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C-SYSTEMS 10 10 CFS 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 10 10 CFS component A**

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.
Chronic aquatic toxicity, Category 2	H411: Toxic 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	R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

2.2 Label elements
Labelling (REGULATION (EC) No 1272/2008)
Hazard pictograms :

Signal word : 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 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)
1,4-bis(2,3-epoxypropoxy)butane
1,3-Propanediol, 2-ethyl-2-(hydroxymethyl)-, polymer with (chloromethyl)oxirane
bis(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. 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	>= 50 - <= 100
1,4-bis(2,3-epoxypropoxy)butane	2425-79-8 219-371-7 01-2119494060-45	Xn; R20/21 Xi; R36/38 R43	Acute Tox. 4; H332 Acute Tox. 4; H312 Eye Irrit. 2; H319 Skin Irrit. 2; H315 Skin Sens. 1; H317	>= 10 - < 12,5
1,3-Propanediol, 2-ethyl-2-(hydroxymethyl)-, polymer with (chloromethyl) oxirane	30499-70-8	Xi; R36/38 Xi; R43	Skin Irrit. 2; H315 Eye Irrit. 2; H319 Skin Sens. 1; H317	>= 7 - < 10
benzyl alcohol	100-51-6 202-859-9 01-2119492630-38	Xn; R20/22	Acute Tox. 4; H332 Acute Tox. 4; H302	>= 3 - < 5
bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate	41556-26-7 255-437-1	Xi; R43 N; R50/53	Skin Sens. 1; H317 Aquatic Acute 1; H400 Aquatic Chronic 1; H410	>= 0,1 - < 0,25

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 equipmentfor 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

Contains no substances with occupational exposure limit values.

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

reaction product: bisphenol-A-(epichlorhydrin) and epoxy resin (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
benzyl alcohol : End Use: Workers
Exposure routes: Inhalation
Potential health effects: Short-term exposure, Systemic effects Value: 450 mg/m3
End Use: Workers
Exposure routes: Inhalation
Potential health effects: Long-term exposure, Systemic effects Value: 90 mg/m3
End Use: Workers
Exposure routes: Skin contact
Potential health effects: Short-term exposure, Systemic effects Value: 47 mg/kg
End Use: Workers
Exposure routes: Skin contact
Potential health effects: Long-term exposure, Systemic effects Value: 9,5 mg/kg
End Use: Consumers
Exposure routes: Ingestion

Potential health effects: Short-term exposure, Systemic effects Value: 25 mg/kg
End Use: Consumers
Exposure routes: Ingestion
Potential health effects: Long-term exposure, Systemic effects
Value: 5 mg/kg
End Use: Consumers
Exposure routes: Inhalation
Potential health effects: Short-term exposure, Systemic effects
Value: 40,55 mg/m3
End Use: Consumers
Exposure routes: Inhalation
Potential health effects: Long-term exposure, Systemic effects
Value: 8,11 mg/m3
End Use: Consumers
Exposure routes: Skin contact
Potential health effects: Short-term exposure, Systemic effects
Value: 28,5 mg/kg
End Use: Consumers
Exposure routes: Skin contact
Potential health effects: Long-term exposure, Systemic effects
Value: 5,7 mg/kg

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
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

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 :	purple
Odour :	slight
Odour Threshold :	not determined
pH :	not determined
Melting point/freezing point :	Not applicable
Boiling point/boiling range :	> 200 °C
Flash point :	150 °C
Evaporation rate :	not determined
Upper explosion limit :	Not applicable
Lower explosion limit :	Not applicable
Vapour pressure :	Not applicable
Relative vapour density :	not determined
Density :	1,12 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 :	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 : Acute toxicity estimate : > 2.000 mg/kg
Method: Calculation method
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
benzyl alcohol:
Acute inhalation toxicity : LC50 (Rat, male and female): > 4.178 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
GLP: yes
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
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:
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
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

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)): 770mg/l
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201
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

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

ADR/RID :	UN 3082
IMDG :	UN 3082
IATA :	UN 3082

14.2 UN proper shipping name

ADR/RID :	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Epoxy resin)
IMDG :	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Epoxy resin)
IATA :	Environmentally hazardous substance, liquid, n.o.s. (Epoxy resin)

14.3 Transport hazard class(es)

ADR/RID :	9
IMDG :	9
IATA :	9

14.4 Packing group

ADR/RID

Packing group :	III
Classification Code :	M6
Hazard Identification Number :	90
Labels :	9
Tunnel restriction code :	E

IMDG

Packing group :	III
Labels :	9
EmS Code :	F-A, S-F

IATA

Packing instruction (cargo aircraft):	964
Packing instruction (passengeraircraft):	964
Packing group :	III
Labels :	9

14.5 Environmental hazards

ADR/RID

Environmentally hazardous :	yes

IMDG

Marine pollutant :	yes

14.6 Special precautions for user

Not applicable

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII) : Low boiling point naphtha - unspecified
Xylene, mixture of isomers
2-methoxy-1-methylethyl acetate
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
Quantity 1 Quantity 2
9b Dangerous for the environment
200 t 500 t

15.2 Chemical Safety Assessment

Not applicable

SECTION 16: Other information

Full text of R-Phrases

R20/21 : Harmful by inhalation and in contact with skin.
R20/22 : Harmful by inhalation and if swallowed.
R36/38 : Irritating to eyes and skin.
R43 : May cause sensitisation by skin contact.
R50/53 : Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R51 : Toxic to aquatic organisms.
R53 : May cause long-term adverse effects in the aquatic environment.

Full text of H-Statements

H302 : Harmful if swallowed.
H312 : Harmful in contact with skin.
H315 : Causes skin irritation.
H317 : May cause an allergic skin reaction.
H319 : Causes serious eye irritation.
H332 : Harmful if inhaled.
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.

Full text of other abbreviations

Acute Tox. : Acute toxicity
Aquatic Acute : Acute aquatic toxicity
Aquatic Chronic : Chronic aquatic toxicity
Eye Irrit. : Eye irritation
Skin Irrit. : Skin irritation
Skin Sens. : Skin sensitisation

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.