



SAFETY DATA SHEET

Issuing Date: 22-Dec-2011

Revision Date: 18-Oct-2013

Revision Number: 1

1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifier

Product Code: 04489CEH-4
Product Name: EPOXY HARDENER MIL-DTL-53022E, TYPE II, PART B

Contains DIETHYLENETRIAMINE

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

Recommended Use Coatings

Uses advised against No information available

1.3 Details of the supplier of the safety data sheet

Manufacturer

Hentzen Coatings Incorporated
6937 West Mill Road
Milwaukee, Wisconsin, USA
53218-1225

For further information, please contact:

Contact Point 001 414 353 4200
E-mail address coatings@hentzen.com

1.4 Emergency telephone number

Emergency telephone - §45 - (EC)1272/2008
Europe CHEMTREC (USA) 001 800 424 9300

2. HAZARDS IDENTIFICATION

This safety data sheet complies with the requirements of: Regulation (EC) No. 1907/2006 and Regulation (EC) No. 1272/2008

2.1 Classification of the substance or mixture

Regulation (EC) No 1272/2008

Skin corrosion/irritation	Category 1 Sub-category B - (H314)
Serious eye damage/eye irritation	Category 1 - (H318)
Skin sensitization	Category 1 - (H317)
Specific target organ toxicity (single exposure)	Category 3 - (H336)
Flammable liquids	Category 3 - (H226)

Classification according to EU Directives 67/548/EEC or 1999/45/EC

Full text of R-phrases: see section 16

Symbol(s)

Xn - Harmful

R-code(s)

R10 - Xn; R22 - Xi; R36/38 - R43 - R67

2.2 Label Elements

Product identifier

Contains DIETHYLENETRIAMINE



Signal Word
DANGER

Hazard Statements

H314 - Causes severe skin burns and eye damage
H317 - May cause an allergic skin reaction
H336 - May cause drowsiness or dizziness
H226 - Flammable liquid and vapor

Precautionary Statements - EU (§28, 1272/2008)

P280 - Wear protective gloves/protective clothing/eye protection/face protection
P260 - Do not breathe dust/fume/gas/mist/vapors/spray
P303 + P361 + P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P310 - Immediately call a POISON CENTER or doctor/physician
P280 - Wear eye protection/ face protection
P321 - Specific treatment (see .? on this label)
P370 + P378 - In case of fire: Use dry sodium carbonate to extinguish
P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking

2.3. Other hazards

No information available

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

Chemical Name	EC No	CAS No	Weight-%	Classification according to 67/548/EEC	Classification according to Regulation (EC) No. 1272/2008 [CLP]	REACH registration number
1-METHOXY-2-PROPANO L	203-539-1	107-98-2	20%-30%	R10 R67	STOT SE 3 (H336) Flam. Liq. 3 (H226)	no data available
METHYL AMYL KETONE	203-767-1	110-43-0	10%-20%	R10 Xn; R20/22	Acute Tox. 4 (H302) Acute Tox. 4 (H332) Flam. Liq. 3 (H226)	no data available
ETHYLENE GLYCOL PROPYL ETHER	220-548-6	2807-30-9	10%-20%	Xn; R21 Xi; R36	Acute Tox. 4 (H312) Eye Irrit. 2 (H319)	no data available
DIETHYLENETRIAMINE	203-865-4	111-40-0	5%-10%	Xn; R21/22 C; R34 R43	Acute Tox. 4 (H302) Acute Tox. 4 (H312) Skin Corr. 1B (H314) Skin Sens. 1 (H317)	no data available

Full text of R-phrases: see section 16

4. FIRST AID MEASURES

4.1 Description of first aid measures

General advice	Show this safety data sheet to the doctor in attendance If symptoms persist, call a physician
Eye Contact	Immediately flush eyes with water for at least 15 minutes. Get medical attention. If easy to do, remove contact lenses Keep eye wide open while rinsing If symptoms persist, call a physician
Skin Contact	Remove and wash contaminated clothing and gloves, including the inside, before re-use If skin irritation persists, call a physician Immediate medical attention is not required Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes
Ingestion	Do NOT induce vomiting Drink plenty of water If symptoms persist, call a physician Rinse mouth Clean mouth with water and afterwards drink plenty of water Never give anything by mouth to an unconscious person Consult a physician if necessary
Inhalation	If breathing is irregular or stopped, administer artificial respiration Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation Consult a physician if necessary Remove to fresh air Immediate medical attention is not required Move to fresh air in case of accidental inhalation of vapors If symptoms persist, call a physician
Self-protection of the first aider	Remove all sources of ignition Use personal protective equipment as required

4.2 Most important symptoms and effects, both acute and delayed

Most Important Symptoms and Effects No information available

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician May cause sensitization of susceptible persons Treat symptomatically

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment

Extinguishing Media Which Must Not Be Used For Safety Reasons

No information available

5.2 Special hazards arising from the substance or mixture

Special Hazard

None in particular

5.3 Advice for fire-fighters

Special protective equipment for fire-fighters

As in any fire, wear self-contained breathing apparatus and full protective gear

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Evacuate personnel to safe areas Ensure adequate ventilation Remove all sources of ignition Use personal protective equipment as required Keep people away from and upwind of spill/leak Avoid breathing vapors or mists Ventilate the area

See Section 12 for additional information

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so Prevent product from entering drains Do not flush into surface water or sanitary sewer system Vapors are heavier than air, spread along floors and form explosive mixtures with air

6.3 Methods and material for containment and cleaning up

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust)

111-40-0				TWA: 4.3 mg/m ³ STEL: 3 ppm STEL: 13 mg/m ³ Skin	TWA: 4 mg/m ³ Skin
----------	--	--	--	---	----------------------------------

Chemical Name	Austria	Switzerland	Poland	Norway	Ireland
1-METHOXY-2-PROPANOL 107-98-2	Skin STEL 50 ppm STEL 187 mg/m ³ TWA: 50 ppm TWA: 187 mg/m ³ Ceiling 50 ppm Ceiling 187 mg/m ³	STEL: 200 ppm STEL: 720 mg/m ³ TWA: 100 ppm TWA: 360 mg/m ³	STEL: 360 mg/m ³ TWA: 180 mg/m ³	TWA: 50 ppm TWA: 180 mg/m ³ Skin STEL: 50 ppm STEL: 180 mg/m ³	TWA: 100 ppm TWA: 375 mg/m ³ STEL: 150 ppm STEL: 568 mg/m ³
METHYL AMYL KETONE 110-43-0	Skin STEL 100 ppm STEL 473 mg/m ³ TWA: 50 ppm TWA: 237 mg/m ³	TWA: 50 ppm TWA: 235 mg/m ³	STEL: 475 mg/m ³ TWA: 238 mg/m ³	TWA: 25 ppm TWA: 115 mg/m ³ Skin STEL: 25 ppm STEL: 115 mg/m ³	TWA: 50 ppm TWA: 238 mg/m ³ STEL: 100 ppm STEL: 475 mg/m ³ Skin
ETHYLENE GLYCOL PROPYL ETHER 2807-30-9	Skin STEL 20 ppm STEL 86 mg/m ³ TWA: 20 ppm TWA: 86 mg/m ³ Ceiling 20 ppm Ceiling 86 mg/m ³	Skin STEL: 40 ppm STEL: 170 mg/m ³ TWA: 20 ppm TWA: 85 mg/m ³			
DIETHYLENETRIAMINE 111-40-0	TWA: 1 ppm TWA: 4 mg/m ³	Skin TWA: 1 ppm TWA: 4 mg/m ³	STEL: 12 mg/m ³ TWA: 4 mg/m ³	TWA: 1 ppm TWA: 4 mg/m ³ Skin STEL: 1 ppm STEL: 4 mg/m ³	TWA: 1 ppm TWA: 4 mg/m ³ STEL: 3 ppm STEL: 12 mg/m ³ Skin

Derived No Effect Level (DNEL) No information available

Predicted No Effect Concentration (PNEC) No information available

8.2 Exposure controls

Engineering Measures

Ensure adequate ventilation, especially in confined areas

Personal protective equipment

Eye Protection

Use personal protective equipment as required

Hand Protection

Protective gloves

Skin and Body Protection

Impervious gloves Antistatic boots Wear fire/flamm resistant/retardant clothing Long sleeved clothing Apron

Respiratory Protection

No special protective equipment required

Hygiene Measures

Do not eat, drink or smoke when using this product Regular cleaning of equipment, work area and clothing is recommended

Environmental exposure controls

Do not allow into any sewer, on the ground or into any body of water

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical state Liquid **Appearance** Clear
Odor Solvent

Property	Values	Note
pH VALUE		no data available
Melting/freezing point		No data available
Boiling Point	120 °C / 248 °F	
Flash Point	31 °C / 88 °F	(based on components)
Evaporation rate		No data available
Flammability (solid, gas)		No data available

Flammability Limits in Air	
upper flammability limit	8.62
lower flammability limit	0.99
Vapor pressure	no data available
Vapor density	no data available
Relative density	0.96
Water solubility	no data available
Solubility in other solvents	no data available
Partition coefficient: n-octanol/water	no data available
Autoignition temperature	No data available
Decomposition temperature	no data available
Viscosity	no data available

9.2 Other information

VOC Content (%) 60.71 %

10. STABILITY AND REACTIVITY

10.1 Reactivity

Not applicable

10.2 Chemical stability

Stable under normal conditions

10.3 Possibility of hazardous reactions

None under normal use conditions

10.4 Conditions to avoid

Heat, flames and sparks

10.5 Incompatible materials

None in particular

10.6 Hazardous decomposition products

None under normal use

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Product Information

Acute Toxicity

Product does not present an acute toxicity hazard based on known or supplied information

Inhalation There is no data for this product

Eye Contact There is no data for this product

Skin Contact There is no data for this product

Ingestion There is no data for this product

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral) 2,312.00 mg/kg

ATEmix (dermal) 2,968.00 mg/kg

ATEmix (inhalation-dust/mist) 5.61 mg/l

Unknown Acute Toxicity

29.9364% of the mixture consists of ingredient(s) of unknown toxicity.

Oral LD50 4705 mg/kg (rat) Estimated
 Dermal LD50 12978 mg/kg (rat) Estimated
 Inhalation LC50 22054 mg/l (mist) (dust) mg/m³ Estimated
 Inhalation LC50

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
1-METHOXY-2-PROPANOL	5000 mg/kg (Rat)	13 g/kg (Rabbit)	6 mg/L (Rat) 4 h
METHYL AMYL KETONE	1600 mg/kg (Rat)	12.6 mL/kg (Rabbit)	2000 ppm (Rat) 4 h
ETHYLENE GLYCOL PROPYL ETHER	3089 mg/kg (Rat)	870 mg/kg (Rabbit)	1530 ppm (Rat) 7 h
DIETHYLENETRIAMINE	1080 mg/kg (Rat)	672 mg/kg (Rabbit)	70 mg/L (Rat) 4 h

Chronic Toxicity

Sensitization No information available

Target Organ Effects Central nervous system (CNS) Eyes Peripheral Nervous System (PNS) Respiratory system Skin

Aspiration hazard No information available

12. ECOLOGICAL INFORMATION

12.1

51.765% of the mixture consists of component(s) of unknown hazards to the aquatic environment

Chemical Name	Toxicity to Algae	Toxicity to Fish	Toxicity to daphnia and other aquatic invertebrates
1-METHOXY-2-PROPANOL	-	20.8: 96 h Pimephales promelas g/L LC50 static	23300: 48 h Daphnia magna mg/L EC50
METHYL AMYL KETONE	-	126 - 137: 96 h Pimephales promelas mg/L LC50 flow-through	-
DIETHYLENETRIAMINE	1164: 72 h Pseudokirchneriella subcapitata mg/L EC50 592: 96 h Desmodesmus subspicatus mg/L EC50 345.6: 96 h Pseudokirchneriella subcapitata mg/L EC50	248: 96 h Poecilia reticulata mg/L LC50 static 1014: 96 h Poecilia reticulata mg/L LC50 semi-static	16: 48 h Daphnia magna mg/L EC50

12.2 Persistence and degradability

No information available.

12.3 Bioaccumulative potential

No information available.

12.4 Mobility in soil

No information available.

12.5 Results of PBT and vPvB assessment

No information available

12.6 Other adverse effects

No information available.

Endocrine Disruptor Information

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Waste from Residues/Unused Products	Dispose of in accordance with local regulations
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal
Other information	According to the European Waste Catalog, Waste Codes are not product specific, but application specific Waste codes should be assigned by the user based on the application for which the product was used

14. TRANSPORT INFORMATION

IMDG/IMO

14.1 <u>UN Number</u>	UN1263
14.2 <u>Proper Shipping Name</u>	Paint
14.3 <u>Hazard Class</u>	3
14.4 <u>Packing group</u>	III
Description	UN1263, Paint, 3, III
14.5 <u>Environmental Hazards</u>	None
14.6 <u>Special Provisions</u>	
EmS-No	F-E, S-E
14.7 <u>Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</u>	No information available

RID

14.1 <u>UN Number</u>	UN1263
14.2 <u>Proper Shipping Name</u>	Paint
14.3 <u>Hazard Class</u>	3
14.4 <u>Packing group</u>	III
Description	UN1263, Paint, 3, III
14.5 <u>Environmental Hazards</u>	None
14.6 <u>Special Provisions</u>	
Classification Code	F1

ADR/RID

14.1 <u>UN Number</u>	UN1263
14.2 <u>Proper Shipping Name</u>	Paint
14.3 <u>Hazard Class</u>	3
14.4 <u>Packing group</u>	III
Description	UN1263, Paint, 3, III, (D/E)
14.5 <u>Environmental Hazards</u>	None
14.6 <u>Special Provisions</u>	
Classification Code	F1
ADR/RID-Labels	3
Tunnel restriction code	(D/E)

ICAO

14.1 <u>UN Number</u>	UN1263
14.2 <u>Proper Shipping Name</u>	Paint
14.3 <u>Hazard Class</u>	3
14.4 <u>Packing group</u>	III
Description	UN1263, Paint, 3, III
14.5 <u>Environmental Hazards</u>	None
14.6 <u>Special Provisions</u>	
Special Provisions	None

IATA

14.1 <u>UN Number</u>	UN1263
14.2 <u>Proper Shipping Name</u>	Paint

14.3 <u>Hazard Class</u>	3
14.4 <u>Packing group</u>	III
Description	UN1263, Paint, 3, III
14.5 <u>Environmental Hazards</u>	None
14.6 <u>Special Provisions</u>	
ERG Code	3L

15. REGULATORY INFORMATION

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

International Inventories

All of the components in the product are on the following Inventory lists Canada (DSL/NDSL).

TSCA	Complies
EINECS/ELINCS	Complies
DSL/NDSL	Complies
PICCS	Complies
ENCS	Complies
IECSC	Complies
AICS	Complies
KECL	Complies

Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

PICCS - Philippines Inventory of Chemicals and Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

AICS - Australian Inventory of Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

15.2 Chemical Safety Assessment

No information available

16. OTHER INFORMATION

Full text of R-phrases referred to under sections 2 and 3

R10 - Flammable

R67 - Vapors may cause drowsiness and dizziness

R36 - Irritating to eyes

R21 - Harmful in contact with skin

R34 - Causes burns

R43 - May cause sensitization by skin contact

R22 - Harmful if swallowed

R20/22 - Harmful by inhalation and if swallowed

R21/22 - Harmful in contact with skin and if swallowed

R36/38 - Irritating to eyes and skin

Full text of H-Statements referred to under section 3

H336 - May cause drowsiness or dizziness

H226 - Flammable liquid and vapor

H302 - Harmful if swallowed

H332 - Harmful if inhaled

H312 - Harmful in contact with skin

H314 - Causes severe skin burns and eye damage

H317 - May cause an allergic skin reaction

H319 - Causes serious eye irritation

SVHC: Substances of Very High Concern for Authorization:

TWA Ceiling	Time-Weighted Average Maximum limit value	STEL: *	Short term occupational exposure limit value Skin designation
----------------	--	------------	--

Issuing Date: 22-Dec-2011

Revision Date: 18-Oct-2013

Revision Note Not applicable.

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

Disclaimer

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.