



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

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

Trade name: **C-SYSTEMS STEEL BLUE component A – RAL 5017**
UFI: **Q520-K0P5-V00E-652F**

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

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 3	H412: Harmful 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 H317 H319 H412	Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. Harmful to aquatic life with long lasting effects.
Precautionary statements	: Prevention: P261 P273 P280 Response: P333 + P313 P337 + P313 P362 + P364	Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray. Avoid release to the environment. Wear protective gloves/ eye protection/ face protection. If skin irritation or rash occurs: Get medical advice/ attention. If eye irritation persists: Get medical advice/ attention. Take off contaminated clothing and wash it before reuse.

Hazardous components which must be listed on the label:
bis-[4-(2,3-epoxipropoxy)phenyl]propane

Phenolic epoxy resin F-44

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

Oxirane, mono[(C10-16-alkyloxy)methyl] derivs.

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 : Filled Epoxy Resin

Hazardous components

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



Phenolic epoxy resin F-44	9003-36-5 01-2119454392-40	Skin Irrit.2; H315 Skin Sens.1A; H317 Aquatic Chronic2; H411	>= 5 - < 7
Quartz (SiO2)	14808-60-7 238-878-4 /	STOT RE2; H373	>= 3 - < 5
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	>= 1 - < 2,5
Oxirane, mono[(C10-16-alkyloxy)methyl] derivs.	Not Assigned /939-183-5 01-2119962192-39	Skin Sens.1; H317 Aquatic Chronic2; H411	>= 0,5 - < 1

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

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
zircon	14940-68-2	TWA	5 mg/m3 (Zirconium)	GB EH40
		STEL	10 mg/m3 (Zirconium)	GB EH40
Quartz (SiO2)	14808-60-7	TWA (Respirable dust)	0,1 mg/m3 (Silica)	GB EH40
Further information	For the purposes of these limits, respirable dust and inhalable dust are those fractions of airborne dust which will be collected when sampling is undertaken in accordance with the methods described in MDHS14/4 General methods for sampling and gravimetric analysis or respirable, thoracic and inhalable aerosols., The COSHH definition of a substance hazardous to health includes dust of any kind when present at a concentration in air equal to or greater than 10 mg.m-3 8-hour TWA of inhalable dust or 4 mg.m-3 8-hour TWA of respirable dust. This means that any dust will be subject to COSHH if people are exposed to dust above these levels. Some dusts have been assigned specific WELs and exposure to these must comply with the appropriate limits., Most industrial dusts contain particles of a wide range of sizes. The behaviour, deposition and fate of any particular particle after entry into the human respiratory system, and the body response that it elicits, depend on the nature and size of the particle. HSE distinguishes two size fractions for limit-setting purposes termed 'inhalable' and 'respirable'., Inhalable dust approximates to the fraction of airborne material that enters the nose and mouth during breathing and is therefore available for deposition in the respiratory tract. Respirable dust approximates to the fraction that penetrates to the gas exchange region of the lung. Fuller definitions and explanatory material are given in MDHS14/4., Where dusts contain components that have their own assigned WEL, all the relevant limits should be complied with., Where no specific short-term exposure limit is listed, a figure three times the long-term exposure limit should be used.			
		TWA (Respirable dust)	0,1 mg/m3	2004/37/EC
Further information	Carcinogens or mutagens			

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/m3 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
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/m3
Oxirane, mono[(C10-16-alkyloxy)methyl] derivs.	: End Use: Workers Exposure routes: Dermal Potential health effects: Long-term systemic effects Value: 4 mg/kg

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
1,6-bis(2,3-epoxypropoxy)hexane	: 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
Oxirane, mono[(C10-16-alkyloxy)methyl] derivs.	: Fresh water Value: 0,0072 mg/l



Fresh water sediment
Value: 6,677 mg/kg
Sewage treatment plant
Value: 1 mg/l
Marine water
Value: 0,00072 mg/l
Marine sediment
Value: 0,6677 mg/kg
Soil
Value: 8012 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.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	: liquid
Colour	: blue
Odour	: slight
Odour Threshold	: not determined

pH	: 4 - 6, 1 %
Melting point/freezing point	: Not applicable
Boiling point/boiling range	: > 200 °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	: 1,99 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	: 100.000 - 150.000 mPa.s (25 °C)
Viscosity, kinematic	: not determined
Explosive properties	: Not applicable
Oxidizing properties	: Not applicable

9.2 Other information

Surface tension	: not determined
Sublimation point	: Not applicable

SECTION 10: Stability and reactivity

10.1 Reactivity

Stable under recommended storage conditions.

10.2 Chemical stability

No decomposition if stored and applied as directed.

10.3 Possibility of hazardous reactions

Hazardous reactions : Reacts with the following substances:
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 : Remarks: No data available

Acute inhalation toxicity : Remarks: No data available

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

Oxirane, mono[(C10-16-alkyloxy)methyl] derivs.:

Acute oral toxicity : LD50 (Rat): 26.800 mg/kg
Method: No information available.
GLP: no

Acute dermal toxicity : LD50 (Rat, male and female): > 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

Oxirane, mono[(C10-16-alkyloxy)methyl] derivs.:

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

Serious eye damage/eye irritation**Product:**

Remarks: No data available

Components:**Oxirane, mono[(C10-16-alkyloxy)methyl] derivs.:**

Species: Rabbit
Method: OECD Test Guideline 405
Result: No 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

Oxirane, mono[(C10-16-alkyloxy)methyl] derivs.:

Test Type: Maximisation Test

Exposure routes: Dermal

Species: Guinea pig

Method: OECD Test Guideline 406

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: Not applicable

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: yes

Toxicity 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

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

Oxirane, mono[(C10-16-alkyloxy)methyl] derivs.:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 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 : EC50 (Daphnia magna (Water flea)): 7,2 mg/l
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202
GLP: yes

12.2 Persistence and degradability.**Product:**

Biodegradability : Remarks: No data available

Physico-chemical removability : Remarks: No data available

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

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

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

Oxirane, mono[(C10-16-alkyloxy)methyl] derivs.:

Partition coefficient: n-octanol/water : log Pow: 6,6
pH: 6,74
Method: OECD Test Guideline 117
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:**

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

Not regulated as a dangerous good

14.2 UN proper shipping name

Not regulated as a dangerous good

14.3 Transport hazard class(es)

Not regulated as a dangerous good

14.4 Packing group

Remarks : IMDG Code segregation group - none
Not regulated as a dangerous good

14.5 Environmental hazards

Not regulated as a dangerous good

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.
Not applicable

**15.2 Chemical safety assessment**Not applicable

SECTION 16: Other information**Full text of H-Statements**

H315	: Causes skin irritation.
H317	: May cause an allergic skin reaction.
H319	: Causes serious eye irritation.
H373	: May cause damage to organs through prolonged or repeated exposure if inhaled.
H411	: Toxic to aquatic life with long lasting effects.
H412	: Harmful to aquatic life with long lasting effects.

Full text of other abbreviations

Aquatic Chronic	: Long-term (chronic) aquatic hazard
Eye Irrit.	: Eye irritation
Skin Irrit.	: Skin irritation
Skin Sens.	: Skin sensitisation
STOT RE	: Specific target organ toxicity - repeated exposure

Further information

Training advice	: Provide adequate information, instruction and training for operators.
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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.