

# Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 19110.1200

Effective date: 03.11.2016

## Super Sap CLF Hardener

### SECTION 1: Identification

**Material name:** Super Sap CLF Hardener

**Trade Name:** Super Sap CLF Hardener

**Product code:** 12\_CLF

**Recommended use of the product and restriction on use:**

Curing agent for epoxy resins.



#### Manufacturer or supplier details

**Manufacturer:**

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

**Supplier:**

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

#### Emergency telephone number:

**3E Company**

Inside USA: 1-760-476-3962

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

**National Chemical Emergency Helpline**

Inside China: +86-0532-8388-9090

### SECTION 2: Hazard(s) identification

#### GHS classification:

Acute toxicity (oral), category 4.

Acute toxicity (inhalation), category 4.

Skin corrosion, category 1A.

Serious eye damage, category 1.

Skin sensitization, category 1.

Specific target organ toxicity - single exposure, category 3, respiratory irritation.

Reproductive toxicity, category 2.

Acute aquatic hazard, category 2.

Chronic aquatic hazard, category 2.

#### Label elements

##### Hazard pictograms:



**Signal word:** Danger

#### Hazard statements:

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

H317 May cause an allergic skin reaction.

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- H318 Causes serious eye damage.
- H332 Harmful if inhaled.
- H335 May cause respiratory irritation.
- H361 Suspected of damaging fertility or the unborn child.
- H401 Toxic to aquatic life.
- H411 Toxic to aquatic life with long lasting effects.

### Precautionary statements:

- P201 Obtain special instructions before use.
- P202 Do not handle until all safety precautions have been read and understood.
- P260 Do not breathe dust/fume/gas/mist/vapors/spray.
- P264 Wash skin thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P271 Use only outdoors or in a well-ventilated area.
- P272 Contaminated work clothing should not be allowed out of the workplace.
- P273 Avoid release to the environment.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P301+P330+P331+P310 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician.
- P302+P352 If on skin: Wash with soap and water.
- 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.
- 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.
- P305+P351+P338+P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.
- P308+P313 If exposed or concerned: Get medical advice/attention.
- P321 Specific treatment (see supplemental first aid instructions on this label).
- P333+P313 If skin irritation or a rash occurs: Get medical advice/attention.
- P363 Wash contaminated clothing before reuse.
- P391 Collect spillage.
- P403+P233 Store in a well ventilated place. Keep container tightly closed.
- P405 Store locked up.
- P501 Dispose of contents and container as instructed in Section 13.

**Hazards not otherwise classified:** None

## SECTION 3: Composition/information on ingredients

Identification	Name	Wt. %
<b>CAS number:</b> 100-51-6	Benzyl Alcohol	15-40
<b>CAS number:</b> 103-83-3	Benzenemethanamine	1-5
<b>CAS number:</b> 1477-55-0	1,3-Benzenedimethanamine	10-30
<b>CAS number:</b> 25154-52-3	Nonyl phenol	1-5

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<b>CAS number:</b> 2855-13-2	Isophorone diamine	10-30
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### SECTION 4: First aid measures

#### Description of first aid measures

##### After 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.

##### After skin contact:

Immediately remove all contaminated clothing.  
Wash affected area with soap and water.  
Immediately call a POISON CONTROL CENTER or seek medical attention.

##### After 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.

##### After swallowing:

Immediately call a POISON CONTROL CENTER or seek medical attention.  
Do not induce vomiting.  
Rinse mouth and then drink plenty of water.

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

##### Acute symptoms:

No information available.

##### Delayed symptoms:

No information available.

#### Immediate medical attention and special treatment:

No information available.

### SECTION 5: Firefighting measures

#### Extinguishing media

##### Suitable extinguishing media:

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

##### Unsuitable extinguishing media:

No information available.

#### Specific hazards during fire-fighting:

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

#### Special protective equipment for firefighters:

Wear protective eye wear, gloves and clothing.  
Refer to Section 8.

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

### Additional information:

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

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

Ensure adequate ventilation.

Ensure air handling systems are operational.

Wear protective eye wear, gloves and clothing.

### Environmental precautions:

Should not be released into the environment.

Prevent from reaching drains, sewer or waterway.

### 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.

### Reference to other sections:

None

## SECTION 7: Handling and storage

### 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.

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

Store in a cool, well-ventilated area.

Store away from foodstuffs.

## SECTION 8: Exposure controls/personal protection

### Components with workplace control parameters:

Component name	Identifier	Permissible concentration
Benzyl Alcohol	100-51-6	WEEL TWA 10.0 ppm
1,3-Benzenedimethanamine	1477-55-0	NIOSH C .10 mg/m3

### 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

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mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above.

### Respiratory protection:

When necessary, use NIOSH-approved breathing equipment.

### Eye protection:

Safety goggles or glasses, or appropriate eye protection.

### Skin and body protection:

Select glove material impermeable and resistant to the substance.

### 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.

## SECTION 9: Physical and chemical properties

<b>Appearance (physical state, color):</b>	Yellow Liquid	<b>Explosion limit lower: Explosion limit upper:</b>	Not determined or not available. Not determined or not available.
<b>Odor:</b>	Amine	<b>Vapor pressure:</b>	Not determined or not available.
<b>Odor threshold:</b>	Not determined or not available.	<b>Vapor density:</b>	Not determined or not available.
<b>pH-value:</b>	~ 13 (solution 100g/L at 20°C)	<b>Relative density:</b>	1.06 g/cm <sup>3</sup> at 20°C (68 °F) (Water = 1)
<b>Melting/Freezing point:</b>	Not determined or not available.	<b>Solubilities:</b>	Partly soluble @ 20°C
<b>Boiling point/range:</b>	> 200°C (> 392 °F)	<b>Partition coefficient (n-octanol/water):</b>	Not determined or not available.
<b>Flash point (closed cup):</b>	> 130°C (> 266°F)	<b>Auto/Self-ignition temperature:</b>	Not determined or not available.
<b>Evaporation rate:</b>	Not determined or not available.	<b>Decomposition temperature:</b>	Not determined or not available.
<b>Flammability (solid, gaseous):</b>	Not determined or not available.	<b>Dynamic viscosity:</b>	Not determined or not available.
<b>Density:</b>	Not determined or not available.	<b>Kinematic viscosity:</b>	Not determined or not available.

## SECTION 10: Stability and reactivity

### Reactivity:

Does not react under normal conditions of use and storage.

### Chemical stability:

Stable under normal conditions of use and storage.

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**Possibility of hazardous reactions:**

None under normal conditions of use and storage.

**Conditions to avoid:**

None known.

**Incompatible materials:**

None known.

**Hazardous decomposition products:**

None known.

### SECTION 11: Toxicological information

**Exposure routes:**

No information available.

**Acute toxicity:****Oral:**

Benzyl Alcohol: LD50 Rat 1,230 mg/kg.

benzyl dimethylamine: LD50 Rat: 265 mg/kg.

1,3-Benzenedimethanamine: LD50 Rat female 980 mg/kg.

Isophorone diamine: LD50: rat male 1,030 mg/kg.

**Dermal:**

benzyl dimethylamine: LD50 Rabbit: 1,660 mg/kg.

1,3-Benzenedimethanamine: LD50 Rabbit 2,000 mg/kg.

Isophorone diamine: LD50: rat >2,000 mg/kg.

**Inhalation:**

1,3-Benzenedimethanamine: LC50 Rat 4h 1.34 mg/l.

Isophorone diamine: LC50: Rat 4h >5.01 mg/l.

**Skin corrosion/irritation:**

Benzyl Alcohol BLK: Rabbit No skin irritation 24h.

benzyl dimethylamine: Rabbit: severe skin irritation 4h.

1,3-Benzenedimethanamine: Rat: Corrosive - 4h.

Isophorone diamine: Rabbit: causes burns 24 h.

**Serious eye damage/irritation:**

Benzyl Alcohol BLK: Rabbit Eye irritation 24h.

benzyl dimethylamine: Rabbit: severe eye irritation.

1,3-Benzenedimethanamine: Rabbit: Severe eye irritation - 24 h.

Isophorone diamine: Rabbit: corrosive to eyes 24h.

**Respiratory or skin sensitization:**

1,3-Benzenedimethanamine : in vivo assay - Mouse: May cause sensitisation by skin contact.

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### Carcinogenicity:

No information available.

### IARC (International Agency for Research on Cancer):

None of the ingredients are listed.

### NTP (National Toxicology Program):

None of the ingredients are listed.

### Germ cell mutagenicity:

No information available.

### Reproductive toxicity:

No information available.

### STOT-single and repeated exposure:

No information available.

### Aspiration toxicity:

No information available.

### Additional toxicological information

No information available.

## SECTION 12: Ecological information

### Ecotoxicity:

Benzyl Alcohol: Fish, LC50 - *Lepomis macrochirus* (Bluegill) - 10 mg/l - 96 h.

Isophorone diamine: Fish, semi-static test LC50 - *Leuciscus idus* (Golden orfe) - 110 mg/l - 96.0 h.

Isophorone diamine: Aquatic invertebrates, Immobilization EC50 - *Daphnia magna* (Water flea) - 23 mg/l - 48 h.

Isophorone diamine: Aquatic Plants, static test EC50 - *Desmodesmus subspicatus* (green algae) - 37 mg/l - 72 h.

Isophorone diamine: Bacteria, EC10 - *Pseudomonas putida* - 1,120 mg/l - 18 h.

Benzyl Alcohol: Aquatic invertebrates, EC50 - *Daphnia magna* (Water flea) - 55 mg/l - 24 h.

benzyl dimethylamine: Fish, LC50 - *Leuciscus idus* (Golden orfe) - 10.0 - 22.0 mg/l - 96.0 h.

1,3-Benzenedimethanamine: Fish, semi-static test LC50 - *Oryzias latipes* - 87.6 mg/l - 96 h.

1,3-Benzenedimethanamine: Aquatic invertebrates, static test EC50 - *Daphnia magna* (Water flea) - 15.2 mg/l - 48 h.

1,3-Benzenedimethanamine: Aquatic Plants, static test EC50 - *Pseudokirchneriella subcapitata* (algae) - 32.1 mg/l - 72 h.

1,3-Benzenedimethanamine: Bacteria, Respiration inhibition EC50 - Sludge Treatment - > 1,000 mg/l - 30 h.

### Persistence and degradability:

No information available.

### Bioaccumulative potential:

No information available.

### Mobility in soil:

No information available.

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### Other adverse effects:

No information available.

## SECTION 13: Disposal considerations


### Disposal methods:

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

## SECTION 14: Transportation information


### Land transport:

#### DOT (49 CFR) transport

<b>UN Number:</b>	2735
<b>UN Proper shipping name:</b>	Amines, liquid, corrosive, n.o.s. (Isophorone diamine,)
<b>UN Transport hazard classes:</b>	8
<b>Packing group:</b>	III
<b>Danger label:</b>	8 Corrosive substances 
<b>Environmental hazards:</b>	Yes
<b>Special precautions for user:</b>	None
<b>Limited quantity:</b>	5L

### Air transport:

#### IATA-DGR

<b>UN Number:</b>	2735
<b>UN Proper shipping name:</b>	Amines, liquid, corrosive, n.o.s. (Isophorone diamine,)
<b>UN Transport hazard classes:</b>	8
<b>Packing group:</b>	III
<b>Danger label:</b>	8 Corrosive substances 
<b>Environmental hazards:</b>	Yes
<b>Special precautions for user:</b>	None



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<b>Limited quantity:</b>	1L (Passenger and cargo aircraft) - Pkg Inst.: Y841
<b>Quantity exception:</b>	E1

### Sea transport:

#### IMDG

<b>UN Number:</b>	2735
<b>UN Proper shipping name:</b>	Amines, liquid, corrosive, n.o.s. (Isophorone diamine,)
<b>UN Transport hazard classes:</b>	8
<b>Packing group:</b>	III
<b>Danger label:</b>	8 Corrosive substances 
<b>EMS code:</b>	F-A, S-B
<b>Environmental hazards:</b>	Yes
<b>Special precautions for user:</b>	None
<b>Limited quantity:</b>	5L - Pkg Inst.: P001 LP01
<b>Quantity exception:</b>	E1
<b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:</b> Not applicable	

## SECTION 15: Regulatory information

### North American

#### SARA Section 311/312 (Specific toxic chemical listings):

Not classified.

#### SARA Section 302 (Extremely hazardous substances):

None of the ingredients are listed.

#### SARA Section 313 (Specific toxic chemical listings):

None of the ingredients are listed.

#### TSCA (Toxic Substances Control Act):

All ingredients are listed.

#### TSCA Rules and Orders:

25154-52-3 Nonyl phenol : subject to a Significant New Use Rule and Section 12b export notification.

#### Proposition 65 (California):

##### Chemicals known to cause cancer:

None of the ingredients are listed.

##### Chemicals known to cause reproductive toxicity for females:

None of the ingredients are listed.

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### Chemicals known to cause reproductive toxicity for males:

None of the ingredients are listed.

### Chemicals known to cause developmental toxicity:

None of the ingredients are listed.

## Canada

### DSL (Canadian Domestic Substances List):

All ingredients are listed.

## SECTION 16: Other information

### Abbreviations and Acronyms: None

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:** 3-1-0

**HMIS:** 3-1-0