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C-SYSTEMS STEEL BLUE component A

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**

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 identificationa

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.
Chronic aquatic toxicity, Category 3	H412: Harmful to aquatic life with long lasting effects.

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

Sensitising	R43: May cause sensitisation by skin contact.
Irritant	R36/38: Irritating to eyes and skin.
Dangerous for the environment	R52/53: Harmful 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: Warning.
Hazard statements:
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H412 Harmful to aquatic life with long lasting effects.
Precautionary statements:
Prevention:
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/spray.
P273 Avoid release to the environment.
P280 Wear eye protection/ face protection.
P280 Wear protective gloves.
Response:
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P337 + P313 If eye irritation persists: Get medical advice/attention.
Hazardous components which must be listed on the label:
reaction product: bisphenol-A-(epichlorhydrin) and epoxy resin (number average molecular weight <= 700)
Epichlorohydrin-formaldehyde-phenol polymer number average molecular weight # 700
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. Registration number	Classification (67/548/EEC)	Classification (REGULATION (EC) No 1272/2008)	Concentration (%)
reaction product bisphenol-A-(epichlorhydrin) and epoxy resin (number average molecular weight <= 700)	25068-38-6 01-2119456619-26	Xi; R36/38 R43 N; R51-R53	Eye Irrit. 2; H319 Skin Irrit. 2; H315 Skin Sens. 1; H317 Aquatic Chronic 2; H411	>= 12,5 - < 20
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
Quartz (SiO2)	14808-60-7 238-878-4	Xn; R48/20	STOT RE 2; H373	>= 3 - < 5
1,6-bis(2,3-epoxypropoxy)hexane	16096-31-4 240-260-4 01-2119463471-41	Xi; R36/38 Xi; R43 N; R52/53	Skin Irrit. 2; H315 Eye Irrit. 2; H319 Skin Sens. 1; H317 Aquatic Chronic 3; H412	>= 1 - < 2,5
Oxirane, mono[(C10-16-alkyloxy)methyl] derivs.	68081-84-5 268-358-2 /	Xi; R36/38 Xi; R43 N; R51/53	Skin Irrit. 2; H315 Eye Irrit. 2; H319 Skin Sens. 1; H317 Aquatic Chronic 2; 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: 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: No information available.

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 wellventilated place. Keep in properly labelled containers.
Advice on common storage: Keep away from oxidising 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	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 MDHS14/3 General methods for sampling and gravimetric analysis of respirable and inhalable dust, 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 above these levels. Some dusts have been assigned specific WELs and exposure to these must comply with the appropriate limit., 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 MDHS14/3., 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 should be used			

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:
reaction product: bisphenol-A- (epichlorhydrin) and epoxyresin (number average molecular weight <= 700):
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

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:
reaction product: bisphenol-A-(epichlorhydrin) and epoxy resin (number average molecular weight <= 700):
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

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: 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 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.
Respirator with a vapour filter (EN 141).
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:	not determined
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/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:	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

Components:
reaction product: bisphenol-A-(epichlorhydrin) and epoxy resin (number average molecular weight <= 700):
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

Oxirane, mono[(C10-16-alkyloxy)methyl] derivs.:
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:
reaction product: bisphenol-A-(epichlorhydrin) and epoxy resin (number average molecular weight <= 700):
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:
reaction product: bisphenol-A-(epichlorhydrin) and epoxy resin (number average molecular

weight <= 700):
Test Type: Mouse Local Lymph Node assay (LLNA)
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 (GPMT)
Exposure routes: Dermal
Species: Guinea pig
Method: OECD Test Guideline 406
Result: May cause sensitisation by skin contact.
GLP: yes

Germ cell mutagenicity
Carcinogenicity
Reproductive toxicity
STOT - single exposure
Product:
Remarks: Not applicable
STOT - repeated exposure
Repeated dose toxicity
Product:
Remarks: No data available

Aspiration toxicity
Components:
reaction product: bisphenol-A-(epichlorhydrin) and epoxy resin (number average molecular weight <= 700):
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:
reaction product: bisphenol-A-(epichlorhydrin) and epoxy resin (number average molecular weight <= 700):
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

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

Components:
reaction product: bisphenol-A-(epichlorhydrin) and epoxy resin (number average molecular weight <= 700):
Biodegradability: Result: Not readily biodegradable.
Method: OECD Test Guideline 301F
GLP: yes

12.3 Bioaccumulative potential
Product:
Bioaccumulation: Remarks: No data available
Components:
Oxirane, mono[(C10-16-alkyloxy)methyl] derivs.:
Partition coefficient: noctanol/water:
log Pow: 6,6
pH: 6,74
Method: OECD Test Guideline 117
GLP: yes

12.4 Mobility in soil
No data available

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
Not regulated as a dangerous good
14.5 Environmental hazards

Not regulated as a dangerous good
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): Low boiling point naphtha - unspecified
Xylene, mixture of isomers
2-methylpropan-1-ol
REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59):
This product does not contain substances of very high concern (Regulation (EC) No 1907/2006 (REACH), Article 57).
REACH - List of substances subject to authorisation (Annex XIV): Not applicable
Seveso II - Directive 2003/105/EC amending Council Directive 96/82/EC on the control of majoraccident hazards involving dangerous substances: Not applicable

15.2 Chemical Safety Assessment
Not applicable

SECTION 16: Other information

Full text of R-Phrases
R36/38: Irritating to eyes and skin.
R43: May cause sensitisation by skin contact.
R48/20: Harmful: danger of serious damage to health by prolonged exposure through inhalation.
R51: Toxic to aquatic organisms.
R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
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.

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: Chronic aquatic toxicity
Eye Irrit.: Eye irritation
Skin Irrit.: Skin irritation
Skin Sens.: Skin sensitisation
STOT RE: Specific target organ toxicity - repeated 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.