

SECTION 1: Identification**1.1. Identification**

Product form : Mixture
Product name : ACTIVATOR - EPOXY PRIMER SURFACER B
Product code : MPB0200

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

No additional information available

1.3. Details of the supplier of the safety data sheet

Endura Manufacturing Company Ltd.
12425 149 Street NW
Edmonton, T5L 2J6 - Canada
T 1-780-451-4242 - F 1-780-452-5079
info@endura.ca - www.endurapaint.com/marine

1.4. Emergency telephone number

Emergency number : In the event of an emergency involving dangerous goods:
in Canada call CHEMTREC at 1-800-424-9300 24 hours / 7 days (Account Name for Canada Endura Manufacturing Co. Ltd.)
in the US call CHEMTREC at 1-800-424-9300 24 hours / 7 days (Account Name for US is Polyglass Coatings)

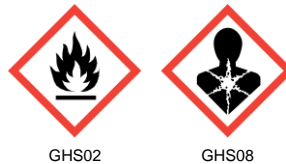
SECTION 2: Hazard(s) identification**2.1. Classification of the substance or mixture****GHS US classification**

Flammable liquids Category 2	H225	Highly flammable liquid and vapor
Respiratory sensitization, Category 1	H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled
Skin sensitization, Category 1	H317	May cause an allergic skin reaction

Full text of H statements : see section 16

2.2. Label elements**GHS US labeling**

Hazard pictograms (GHS-US) :



Signal word (GHS-US) :

Danger

Hazard statements (GHS-US) :

H225 - Highly flammable liquid and vapor
H317 - May cause an allergic skin reaction
H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled

Precautionary statements (GHS-US) :

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 - Keep container tightly closed.
P240 - Ground/Bond container and receiving equipment
P241 - Use explosion-proof electrical/ventilating/lighting equipment
P242 - Use only non-sparking tools.
P243 - Take precautionary measures against static discharge.
P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.
P272 - Contaminated work clothing must not be allowed out of the workplace
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P284 - [In case of inadequate ventilation] wear respiratory protection.
P302+P352 - IF ON SKIN: Wash with plenty of soap and water
P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
P304+P341 - If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing
P321 - Specific treatment (see 4.1. First aid procedures on this label)
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
P342+P311 - If experiencing respiratory symptoms: Call a poison center or doctor
P363 - Wash contaminated clothing before reuse.

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P370+P378 - In case of fire: Use dry chemical powder, alcohol-resistant foam, carbon dioxide (CO₂) to extinguish

P403+P235 - Store in a well-ventilated place. Keep cool.

P501 - Dispose of contents/container in accordance with all local, regional, national and international regulations.

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	wt%	GHS US classification
ethylenediamine	(CAS-No.) 107-15-3	< 5	Flam. Liq. 3, H226 Acute Tox. 4 (Oral), H302 Acute Tox. 3 (Dermal), H311 Skin Corr. 1, H314 Resp. Sens. 1, H334 Skin Sens. 1, H317

Full text of H-phrases: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: Call a poison center/doctor/physician if you feel unwell.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a poison center or a doctor.
First-aid measures after skin contact	: Rinse skin with water/shower. Remove/Take off all contaminated clothing immediately. If skin irritation or rash occurs: Get medical advice/attention.
First-aid measures after eye contact	: Rinse eyes with water as a precaution.
First-aid measures after ingestion	: Call a poison center/doctor/physician if you feel unwell.

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

Symptoms/effects after inhalation	: May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Symptoms/effects after skin contact	: May cause an allergic skin reaction.
Symptoms/effects after eye contact	: Irritation to eyes.
Symptoms/effects after ingestion	: Harmful if swallowed.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

5.2. Special hazards arising from the substance or mixture

Fire hazard	: Highly flammable liquid and vapor.
Reactivity	: Highly flammable liquid and vapor.

5.3. Advice for firefighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. No open flames, no sparks, and no smoking. Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapors/spray.

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6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8 Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.

Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 8 : Exposure-controls/personal protection".

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Flammable vapors may accumulate in the container. Use explosion-proof equipment. Wear personal protective equipment. Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapors/spray.

Hygiene measures : Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Ground/bond container and receiving equipment.

Storage conditions : Store in a well-ventilated place. Keep cool. Keep container tightly closed.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

ethylenediamine (107-15-3)		
ACGIH	ACGIH TWA (ppm)	10 ppm
OSHA	OSHA PEL (TWA) (mg/m ³)	25 mg/m ³
OSHA	OSHA PEL (TWA) (ppm)	10 ppm

8.2. Exposure controls

Appropriate engineering controls : Ensure good ventilation of the work station.

Hand protection : Protective gloves.

Eye protection : Safety glasses.

Skin and body protection : Wear suitable protective clothing.

Respiratory protection : Wear respiratory protection.

Environmental exposure controls : Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid

Color : No data available

Odor : There may be no odour warning properties, odour is subjective and inadequate to warn of overexposure.
Mixture contains one or more component(s) which have the following odour:
Camphor odour Aromatic odour Amine-like odour Ammonia odour

Odor threshold : No data available

pH : No data available

Melting point : Not applicable

Freezing point : No data available

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Boiling point	: 65.5 °C 149.9 °F
Flash point	: 4.4 °C 39.92 °F
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: No data available
Explosion limits	: 0.9 – 10.5 vol %
Explosive properties	: No data available
Oxidizing properties	: No data available
Vapor pressure	: No data available
Relative density	: No data available
Relative vapor density at 20 °C	: No data available
Specific gravity / density	: 1.0936 g/cm ³
Solubility	: No data available
Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: 449 °C 840 °F
Decomposition temperature	: No data available
Viscosity	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available

9.2. Other information

VOC content (Regulatory - Less water and exempt solvents)	: 0 g/l 0 lb/gal
VOC content (Material - Actual)	: 0 g/l 0 lb/gal
Percent Solids (Weight)	: 7.88 %
Percent Solids (Volume)	: 8.781 %
Percent Volatile (Weight)	: 92.12 %
Percent Volatile (Volume)	: 91.282 %

SECTION 10: Stability and reactivity

10.1. Reactivity

Highly flammable liquid and vapor.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Likely routes of exposure	: Dermal; Inhalation; Skin and eye contact
Acute toxicity	: Not classified

ethylenediamine (107-15-3)

LD50 oral rat	866 mg/kg body weight (Equivalent or similar to OECD 401, Rat, Male / female, Experimental value, Oral, 14 day(s))
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ethylenediamine (107-15-3)	
LD50 dermal rabbit	560 mg/kg body weight (24 h, Rabbit, Male, Experimental value, Dermal)
LC50 inhalation rat (mg/l)	14.7 mg/l (4 h, Rat, Male, Experimental value, Inhalation (vapours), 14 day(s))
ATE US (oral)	866 mg/kg body weight
ATE US (dermal)	560 mg/kg body weight
ATE US (vapors)	14.7 mg/l/4h
ATE US (dust, mist)	14.7 mg/l/4h

Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitization	: May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity – single exposure	: Not classified
Specific target organ toxicity – repeated exposure	: Not classified
Aspiration hazard	: Not classified
Symptoms/effects after inhalation	: May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Symptoms/effects after skin contact	: May cause an allergic skin reaction.
Symptoms/effects after eye contact	: Irritation to eyes.
Symptoms/effects after ingestion	: Harmful if swallowed.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.
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ethylenediamine (107-15-3)	
LC50 fish 1	640 mg/l (EU Method C.1, 96 h, Poecilia reticulata, Semi-static system, Fresh water, Experimental value, GLP)
EC50 Daphnia 1	16.7 mg/l (EU Method C.2, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, Locomotor effect)
ErC50 (algae)	645 mg/l (EU Method C.3, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, GLP)

12.2. Persistence and degradability

ethylenediamine (107-15-3)	
Persistence and degradability	Readily biodegradable in water.
Biochemical oxygen demand (BOD)	0.01 g O ₂ /g substance
Chemical oxygen demand (COD)	1.3 g O ₂ /g substance
ThOD	1.33 g O ₂ /g substance

12.3. Bioaccumulative potential

ethylenediamine (107-15-3)	
Partition coefficient n-octanol/water (Log Pow)	-1.62 (Calculated, KOWWIN, 25 °C)
Bioaccumulative potential	Not bioaccumulative.

12.4. Mobility in soil

ethylenediamine (107-15-3)	
Partition coefficient n-octanol/water (Log Koc)	3.68 (log Koc, Equivalent or similar to OECD 106, Experimental value, GLP)
Ecology - soil	Low potential for mobility in soil.

12.5. Other adverse effects

No additional information available

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SECTION 13: Disposal considerations

13.1. Waste treatment methods

- Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.
Additional information : Flammable vapors may accumulate in the container.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

- Transport document description : UN1263 Paint related material (including paint thinning, drying, removing, or reducing compound), 3, II

- UN-No.(DOT) : UN1263
Proper Shipping Name (DOT) : Paint related material including paint thinning, drying, removing, or reducing compound
Class (DOT) : 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120
Hazard labels (DOT) : 3 - Flammable liquid



- Packing group (DOT) : II - Medium Danger
DOT Packaging Non Bulk (49 CFR 173.xxx) : 173
DOT Packaging Bulk (49 CFR 173.xxx) : 242
DOT Special Provisions (49 CFR 172.102) : 149 - When transported as a limited quantity or a consumer commodity, the maximum net capacity specified in 173.150(b)(2) of this subchapter for inner packaging may be increased to 5 L (1.3 gallons).
B52 - Notwithstanding the provisions of 173.24b of this subchapter, non-reclosing pressure relief devices are authorized on DOT 57 portable tanks.
IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31H21). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized.
T4 - 2.65 178.274(d)(2) Normal..... 178.275(d)(3)
TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = $97 / 1 + a (tr - tf)$ Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling.
TP8 - A portable tank having a minimum test pressure of 1.5 bar (150 kPa) may be used when the flash point of the hazardous material transported is greater than 0 C (32 F).
TP28 - A portable tank having a minimum test pressure of 2.65 bar (265 kPa) may be used provided the calculated test pressure is 2.65 bar or less based on the MAWP of the hazardous material, as defined in 178.275 of this subchapter, where the test pressure is 1.5 times the MAWP.
DOT Packaging Exceptions (49 CFR 173.xxx) : 150
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 5 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 60 L
DOT Vessel Stowage Location : B - (i) The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) "On deck only" on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded.
Other information : No supplementary information available.

Transportation of Dangerous Goods

- Transport document description : UN1263 PAINT RELATED MATERIAL (PAINT RELATED MATERIAL), 3, II
UN-No. (TDG) : UN1263
Proper Shipping Name (Transportation of Dangerous Goods) : PAINT RELATED MATERIAL
TDG Primary Hazard Classes : 3 - Class 3 - Flammable Liquids

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Packing group	: II - Medium Danger
TDG Special Provisions	: 59 - Substances that are listed by name in Schedule 1 must not be transported under this shipping name. Substances transported under this shipping name may contain not more than 20 per cent nitrocellulose if the nitrocellulose contains not more than 12.6 per cent nitrogen (by dry mass),83 - Repealed SOR/2014-152
Explosive Limit and Limited Quantity Index	: 5
Passenger Carrying Road Vehicle or Passenger Carrying Railway Vehicle Index	: 5

Transport by sea

UN-No. (IMDG)	: 1263
Proper Shipping Name (IMDG)	: PAINT RELATED MATERIAL
Class (IMDG)	: 3 - Flammable liquids
Packing group (IMDG)	: II - substances presenting medium danger

Air transport

No additional information available

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

ethylenediamine (107-15-3)	
Not listed on SARA Section 313 (Specific toxic chemical listings)	
CERCLA RQ	5000 lb
SARA Section 302 Threshold Planning Quantity (TPQ)	10000 lb

15.2. International regulations

CANADA

ACTIVATOR - EPOXY PRIMER SURFACER B
Listed on the Canadian DSL (Domestic Substances List) inventory.

EU-Regulations

No additional information available

National regulations

No additional information available

15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer and/or reproductive harm

ethylenediamine (107-15-3)	
U.S. - Massachusetts - Right To Know List	
U.S. - New Jersey - Right to Know Hazardous Substance List	
U.S. - Pennsylvania - RTK (Right to Know) List	

SECTION 16: Other information

Full text of H-phrases:

H225	Highly flammable liquid and vapor
H226	Flammable liquid and vapor
H302	Harmful if swallowed
H311	Toxic in contact with skin
H314	Causes severe skin burns and eye damage
H317	May cause an allergic skin reaction
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled

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SDS US Endura

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