

## Safety Data Sheet

According to Regulation (EC) No 1272/2008 (CLP) and (EC) No 1907/2006 (REACH)

Initial preparation date: 10.10.2016

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### Super Sap CLF Hardener

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

##### 1.1 Product identifier

**Product Name:** Super Sap CLF Hardener

**Product code:** 12\_CLF02

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

**Relevant identified uses:** Curing agent for epoxy resins

**Uses advised against:** Not determined or not applicable.

**Reasons why uses advised against:** Not determined or not applicable.

##### 1.3 Details of the manufacturer/supplier of the safety data sheet

###### Manufacturer:

###### North America

Entropy Resins, Inc.  
30621 San Antonio St.  
Hayward, CA 94544 USA  
1-310-882-2120  
info@entropyresins.com

###### Supplier:

###### North America

Entropy Resins, Inc.  
30621 San Antonio St.  
Hayward, CA 94544 USA  
1-310-882-2120  
info@entropyresins.com

###### European Union

Composite Creations Co., LTD  
11/4 Moo 5  
345 Road  
Klongkhoy, Pakkret, Nonthaburi 11120 Thailand  
(+66) 02-964-7203-4  
info@entropyresins.com

###### European Union

Ferrer-Dalmau  
Entropy Resins (Europe / Africa / Middle East)  
Rosalia de Castro 21  
08025 Barcelona, Spain  
+34 93 487 40 15  
info@entropyresins.eu

###### Asia

Composite Creations Co., LTD  
11/4 Moo 5  
345 Road  
Klongkhoy, Pakkret, Nonthaburi 11120 Thailand  
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11/4 Moo 5  
345 Road  
Klongkhoy, Pakkret, Nonthaburi Thailand 11120  
(+66) 02-964-7203-4  
info@entropyresins.com

##### 1.4 Emergency telephone number:

###### North America

###### 3E Company

Inside USA: 1-760-476-3962  
International / not specified: 1-760-476-3962

###### Asia

###### National Chemical Emergency Helpline

国家化学事故应急咨询专线  
China: +86-0532-8388-9090

###### European Union

###### 3E Company

International / not specified: 1-760-476-3962  
Inside USA: 1-760-476-3962

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### SECTION 2: Hazard(s) identification

#### 2.1 Classification of the substance or mixture:

##### Classification according to Regulation (EC) No1278/2008 (CLP):

Serious eye damage, category 1  
Skin corrosion, category 1A  
Skin sensitization, category 1  
Acute toxicity (oral), category 4  
Acute toxicity (inhalation), category 4  
Specific target organ toxicity - single exposure, category 3, respiratory irritation  
Reproductive toxicity, category 2  
Chronic aquatic hazard, category 3

##### Hazard-determining components of labeling:

Isophorone diamine  
1,3-Cyclohexanedimethanamine  
Benzyl Alcohol  
4-tert-Butylphenol

#### 2.2 Label elements

##### Hazard pictograms:



**Signal word:** Danger

##### Hazard statements:

H318 Causes serious eye damage.  
H314 Causes severe skin burns and eye damage.  
H317 May cause an allergic skin reaction.  
H302 Harmful if swallowed.  
H332 Harmful if inhaled.  
H335 May cause respiratory irritation.  
H361 Suspected of damaging fertility or the unborn child.  
H412 Harmful to aquatic life with long lasting effects.

##### Precautionary statements:

P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P260 Do not breathe dust/fume/gas/mist/vapors/spray.  
P264 Wash skin thoroughly after handling.  
P272 Contaminated work clothing should not be allowed out of the workplace.  
P270 Do not eat, drink or smoke when using this product.  
P271 Use only outdoors or in a well-ventilated area.  
P201 Obtain special instructions before use.  
P202 Do not handle until all safety precautions have been read and understood.  
P273 Avoid release to the environment.  
P321 Specific treatment (see supplemental first aid instructions on this label).  
P363 Wash contaminated clothing before reuse.  
P304+P340+P310 If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a poison center or doctor/physician.  
P301+P330+P331+P310 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician.  
P303+P361+P353+P310 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a POISON CENTER or doctor/physician.  
P302+P352 If on skin: Wash with soap and water.  
P333+P313 If skin irritation or a rash occurs: Get medical advice/attention.

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P308+P313 If exposed or concerned: Get medical advice/attention.

P405 Store locked up.

P403+P233 Store in a well ventilated place. Keep container tightly closed.

P501 Dispose of contents and container as instructed in Section 13.

**2.3 Other hazards:** None known

## SECTION 3: Composition/information on ingredients

**3.1 Substance:** Not applicable.

**3.2 Mixture:**

Identification	Name	Classification according to Regulation (EC) No1278/2008 (CLP)	Weight %
CAS number: 100-51-6	Benzyl Alcohol	Acute Tox. 4; H302 Acute Tox. 4; H332	30-50
CAS number: 2855-13-2	Isophorone diamine	Acute Tox. 4; H302 Acute Tox. 4; H312 Skin Sens. 1; H317 Skin Corr. 1B; H314 Aquatic Chronic 3; H412	15-25
CAS number: 2579-20-6	1,3-Cyclohexanedimethanamine	Acute Tox. 4; H302 Acute Tox. 4; H312 Skin Corr. 1A; H314 Aquatic Chronic 3; H412	15-25
CAS number: 98-54-4	4-tert-Butylphenol	Skin Irrit. 2 ; H315 Eye Dam. 1; H318 Repr. 2; H361	5-15

**Additional information:** None

**Full Text of H and EUH statements:** See section 16

## SECTION 4: First aid measures

**4.1 Description of first aid measures**

**General notes:**

Not determined or not available.

**Following inhalation:**

Move exposed individual to fresh air

Loosen clothing as necessary and position individual in a comfortable position

Maintain an unobstructed airway

Immediately call a POISON CONTROL CENTER or seek medical attention

**Following skin contact:**

Immediately remove all contaminated clothing

Wash affected area with soap and water

Immediately call a POISON CONTROL CENTER or seek medical attention

**Following eye contact:**

Rinse/flush exposed eye(s) gently using water for 15-20 minutes

Remove contact lens(es) if able to do so during rinsing

Immediately call a POISON CONTROL CENTER or seek medical attention

**Following ingestion:**

Immediately call a POISON CONTROL CENTER or seek medical attention

Do not induce vomiting

Rinse mouth and then drink plenty of water

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### 4.2 Most important symptoms and effects, both acute and delayed

#### Acute symptoms and effects:

Not determined or not available.

#### Delayed symptoms and effects:

Not determined or not available.

### 4.3 Indication of any immediate medical attention and special treatment needed

#### Specific treatment:

Not determined or not available.

#### Notes for the doctor:

Not determined or not available

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

#### Suitable extinguishing media:

Use appropriate fire suppression agents for adjacent combustible materials or sources of ignition.

#### Unsuitable extinguishing media:

Not determined or not applicable.

### 5.2 Special hazards arising from the substance or mixture:

Thermal decomposition can lead to release of irritating gases and vapors.

### 5.3 Advice for firefighters

#### Personal protection equipment:

Wear protective eye wear, gloves and clothing.

Refer to Section 8.

Use typical firefighting equipment, self-contained breathing apparatus, special tightly sealed suit.

#### Special precautions:

Heating causes a rise in pressure, risk of bursting and combustion.

Shut off sources of ignition.

Carbon monoxide and carbon dioxide may form upon combustion.

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures:

Ensure adequate ventilation.

Ensure air handling systems are operational.

Wear protective eye wear, gloves and clothing.

### 6.2 Environmental precautions:

Should not be released into the environment.

Prevent from reaching drains, sewer or waterway.

### 6.3 Methods and material for containment and cleaning up:

Absorb with non-combustible liquid-binding material (sand, diatomaceous earth (clay), acid binders, universal binders).

Dispose of contents / container in accordance with local regulations.

### 6.4 Reference to other sections:

Not determined or not applicable.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling:

Do not eat, drink, smoke or use personal products when handling chemical substances.

Avoid breathing mist or vapor.

Use only with adequate ventilation.

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### 7.2 Conditions for safe storage, including any incompatibilities:

Store in a cool, well-ventilated area.  
Store away from foodstuffs.

### 7.3 Specific end use(s):

Not determined or not applicable.

## SECTION 8: Exposure controls/personal protection



### 8.1 Control parameters

Only those substances with limit values have been included below.

#### Occupational Exposure limit values:

Country (Legal Basis)	Substance	Identifier	Permissible concentration
WEEL	Benzyl Alcohol	100-51-6	WEEL TWA 10.0 ppm

#### Biological limit values:

No biological exposure limits noted for the ingredient(s).

#### Derived No Effect Level (DNEL):

Not determined or not applicable.

#### Predicted No Effect Concentration (PNEC):

Not determined or not applicable.

#### Information on monitoring procedures:

Not determined or not applicable.

### 8.2 Exposure controls

#### Appropriate engineering controls:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling.

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor and mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above.

#### Personal protection equipment

##### Eye and face protection:

Safety goggles or glasses, or appropriate eye protection.

##### Skin and body protection:

Select glove material impermeable and resistant to the substance.

##### Respiratory protection:

When necessary, use NIOSH-approved breathing equipment.

#### General hygienic measures:

Wash hands before breaks and at the end of work.

Avoid contact with skin, eyes and clothing.

Perform routine housekeeping.

Wash contaminated clothing before reusing.

#### Environmental exposure controls:

Select controls based on a risk assessment of local conditions.

See section 6 for information on accidental release measures.

## SECTION 9: Physical and chemical properties

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### 9.1 Information on basic physical and chemical properties

<b>Appearance</b>	Yellow liquid
<b>Odor</b>	Amine
<b>Odor threshold</b>	Not determined or not available.
<b>pH</b>	~ 13 (solution 100g/L at 20°C)
<b>Melting point/freezing point</b>	Not determined or not available.
<b>Initial boiling point/range</b>	> 200°C (> 392 °F)
<b>Flash point (closed cup)</b>	> 200°C (> 392 °F)
<b>Evaporation rate</b>	Not determined or not available.
<b>Flammability (solid, gas)</b>	Not determined or not available.
<b>Upper flammability/explosive limit</b>	Not determined or not available.
<b>Lower flammability/explosive limit</b>	Not determined or not available.
<b>Vapor pressure</b>	Not determined or not available.
<b>Vapor density</b>	Not determined or not available.
<b>Density</b>	Not determined or not available.
<b>Relative density</b>	1.06 g/cm <sup>3</sup> at 20°C (68 °F) (Water = 1)
<b>Solubilities</b>	Not determined or not available.
<b>Partition coefficient (n-octanol/water)</b>	Not determined or not available.
<b>Auto/Self-ignition temperature</b>	Not determined or not available.
<b>Decomposition temperature</b>	Not determined or not available.
<b>Dynamic viscosity</b>	Not determined or not available.
<b>Kinematic viscosity</b>	Not determined or not available.
<b>Explosive properties</b>	Not determined or not available.
<b>Oxidizing properties</b>	Not determined or not available.

### 9.2 Other information

#### SECTION 10: Stability and reactivity

**10.1 Reactivity:** Does not react under normal conditions of use and storage.

**10.2 Chemical stability:** Stable under normal conditions of use and storage.

**10.3 Possibility of hazardous reactions:** None under normal conditions of use and storage.

**10.4 Conditions to avoid:** None known.

**10.5 Incompatible materials:** None known.

**10.6 Hazardous decomposition products:** None known.

#### SECTION 11: Toxicological information

##### 11.1 Information on toxicological effects

###### Acute toxicity

**Assessment:** Harmful if swallowed Harmful if inhaled

**Product data:** No data available.

**Substance data:**

Name	Route	Result
Isophorone diamine	oral	LD50 - Rat - 1,030 mg/kg
1,3-Cyclohexanedimethanamine	oral	LD50 - Rat - 880 mg/kg

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Name	Route	Result
Benzyl Alcohol	oral	LD50 - Rat - 1,230 mg/kg
	inhalation	LD50 - Rat - > 4,178 mg/m <sup>3</sup>

### Skin corrosion/irritation

**Assessment:** Causes severe skin burns and eye damage

**Product data:** No data available.

**Substance data:**

Name	Result
1,3-Cyclohexanedimethanamine	Corrosive to the skin.
4-tert-Butylphenol	Irritating to the skin.
Isophorone diamine	Corrosive to the skin.

### Serious eye damage/irritation

**Assessment:** Causes serious eye damage

**Product data:** No data available.

**Substance data:**

Name	Result
4-tert-Butylphenol	Corrosive to the eyes.

### Respiratory or skin sensitization

**Assessment:** May cause an allergic skin reaction

**Product data:** No data available.

**Substance data:**

Name	Result
Isophorone diamine	Sensitization possible through skin contact.

### Carcinogenicity

**Assessment:** Based on available data, the classification criteria are not met.

**Product data:** No data available.

**Substance data:** No data available.

**International Agency for Research on Cancer (IARC):** None of the ingredients are listed.

**National Toxicology Program (NTP):** None of the ingredients are listed.

### Germ cell mutagenicity

**Assessment:** Based on available data, the classification criteria are not met.

**Product data:** No data available.

**Substance data:** No data available.

### Reproductive Toxicity

**Assessment:** Suspected of damaging fertility or the unborn child

**Product data:** No data available.

**Substance data:**

Name	Result
4-tert-Butylphenol	Suspected human reproductive toxicant.

### Specific target organ toxicity (single exposure)

**Assessment:** May cause respiratory irritation

**Product data:** No data available.

**Substance data:** No data available.

### Specific target organ toxicity (repeated exposure)

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**Assessment:** Based on available data, the classification criteria are not met.

**Product data:** No data available.

**Substance data:** No data available.

### Aspiration toxicity

**Assessment:** Based on available data, the classification criteria are not met.

**Product data:** No data available.

**Substance data:** No data available.

**Information on likely routes of exposure:** No data available.

**Symptoms related to the physical, chemical and toxicological characteristics:** No data available.

**Other information:** No data available.

## SECTION 12: Ecological information

### 12.1 Toxicity

#### Acute (short-term) toxicity

**Assessment:** Based on available data, the classification criteria are not met.

**Product data:** No data available.

**Substance data:**

Name	Result
Isophorone diamine	LC50 - Daphnia magna (Water flea) - 17.4 mg/L - 48 h
1,3-Cyclohexanedimethanamine	static test EC50 - Daphnia magna (Water flea) - 33.1 mg/l - 48 h
	static test EC50 - Pseudokirchneriella subcapitata (green algae) - 56.7 mg/l - 72h

#### Chronic (long-term) toxicity

**Product data:** No data available.

**Substance data:** No data available.

### 12.2 Persistence and degradability

**Product data:** No data available.

**Substance data:** No data available.

### 12.3 Bioaccumulative potential

**Product data:** No data available.

**Substance data:** No data available.

### 12.4 Mobility in soil

**Product data:** No data available.

**Substance data:** No data available.

### 12.5 Results of PBT and vPvB assessment

**PBT assessment:** This product does not contain any substances that are assessed to be a PBT.

**vPvB assessment:** This product does not contain any substances that are assessed to be a vPvB.

**12.6 Other adverse effects:** No data available.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

#### Relevant information:

It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11)

## SECTION 14: Transport information

### International Carriage of Dangerous Goods by Road/Rail (ADR/RID)




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<b>14.1 UN number</b>	2735
<b>14.2 UN proper shipping name</b>	Amines, liquid, corrosive, n.o.s. (Isophorone diamine)
<b>14.3 UN transport hazard class(es)</b>	8 
<b>14.4 Packing group</b>	III
<b>14.5 Environmental hazards</b>	None
<b>14.6 Special precautions for user</b>	None
<b>Classification code</b>	80
<b>Transport category</b>	3
<b>Tunnel restriction code</b>	E
<b>Excepted quantities</b>	30mL inner pckg; 1L outer pckg
<b>Limited quantity</b>	5L


### International Carriage of Dangerous Goods by Inland Waterways (ADN)

<b>14.1 UN number</b>	2735
<b>14.2 UN proper shipping name</b>	Amines, liquid, corrosive, n.o.s. (Isophorone diamine)
<b>14.3 UN transport hazard class(es)</b>	8 
<b>14.4 Packing group</b>	III
<b>14.5 Environmental hazards</b>	None
<b>14.6 Special precautions for user</b>	None
<b>Excepted quantities</b>	30mL inner pckg; 1L outer pckg
<b>Limited quantity</b>	5L

### International Maritime Dangerous Goods (IMDG)

<b>14.1 UN number</b>	2735
<b>14.2 UN proper shipping name</b>	Amines, liquid, corrosive, n.o.s. (Isophorone diamine)
<b>14.3 UN transport hazard class(es)</b>	8 
<b>14.4 Packing group</b>	III
<b>14.5 Environmental hazards</b>	None
<b>14.6 Special precautions for user</b>	None
<b>EmS number</b>	F-A, S-B
<b>Excepted quantities</b>	30mL inner pckg; 1L outer pckg
<b>Limited quantity</b>	5L

### International Air Transport Association Dangerous Goods Regulations (IATA-DGR)

<b>14.1 UN number</b>	2735
<b>14.2 UN proper shipping name</b>	Amines, liquid, corrosive, n.o.s. (Isophorone diamine)
<b>14.3 UN transport hazard class(es)</b>	8 
<b>14.4 Packing group</b>	III
<b>14.5 Environmental hazards</b>	None
<b>14.6 Special precautions for user</b>	None

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<b>Excepted quantities</b>	30mL inner pckg; 1L outer pckg
<b>Limited quantity</b>	1L

### 14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code

<b>Bulk Name</b>	None
<b>Ship type</b>	None
<b>Pollution category</b>	None

## SECTION 15: Regulatory information

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

#### United States regulations

**SARA Section 313 toxic chemicals:** Not determined.

#### European regulations

**Inventory listing (EINECS):** Not determined.

**REACH SVHC candidate list:** Not determined.

**REACH SVHC Authorizations:** Not determined.

**REACH Restriction:** Not determined.

**Water hazard class (WGK):** Not determined.

### 15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

## SECTION 16: Other information

### Indication of changes:

Not applicable.

### Abbreviations and Acronyms: None

### Classification procedure:

Classification according to Regulation (EC) No1278/2008 (CLP)	Method Used
Serious eye damage, category 1	
Skin corrosion, category 1A	
Skin sensitization, category 1	
Acute toxicity (oral), category 4	
Acute toxicity (inhalation), category 4	
Specific target organ toxicity - single exposure, category 3, respiratory irritation	
Reproductive toxicity, category 2	
Chronic aquatic hazard, category 3	

### Summary of classification in section 3:

Acute Tox. 4; H302	Acute toxicity (oral), category 4
Acute Tox. 4; H332	Acute toxicity (inhalation), category 4
Acute Tox. 4; H312	Acute toxicity (dermal), category 4
Skin Sens. 1; H317	Skin sensitization, category 1
Skin Corr. 1B; H314	Skin corrosion, category 1B
Aquatic Chronic 3; H412	Chronic aquatic hazard, category 3
Skin Corr. 1A; H314	Skin corrosion, category 1A
Skin Irrit. 2 ; H315	Skin irritation, category 2

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Eye Dam. 1; H318	Serious eye damage, category 1
Repr. 2; H361	Reproductive toxicity, category 2

#### Summary of hazard statements in section 3:

H302	Harmful if swallowed
H332	Harmful if inhaled
H312	Harmful in contact with skin
H317	May cause an allergic skin reaction
H314	Causes severe skin burns and eye damage
H412	Harmful to aquatic life with long lasting effects
H315	Causes skin irritation
H318	Causes serious eye damage
H361	Suspected of damaging fertility or the unborn child

#### Disclaimer:

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations. The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations applicable to this material.

**NFPA:** 3-0-0

**HMIS:** 3-0-0

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**End of Safety Data Sheet**