

# Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial preparation date: 04.18.2018

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## CPS Hardener

### SECTION 1: Identification

#### Product identifier

**Product name:** CPS Hardener

**Product code:** CPS-1

#### Recommended use of the product and restriction on use

**Relevant identified uses:** Liquid curing agent for epoxy resin

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

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

#### Manufacturer or supplier details

##### Manufacturer:

##### North America

Gougeon Brothers, Inc.

100 Patterson Ave.

Bay City, MI 48706, U.S.A.

310-882-2120

safety@entropyresin.com

#### Emergency telephone number:

##### North America

##### CHEMTREC

800-424-9300 US

703-527-3887 International

### SECTION 2: Hazard(s) identification

#### GHS classification:

Skin corrosion, category 1A

Serious eye damage, category 1

Skin sensitization, category 1

Acute toxicity (oral), category 4

Chronic aquatic hazard, category 3

#### Label elements

##### Hazard pictograms:



**Signal word:** Danger

#### Hazard statements:

H314 Causes severe skin burns and eye damage.

H318 Causes serious eye damage.

H317 May cause an allergic skin reaction.

H302 Harmful if swallowed.

H412 Harmful to aquatic life with long lasting effects.

#### Precautionary statements:

P260 Do not breathe dust/fume/gas/mist/vapors/spray.

P264 Wash skin and eyes thoroughly after handling.

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P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P261 Avoid breathing dust/fume/gas/mist/vapors/spray.  
P272 Contaminated work clothing should not be allowed out of the workplace.  
P270 Do not eat, drink or smoke when using this product.  
P273 Avoid release to the environment.  
P310 Immediately call a POISON CENTER or doctor/physician.  
P321 Specific treatment (see supplemental first aid instructions on this label).  
P363 Wash contaminated clothing before reuse  
P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.  
P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.  
P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P302+P352 IF ON SKIN: Wash with plenty of soap and water.  
P333+P313 If skin irritation or a rash occurs: Get medical advice/attention  
P330 Rinse mouth  
P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.  
P405 Store locked up.  
P501 Dispose of contents/container in accordance with local/regional/national/international regulation.

**Hazards not otherwise classified:** None

## SECTION 3: Composition/information on ingredients

Identification	Name	Weight %
CAS number: 112-24-3	Triethylenetetramine	1-5
CAS number: 26950-63-0	Triethylenetetramine, propoxylated	5-20
CAS number: 9046-10-0	Poly(propylene glycol) bis(2-aminopropyl ether)	10-15
CAS number: 2855-13-2	Isophorone diamine	12-25

**Additional Information:** None

## SECTION 4: First aid measures

### Description of first aid measures

#### General notes:

Not determined or not applicable.

#### 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

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### 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 and effects:

Not determined or not applicable.

#### Delayed symptoms and effects:

Not determined or not applicable.

### Immediate medical attention and special treatment

#### Specific treatment:

Not determined or not applicable.

#### Notes for the doctor:

Not determined or not applicable.

## 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:

Not determined or not applicable.

### 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

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

### 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)

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Dispose of contents / container in accordance with local regulations

### Reference to other sections:

Not determined or not applicable.

## 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

Only those substances with limit values have been included below.

### Occupational Exposure limit values:

Country (Legal Basis)	Substance	Identifier	Permissible concentration
WEEL	Triethylenetetramine	112-24-3	WEEL TWA 1.0 ppm

### Biological limit values:

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

### Information on monitoring procedures:

Not determined or not applicable.

### 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.

## SECTION 9: Physical and chemical properties

### Information on basic physical and chemical properties

Appearance	Amber colored liquid
Odor	Amine
Odor threshold	Not determined or not available.

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<b>pH</b>	Not determined or not available.
<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>	>266°F (>130°C)
<b>Evaporation rate</b>	<1
<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>	0.1 Pa @ 20°C (68°F)
<b>Vapor density</b>	Not determined or not available.
<b>Density</b>	Not determined or not available.
<b>Relative density</b>	0.97-1.2 g/cm <sup>3</sup> @ 20°C (68°F)
<b>Solubilities</b>	Miscible @ 20°C (68°F)
<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.

### Other information

## 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.

### 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

### Acute toxicity

**Assessment:** Harmful if swallowed

**Product data:** No data available.

### Substance data:

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

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### Skin corrosion/irritation

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

**Product data:**

No data available.

**Substance data:**

Name	Result
Triethylenetetramine, propoxylated	Corrosive to the skin.
Poly(propylene glycol) bis(2-aminopropyl ether)	Corrosive to the skin.
Isophorone diamine	Corrosive to the skin.
Triethylenetetramine	Corrosive to the skin.

### Serious eye damage/irritation

**Assessment:** Causes serious eye damage

**Product data:**

No data available.

**Substance data:**

Name	Result
Triethylenetetramine, propoxylated	Corrosive effect on 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.
Triethylenetetramine	Sensitization possible through skin contact.
Triethylenetetramine, propoxylated	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:** Based on available data, the classification criteria are not met.

**Product data:**

No data available.

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**Substance data:** No data available.

### Specific target organ toxicity (single exposure)

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

**Product data:**

No data available.

**Substance data:** No data available.

### Specific target organ toxicity (repeated exposure)

**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

### 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
Triethylenetetramine	LC50 - Daphnia magna (Water flea) - 33.9 mg/L - 48 h

### Chronic (long-term) toxicity

**Product data:** No data available.

**Substance data:** No data available.

### Persistence and degradability

**Product data:** No data available.

**Substance data:** No data available.

### Bioaccumulative potential

**Product data:** No data available.

**Substance data:** No data available.

### Mobility in soil

**Product data:** No data available.

**Substance data:** No data available.

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

## SECTION 13: Disposal considerations

### Disposal methods:

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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


#### United States Transportation of dangerous goods (49 CFR DOT)

UN number	2735
UN proper shipping name	Amines, liquid, corrosive, n.o.s. (Isophorone diamine)
UN transport hazard class(es)	8 
Packing group	III
Environmental hazards	None
Special precautions for user	None

#### International Maritime Dangerous Goods (IMDG)

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

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

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

### SECTION 15: Regulatory information

#### United States regulations

##### Inventory listing (TSCA):

9046-10-0	Poly(propylene glycol) bis(2-aminopropyl ether)	Listed
2855-13-2	Isophorone diamine	Listed



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112-24-3	Triethylenetetramine	Listed
26950-63-0	Triethylenetetramine, propoxylated	Listed

**Significant New Use Rule (TSCA Section 5):** Not determined.

**Export notification under TSCA Section 12(b):** Not determined.

**SARA Section 302 extremely hazardous substances:** Not determined.

**SARA Section 313 toxic chemicals:**

2855-13-2	Isophorone diamine	Not Listed
112-24-3	Triethylenetetramine	Not Listed
9046-10-0	Poly(propylene glycol) bis(2-aminopropyl ether)	Not Listed
26950-63-0	Triethylenetetramine, propoxylated	Not Listed

**CERCLA:** Not determined.

**RCRA:** Not determined.

**Section 112(r) of the Clean Air Act (CAA):** Not determined.

**Massachusetts Right to Know:**

112-24-3	Triethylenetetramine	Listed
26950-63-0	Triethylenetetramine, propoxylated	Not Listed
2855-13-2	Isophorone diamine	Not Listed
9046-10-0	Poly(propylene glycol) bis(2-aminopropyl ether)	Not Listed

**New Jersey Right to Know:**

26950-63-0	Triethylenetetramine, propoxylated	Not Listed
9046-10-0	Poly(propylene glycol) bis(2-aminopropyl ether)	Not Listed
2855-13-2	Isophorone diamine	Listed
112-24-3	Triethylenetetramine	Listed

**New York Right to Know:**

112-24-3	Triethylenetetramine	Listed
26950-63-0	Triethylenetetramine, propoxylated	Not Listed
2855-13-2	Isophorone diamine	Listed
9046-10-0	Poly(propylene glycol) bis(2-aminopropyl ether)	Not Listed

**Pennsylvania Right to Know:**

112-24-3	Triethylenetetramine	Listed
26950-63-0	Triethylenetetramine, propoxylated	Not Listed
2855-13-2	Isophorone diamine	Not Listed
9046-10-0	Poly(propylene glycol) bis(2-aminopropyl ether)	Not Listed

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**California Proposition 65:** None of the ingredients are listed.

### SECTION 16: Other information

**Abbreviations and Acronyms:** None

**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**