmS Code : F-A, S-F
Remarks : IMDG Code segregation group - none
IATA
Packing instruction (cargo aircraft) : 964
Packing instruction (passenger aircraft) : 964
Packing group : III
Labels : 9

**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.
H315	: Causes skin irritation.
H317	: May cause an allergic skin reaction.
H319	: Causes serious eye irritation.
H332	: Harmful if inhaled.
H361f	: Suspected of damaging fertility.
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	: Short-term (acute) aquatic hazard
Aquatic Chronic	: Long-term (chronic) aquatic hazard
Eye Irrit.	: Eye irritation
Repr.	: Reproductive toxicity
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; AIC - 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; EC_x - Concentration associated with x% response; EL_x - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErC_x - 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; TECI - 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.

Classification of the mixture:**Classification procedure:**

Skin Irrit. 2	H315	Calculation method
Eye Irrit. 2	H319	Calculation method
Skin Sens. 1	H317	Calculation method
Aquatic Chronic 2	H411	Calculation method

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

GB / EN