

Safety Data Sheet

H-7 Hardener

SDS Revision Date:

02/23/2015



1. Identification

1.1. Product identifier

Product Identity

H-7 Hardener

Alternate Names

H-7 Hardener

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

Intended use

See Technical Data Sheet.

Application Method

See Technical Data Sheet.

1.3. Details of the supplier of the safety data sheet

Company Name

Cast-Coat, Inc.
354 West Street
W. Bridgewater, MA 02379

Emergency

CHEMTREC 24 hour Emergency Telephone No.

1-800-424-9300 or 1-703-527-3887

Customer Service: Cast-Coat, Inc.

1-800-527-4502 or 1-508-587-4502

2. Hazard(s) identification

2.1. Classification of the substance or mixture

Acute Tox. 5;H303

May be harmful if swallowed. (Not adopted by US OSHA)

Acute Tox. 5;H313

May be harmful in contact with skin. (Not adopted by US OSHA)

Skin Corr. 1;H314

Causes severe skin burns and eye damage.

Eye Dam. 1;H318

Causes serious eye damage.

Skin Sens. 1;H317

May cause an allergic skin reaction.

Resp. Sens. 1;H334

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Repr. 2;H361fd

Suspected of damaging fertility. Suspected of damaging the unborn child.

2.2. Label elements

Using the Toxicity Data listed in section 11 and 12 the product is labeled as follows.



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Danger

H303 May be harmful if swallowed.

H313 May be harmful in contact with skin.

H314 Causes severe skin burns and eye damage.

H317 May cause an allergic skin reaction.

H318 Causes serious eye damage.

H334 May cause allergic or asthmatic symptoms or breathing difficulties if inhaled.

H361Fd Suspected of damaging fertility. Suspected of damaging the unborn child.

[Prevention]:

P261 Avoid breathing dust / fume / gas / mist / vapors / spray.

P264 Wash thoroughly after handling.

P272 Contaminated work clothing should not be allowed out of the workplace.

P280 Wear protective gloves / eye protection / face protection.

P285 In case of inadequate ventilation wear respiratory protection.

[Response]:

P301+330+331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P302+352 IF ON SKIN: Wash with plenty of soap and water.

P303+361+353 IF ON SKIN (or hair): Remove / Take off immediately all contaminated clothing. Rinse skin with water / shower.

P304+312 IF INHALED: Call a POISON CENTER or doctor / physician if you feel unwell.

P305+351+338 IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing.

P308+313 IF exposed or concerned: Get medical advice / attention.

P310 Immediately call a POISON CENTER or doctor / physician.

P321 Specific treatment (see information on this label).

P333+313 If skin irritation or a rash occurs: Get medical advice / attention.

P340 Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P341 If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.

P342+311 If experiencing respiratory symptoms: Call a POISON CENTER or doctor / physician.

P363 Wash contaminated clothing before reuse.

[Storage]:

P405 Store locked up.

[Disposal]:

P501 Dispose of contents / container in accordance with local / national regulations.

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3. Composition/information on ingredients

This product contains the following substances that present a hazard within the meaning of the relevant State and Federal Hazardous Substances regulations.

Ingredient/Chemical Designations	Weight %	GHS Classification	Notes
3,3'- Oxybis(2,1-ethanediolyloxy) bis-1-propanamine CAS Number: 0004246-51-9	50 - 75	Skin Corr. 1B;H314 Skin Sens. 1;H317 Eye Dam. 1;H318	[1]
Polyoxypropylenediamine CAS Number: 0009046-10-0	25 - 50	Skin Corr. 1;H314	[1]
Triethanolamine CAS Number: 0000102-71-6	1.0 - 10	Eye Irrit. 2;H319	[1]
Piperazine CAS Number: 0000110-85-0	1.0 - 10	Repr. 2;H361fd Skin Corr. 1B;H314 Resp. Sens. 1;H334 Skin Sens. 1;H317	[1]
2-piperazin-1-ethylamine CAS Number: 0000140-31-8	1.0 - 10	Acute Tox. 4;H312 Acute Tox. 4;H302 Skin Corr. 1B;H314 Skin Sens. 1;H317 Aquatic Chronic 3;H412	[1]

[1] Substance classified with a health or environmental hazard.

[2] Substance with a workplace exposure limit.

[3] PBT-substance or vPvB-substance.

*The full texts of the phrases are shown in Section 16.

4. First aid measures

4.1. Description of first aid measures

General

In all cases of doubt, or when symptoms persist, seek medical attention.
Never give anything by mouth to an unconscious person.

Inhalation

Move to fresh air and provide oxygen if necessary.

Eyes

Immediately flush eyes with water for at least 30 minutes. Seek medical attention.

Skin

Remove contaminated clothing and wipe excess from skin. Promptly wash with soap and water for 15 minutes. Seek medical attention if irritation persists.

Ingestion

Rinse mouth with water. If conscious, give small quantities of water to drink. Do not induce vomiting. If vomiting occurs, keep victim's head below hips to prevent vomit from entering lungs. Seek medical attention.

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

Overview

Eye Contact: Corrosive to the eyes and may cause severe damage, including blindness.
Vapors may be irritating.

Skin Contact: Corrosive to the skin. May cause skin sensitization. May be toxic if absorbed through the skin.

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Inhalation: Vapors / mists may be corrosive to the upper respiratory tract. Repeated or prolonged exposure can result in lung damage.

Ingestion: Not expected to be a relevant route of exposure, however, corrosive and may cause severe and permanent damage to the mouth, throat and stomach.

Aggravated Medical Conditions: Pre-existing eye, skin and respiratory disorders may be aggravated by exposure to this product. Pre-existing respiratory and skin allergies may be increased from exposure to this product.

Good practice requires that gross amounts of any chemical be removed from the skin as soon as practical, especially before eating or smoking. See section 2 for further details.

May cause allergy or asthma symptoms of breathing difficulties if inhaled.

Inhalation

Eyes

Causes serious eye damage.

Skin

May be harmful in contact with skin. (Not adopted by US OSHA) May cause an allergic skin reaction. Causes severe skin burns and eye damage.

Ingestion

May be harmful if swallowed. (Not adopted by US OSHA)

5. Fire-fighting measures

5.1. Extinguishing media

Carbon dioxide (CO₂), foam, dry chemical, water spray

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition: Carbon Monoxide, Carbon Dioxide, Nitrous Oxide.

Avoid breathing dust / fume / gas / mist / vapors / spray.

5.3. Advice for fire-fighters

Protective Equipment: Do not enter confined space without full bunker gear (helmet with face shield, bunker coats, gloves and rubber boots). Use self contained, positive pressure breathing apparatus.

Specific Hazards: Decomposition and combustion products may be toxic. Containers exposed to intense heat should be cooled with water to avoid vapor pressure buildup.

ERG Guide No.

153

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Put on appropriate personal protective equipment (see section 8).

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6.2. Environmental precautions

Do not allow spills to enter drains or waterways.

Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

6.3. Methods and material for containment and cleaning up

Soak up residue with absorbent material and shovel into non-leaking containers

7. Handling and storage

7.1. Precautions for safe handling

Good practice requires that gross amounts of any chemical be removed from the skin as soon as practical, especially before eating or smoking. Wear splash proof chemical goggles, impervious gloves and protective clothing to prevent skin contact. Emergency eye wash stations should be readily accessible.

See section 2 for further details. - [Prevention]:

7.2. Conditions for safe storage, including any incompatibilities

Handle containers carefully to prevent damage and spillage.

Incompatible materials: No data available.

Store in a cool, dry location in tightly sealed containers. Do not pressurize containers to empty them.

See section 2 for further details. - [Storage]:

7.3. Specific end use(s)

No data available.

8. Exposure controls and personal protection

8.1. Control parameters

Exposure			
CAS No.	Ingredient	Source	Value
0000102-71-6	Triethanolamine	OSHA	No Established Limit
		ACGIH	TWA: 5 mg/m3
		NIOSH	No Established Limit
		Supplier	No Established Limit
0000110-85-0	Piperazine	OSHA	No Established Limit
		ACGIH	TWA: 0.3 mg/m3 STEL: 1 mg/m3 S
		NIOSH	No Established Limit
		Supplier	No Established Limit
0000140-31-8	2-piperazin-1-ethylamine	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit
		Supplier	No Established Limit

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0004246-51-9	3,3'- Oxybis(2,1-ethanedioxy) bis-1-propanamine	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit
		Supplier	No Established Limit
0009046-10-0	Polyoxypropylenediamine	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit
		Supplier	No Established Limit

Carcinogen Data

CAS No.	Ingredient	Source	Value
0000102-71-6	Triethanolamine	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: Yes; Group 4: No;
0000110-85-0	Piperazine	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;
0000140-31-8	2-piperazin-1-ethylamine	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;
0004246-51-9	3,3'- Oxybis(2,1-ethanedioxy) bis-1-propanamine	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;
0009046-10-0	Polyoxypropylenediamine	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;

8.2. Exposure controls

Respiratory

A NIOSH approved full-facepiece respirator fitted with organic vapor cartridges may be used when the exposure level is low. For emergencies or when the exposure level is unknown use a full-facepiece positive-pressure air-supplied respirator.

Eyes

Wear safety goggles or safety glasses with side shields. Emergency eye wash stations should be readily accessible.

Skin

Wear overalls to keep skin contact to a minimum. Wear chemical resistant impervious gloves and protective clothing such as an apron to prevent skin contact.

Engineering Controls

Provide effective mechanical exhaust to ensure concentration levels are below exposure limits.

Other Work Practices

Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

See section 2 for further details. - [Prevention]:

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9. Physical and chemical properties

Appearance	Clear to Amber Liquid
Odor	Amine odor
Odor threshold	Not Measured
pH	Not Measured
Melting point / freezing point	Not Measured
Initial boiling point and boiling range	Not Measured
Flash Point	> 100 C
Evaporation rate (Ether = 1)	Not Measured
Flammability (solid, gas)	Not Applicable
Upper/lower flammability or explosive limits	Lower Explosive Limit: Not Measured Upper Explosive Limit: Not Measured
Vapor pressure (Pa)	< 1.00 mmHg at 20 C
Vapor Density	Not Measured
Specific Gravity	0.98
Solubility in Water	Miscible
Partition coefficient n-octanol/water (Log Kow)	Not Measured
Auto-ignition temperature	Not Measured
Decomposition temperature	Not Measured
Viscosity (cSt)	Not Measured
VOC Content	< 15% by weight

9.2. Other information

No other relevant information.

10. Stability and reactivity

10.1. Reactivity

Hazardous Polymerization will not occur.

10.2. Chemical stability

Stable under normal circumstances.

10.3. Possibility of hazardous reactions

No data available.

10.4. Conditions to avoid

Avoid heat, flame strong oxidizing agents.. Properly dispose of contaminated leather articles, such as shoes or belts that cannot be decontaminated.

10.5. Incompatible materials

No data available.

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10.6. Hazardous decomposition products

Carbon Monoxide, Carbon Dioxide, Nitrous Oxide.

11. Toxicological information

Acute toxicity

Ingredient	Oral LD50, mg/kg	Skin LD50, mg/kg	Inhalation Vapor LD50, mg/L/4hr	Inhalation Dust/Mist LD50, mg/L/4hr	Inhalation Gas LD50, ppm
3,3'- Oxybis(2,1-ethanedioxy) bis-1-propanamine - (4246-51-9)	No data available	No data available	No data available	No data available	No data available
Polyoxypropylenediamine - (9046-10-0)	1,100.00, Rat - Category: 4	980.00, Rabbit - Category: 3	No data available	No data available	No data available
Triethanolamine - (102-71-6)	No data available	No data available	No data available	No data available	No data available
Piperazine - (110-85-0)	No data available	No data available	No data available	No data available	No data available
2-piperazin-1-ethylamine - (140-31-8)	2,107.50, Rat - Category: 5	866.80, Rabbit - Category: 3	No data available	No data available	No data available

Note: When no route specific LD50 data is available for an acute toxin, the converted acute toxicity point estimate was used in the calculation of the product's ATE (Acute Toxicity Estimate).

Classification	Category	Hazard Description
Acute toxicity (oral)	5	May be harmful if swallowed. (Not adopted by US OSHA)
Acute toxicity (dermal)	5	May be harmful in contact with skin. (Not adopted by US OSHA)
Acute toxicity (inhalation)	---	Not Applicable
Skin corrosion/irritation	1	Causes severe skin burns and eye damage.
Serious eye damage/irritation	1	Causes serious eye damage.
Respiratory sensitization	1	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Skin sensitization	1	May cause an allergic skin reaction.
Germ cell mutagenicity	---	Not Applicable
Carcinogenicity	---	Not Applicable
Reproductive toxicity	---	Suspected of damaging fertility. Suspected of damaging the unborn child.
STOT-single exposure	---	Not Applicable
STOT-repeated exposure	---	Not Applicable
Aspiration hazard	---	Not Applicable

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12. Ecological information

12.1. Toxicity

The preparation has been assessed following the conventional method of the Dangerous Preparations Directive 1999/45/EC and GHS and is not classified as dangerous for the environment, but contains substance(s) dangerous for the environment. See section 3 for details

Aquatic Ecotoxicity

Ingredient	96 hr LC50 fish, mg/l	48 hr EC50 crustacea, mg/l	ErC50 algae, mg/l
3,3'- Oxybis(2,1-ethanediylxy) bis-1-propanamine - (4246-51-9)	Not Available	Not Available	Not Available
Polyoxypropylenediamine - (9046-10-0)	Not Available	15.00, Daphnia magna	Not Available
Triethanolamine - (102-71-6)	Not Available	Not Available	Not Available
Piperazine - (110-85-0)	Not Available	Not Available	Not Available
2-piperazin-1-ethylamine - (140-31-8)	100.00, Oncorhynchus mykiss	32.00, Daphnia magna	495.00 (72 hr), Pseudokirchneriella subcapitata

12.2. Persistence and degradability

No data available.

12.3. Bioaccumulative potential

Not Measured

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

This product contains no PBT/vPvB chemicals.

12.6. Other adverse effects

No data available.

13. Disposal considerations

13.1. Waste treatment methods

Observe all federal, state and local regulations when disposing of this substance.
RCRA: D002

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14. Transport information

	DOT	IMO / IMDG	ICAO / IATA
14.1. UN number	UN2735	UN2735	UN2735
14.2. UN proper shipping name	Amines, Liquid, Corrosive, N.O.S. (Polyoxypropylenediamine, Trioxatridecanediamine)	Amines, Liquid, Corrosive, N.O.S. (Polyoxypropylenediamine, Trioxatridecanediamine)	Amines, Liquid, Corrosive, N.O.S. (Polyoxypropylenediamine, Trioxatridecanediamine)
14.3. Transport hazard class(es)	8	8	8
14.4. Packing group	III	III	III
14.5. Environmental hazards			
IMDG	Marine Pollutant: No		
14.6. Special precautions for user			
	No further information		

15. Regulatory information

Regulatory Overview	The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented.
Toxic Substance Control Act (TSCA)	All components of this material are either listed or exempt from listing on the TSCA Inventory.
WHMIS Classification	D2A E
US EPA Tier II Hazards	Fire: No Sudden Release of Pressure: No Reactive: No Immediate (Acute): Yes Delayed (Chronic): No

EPCRA 311/312 Chemicals and RQs:

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

EPCRA 302 Extremely Hazardous:

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

EPCRA 313 Toxic Chemicals:

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65 - Carcinogens (>0.0%):

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

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Proposition 65 - Developmental Toxins (>0.0%):

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65 - Female Repro Toxins (>0.0%):

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65 - Male Repro Toxins (>0.0%):

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

New Jersey RTK Substances (>1%):

2-piperazin-1-ethylamine

Piperazine

Triethanolamine

Pennsylvania RTK Substances (>1%):

2-piperazin-1-ethylamine

Piperazine

Triethanolamine

16. Other information

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

The full text of the phrases appearing in section 3 is:

H302 Harmful if swallowed.

H312 Harmful in contact with skin.

H314 Causes severe skin burns and eye damage.

H317 May cause an allergic skin reaction.

H318 Causes serious eye damage.

H319 Causes serious eye irritation.

H334 May cause allergic or asthmatic symptoms or breathing difficulties if inhaled.

H361fd Suspected of damaging fertility. Suspected of damaging the unborn child.

H412 Harmful to aquatic life with long lasting effects.

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This is the first version in the GHS SDS format. Listings of changes from previous versions in other formats are not applicable.

All information appearing herein is based upon data obtained from the manufacturer and / or recognized technical sources. While the information is believed to be accurate, Cast-Coat makes no representations as to its accuracy or sufficiency. Conditions of use are beyond the control of Cast-Coat and therefore users are responsible to verify this data under their own operating conditions to determine whether the product is suitable for their purposes. Cast-Coat, Inc. assumes no responsibility for injury from the use of the product described herein.

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