



DRIVING SURFACE PERFECTION

RAPTOR ANTI-CORROSIVE EPOXY PRIMER HARDENER

Safety Data Sheet REPH-US-SDS

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Issue date: 03/03/2017

Revision date: 07/18/2018

Supersedes: 03/03/2017

Version: 1.1

SECTION 1: Identification

1.1. Identification

Product form : Mixture
 Trade name : RAPTOR ANTI-CORROSIVE EPOXY PRIMER HARDENER
 UP Number : UP4830, UP4830B, UP4830W, UP4831, UP4831B, UP4831W

1.2. Recommended use and restrictions on use

Use of the substance/mixture : Coatings and paints, thinners, paint removers
 Recommended use : Hardener
 Restrictions on use : Consumer uses: Private households (= general public = consumers)

1.3. Supplier

U-POL US Inc
 108 Commerce Way
 Easton, PA 18040 - United States
 T 1-800-340-7824 - F 1-800-787-5150
technicalsupport@u-pol.com - www.u-pol.com

1.4. Emergency telephone number

Emergency number : CHEMTREC - 1-800-424-9300

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Flammable liquids Category 3	Flammable liquid and vapor
Acute toxicity (oral) Category 4	Harmful if swallowed
Acute toxicity (dermal) Category 4	Harmful in contact with skin
Acute toxicity (inhalation:dust,mist) Category 4	Harmful if inhaled
Skin corrosion/irritation Category 1B	Causes severe skin burns and eye damage
Serious eye damage/eye irritation Category 1	Causes serious eye damage
Skin sensitization, Category 1	May cause an allergic skin reaction
Specific target organ toxicity — Single exposure, Category 3, Narcosis	May cause drowsiness or dizziness
Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation	May cause respiratory irritation
Specific target organ toxicity (repeated exposure) Category 2	May cause damage to organs through prolonged or repeated exposure

2.2. GHS Label elements, including precautionary statements

GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US) :

Danger

Hazard statements (GHS US) :

Flammable liquid and vapor
 Harmful if swallowed, in contact with skin or if inhaled
 Causes severe skin burns and eye damage
 May cause an allergic skin reaction
 Causes serious eye damage
 May cause respiratory irritation
 May cause drowsiness or dizziness
 May cause damage to organs through prolonged or repeated exposure

Precautionary statements (GHS US) :

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 Do not breathe fume, vapors, spray.
 Wear face protection, protective clothing, protective gloves.
 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with

RAPTOR ANTI-CORROSIVE EPOXY PRIMER HARDENER

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

water/shower.

IF IN EYES: Rinse first with plenty of water and if necessary take medical advice
Get medical advice/attention if you feel unwell.

2.3. Other hazards which do not result in classification

2.4. Unknown acute toxicity (GHS US)

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS US classification
1-methoxy-2-propanol	(CAS-No.) 107-98-2	23 – 43	Flam. Liq. 3, H226 STOT SE 3, H336
Xylene	(CAS-No.) 1330-20-7	23 – 43	Flam. Liq. 3, H226 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 STOT RE 2, H373 Asp. Tox. 1, H304
benzyl alcohol	(CAS-No.) 100-51-6	5 – 23	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation:dust,mist), H332
m-phenylenebis(methylamine)	(CAS-No.) 1477-55-0	5 – 23	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation), H332 Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Chronic 3, H412

Full text of hazard classes and H-statements : see section 16

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general	: Call a physician immediately.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor/physician if you feel unwell.
First-aid measures after skin contact	: Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing. Call a physician immediately.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.
First-aid measures after ingestion	: Rinse mouth. Do not induce vomiting. Call a physician immediately.

4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects	: May cause drowsiness or dizziness.
Symptoms/effects after inhalation	: May cause respiratory irritation.
Symptoms/effects after skin contact	: Burns. May cause an allergic skin reaction.
Symptoms/effects after eye contact	: Serious damage to eyes.
Symptoms/effects after ingestion	: Burns.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

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

5.2. Specific hazards arising from the chemical

Fire hazard	: Flammable liquid and vapor.
Reactivity	: Flammable liquid and vapor.

RAPTOR ANTI-CORROSIVE EPOXY PRIMER HARDENER

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

5.3. Special protective equipment and precautions for fire-fighters

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 : No open flames, no sparks, and no smoking. Do not breathe fume, vapors. Avoid contact with skin, eyes and clothing.

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 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : 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. Do not breathe fume, spray, vapors. Use only outdoors or in a well-ventilated area. Do not get in eyes, on skin, or on clothing.

Hygiene measures : Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace. 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. Store locked up.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

m-phenylenebis(methylamine) (1477-55-0)		
ACGIH	Local name	m-Xylene α,α' -diamine
ACGIH	ACGIH OEL Ceiling [ppm]	0.018 ppm
ACGIH	Remark (ACGIH)	TLV® Basis: Eye, skin, & GI irr. Notations: Skin
ACGIH	Regulatory reference	ACGIH 2021
benzyl alcohol (100-51-6)		
Not applicable		
1-methoxy-2-propanol (107-98-2)		
ACGIH	Local name	1-Methoxy-2-propanol
ACGIH	ACGIH OEL TWA [ppm]	50 ppm
ACGIH	ACGIH OEL STEL [ppm]	100 ppm
ACGIH	Remark (ACGIH)	TLV® Basis: Eye & URT irr. Notations: A4 (Not classifiable as a Human Carcinogen)
ACGIH	Regulatory reference	ACGIH 2021

RAPTOR ANTI-CORROSIVE EPOXY PRIMER HARDENER

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Xylene (1330-20-7)		
ACGIH	Local name	Xylene, mixed isomers (Dimethylbenzene)
ACGIH	ACGIH OEL TWA [ppm]	100 ppm
ACGIH	ACGIH OEL STEL [ppm]	150 ppm
ACGIH	Remark (ACGIH)	TLV® Basis: URT & eye irr; CNS impair. Notations: A4 (Not classifiable as a Human Carcinogen); BEI
ACGIH	Regulatory reference	ACGIH 2021
OSHA	OSHA PEL (TWA) [1]	435 mg/m ³
OSHA	OSHA PEL (TWA) [2]	100 ppm
OSHA	Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.
Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Hand protection:

Protective gloves

Eye protection:

Safety glasses

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

Wear respiratory protection.

Personal protective equipment symbol(s):



SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid
Appearance : Liquid.
Color : dark yellow
Odor : Amine-like
Odor threshold : No data available
pH : No data available
pH solution : > 7.5
Melting point : Not applicable
Freezing point : No data available
Boiling point : No data available
Flash point : 24 °C
Relative evaporation rate (butyl acetate=1) : ≈ 13
Flammability (solid, gas) : Not applicable.
Vapor pressure : 0.93 kPa
Relative vapor density at 20 °C : No data available
Relative density : No data available

RAPTOR ANTI-CORROSIVE EPOXY PRIMER HARDENER

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Density	: 0.96 g/cm ³
Solubility	: Immiscible with water.
Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
No data available	Viscosity, kinematic : > 20.5 mm ² /s
Viscosity, dynamic	: No data available
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available

9.2. Other information

As Packaged Regulatory VOC	: 651 g/l (5.43 lb/gal)
As Packaged Actual VOC	: 651 g/l (5.43 lb/gal)
Water Content	0 wt%

SECTION 10: Stability and reactivity

10.1. Reactivity

Flammable liquid and vapor.

10.2. Chemical stability

Stable at ambient temperature and under normal conditions of use.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Acids. Oxidising agents. 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

Hazardous decomposition products may be released during prolonged heating like smokes, carbon monoxide and dioxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: Harmful if swallowed.
Acute toxicity (dermal)	: Harmful in contact with skin.
Acute toxicity (inhalation)	: Harmful if inhaled.

ATE US (oral)	1194.886 mg/kg body weight
ATE US (dermal)	1614.087 mg/kg body weight
ATE US (dust, mist)	3.585 mg/l/4h

m-phenylenebis(methylamine) (1477-55-0)	
LD50 oral rat	500 mg/kg
LD50 dermal rat	> 3100 mg/kg body weight Animal: rat
ATE US (oral)	500 mg/kg body weight
ATE US (gases)	4500 ppmV/4h
ATE US (vapors)	11 mg/l/4h
ATE US (dust, mist)	1.5 mg/l/4h

benzyl alcohol (100-51-6)	
LD50 oral rat	1620 mg/kg bw/day (Rat, Male, Experimental value, Oral)
LD50 dermal rabbit	> 2000 mg/kg (Rabbit, Inconclusive, insufficient data, Dermal)
LC50 Inhalation - Rat	> 4.178 mg/l air Animal: rat, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity)
ATE US (oral)	500 mg/kg body weight

RAPTOR ANTI-CORROSIVE EPOXY PRIMER HARDENER

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

benzyl alcohol (100-51-6)	
ATE US (dust, mist)	1.5 mg/l/4h
1-methoxy-2-propanol (107-98-2)	
LD50 oral rat	4016 mg/kg body weight (EU Method B.1 tris: Acute oral toxic – Acute toxic class method, Rat, Male / female, Experimental value, Oral)
LD50 dermal rat	13 g/kg (Other, 24 h, Rat, Male/female, Experimental value, Dermal)
ATE US (oral)	4016 mg/kg body weight
ATE US (dermal)	13000 mg/kg body weight

Xylene (1330-20-7)	
LD50 oral rat	3523 mg/kg body weight (Equivalent or similar to EU Method B.1: Acute Toxicity (Oral), Rat, Male, Experimental value, Oral, 14 day(s))
LD50 dermal rat	12126 mg/kg (Non-GLP, read-across from supporting substance, single dermal dose under occlusion followed by observation for 14 days)
LD50 dermal rabbit	12126 mg/kg body weight Animal: rabbit, Animal sex: male
LC50 Inhalation - Rat [ppm]	6700 ppm/4h (EU Method B.2 (Acute Toxicity (Inhalation)), 4h, rat, male)
ATE US (oral)	3523 mg/kg body weight
ATE US (dermal)	1100 mg/kg body weight
ATE US (gases)	6700 ppmV/4h
ATE US (vapors)	11 mg/l/4h
ATE US (dust, mist)	1.5 mg/l/4h

Skin corrosion/irritation : Causes severe skin burns.
Serious eye damage/irritation : Causes serious eye damage.
Respiratory or skin sensitization : May cause an allergic skin reaction.
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified

Xylene (1330-20-7)	
IARC group	3 - Not classifiable
Reproductive toxicity	: Not classified
STOT-single exposure	: May cause drowsiness or dizziness. May cause respiratory irritation.

1-methoxy-2-propanol (107-98-2)	
STOT-single exposure	May cause drowsiness or dizziness.

Xylene (1330-20-7)	
STOT-single exposure	May cause respiratory irritation.

STOT-repeated exposure : May cause damage to organs through prolonged or repeated exposure.

benzyl alcohol (100-51-6)	
NOAEL (oral,rat,90 days)	400 mg/kg body weight Animal: rat, Guideline: other:OECD Guideline 451 (Carcinogenicity Studies)

1-methoxy-2-propanol (107-98-2)	
LOAEL (oral,rat,90 days)	2757 mg/kg body weight Animal: rat, Animal sex: male, Guideline: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity in Rodents)
NOAEL (oral,rat,90 days)	919 mg/kg body weight Animal: rat, Animal sex: male, Guideline: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity in Rodents)
NOAEL (dermal,rat/rabbit,90 days)	> 1000 mg/kg body weight Animal: rabbit, Guideline: OECD Guideline 410 (Repeated Dose Dermal Toxicity: 21/28-Day Study)

Xylene (1330-20-7)	
LOAEL (oral,rat,90 days)	150 mg/kg body weight Animal: rat, Animal sex: male, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents), Guideline: EPA OPP 82-1 (90-Day Oral Toxicity)
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard : Not classified
Viscosity, kinematic : > 20.5 mm²/s
Symptoms/effects : May cause drowsiness or dizziness.

RAPTOR ANTI-CORROSIVE EPOXY PRIMER HARDENER

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Symptoms/effects after inhalation	: May cause respiratory irritation.
Symptoms/effects after skin contact	: Burns. May cause an allergic skin reaction.
Symptoms/effects after eye contact	: Serious damage to eyes.
Symptoms/effects after ingestion	: Burns.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment. Before neutralisation, the product may represent a danger to aquatic organisms.

m-phenylenebis(methylamine) (1477-55-0)	
LC50 - Fish [1]	87.6 mg/l Test organisms (species): <i>Oryzias latipes</i>
EC50 - Crustacea [1]	15.2 mg/l Test organisms (species): <i>Daphnia magna</i>
LOEC (chronic)	15 mg/l Test organisms (species): <i>Daphnia magna</i> Duration: '21 d'
NOEC (chronic)	4.7 mg/l Test organisms (species): <i>Daphnia magna</i> Duration: '21 d'
benzyl alcohol (100-51-6)	
LC50 - Fish [1]	460 mg/l Test organisms (species): <i>Pimephales promelas</i>
EC50 - Crustacea [1]	230 mg/l Test organisms (species): <i>Daphnia magna</i>
ErC50 algae	770 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, <i>Pseudokirchneriella subcapitata</i> , Static system, Fresh water, Experimental value, GLP)
NOEC (chronic)	51 mg/l Test organisms (species): <i>Daphnia magna</i> Duration: '21 d'
1-methoxy-2-propanol (107-98-2)	
LC50 - Fish [1]	≥ 1000 mg/l (Equivalent or similar to OECD 203, 96 h, <i>Oncorhynchus mykiss</i> , Semi-static system, Fresh water, Experimental value, Nominal concentration)
EC50 - Other aquatic organisms [1]	2954 mg/l Test organisms (species): other aquatic crustacea: <i>Acartia tonsa</i>
ErC50 algae	> 1000 mg/l (Other, 168 h, <i>Pseudokirchneriella subcapitata</i> , Static system, Fresh water, Experimental value, GLP)
Xylene (1330-20-7)	
LC50 - Fish [1]	2.6 mg/l Test organisms (species): <i>Oncorhynchus mykiss</i> (previous name: <i>Salmo gairdneri</i>)
EC50 - Crustacea [1]	> 3.4 mg/l Test organisms (species): <i>Ceriodaphnia dubia</i>
ErC50 algae	4.36 mg/l (OECD 201: Alga, Growth Inhibition Test, 73 h, <i>Pseudokirchneriella subcapitata</i> , Static system, Fresh water, Experimental value, GLP)
NOEC chronic fish	> 1.3 mg/l Test organisms (species): <i>Oncorhynchus mykiss</i> (previous name: <i>Salmo gairdneri</i>) Duration: '56 d'

12.2. Persistence and degradability

benzyl alcohol (100-51-6)	
Persistence and degradability	Biodegradable in the soil. Readily biodegradable in water.
Biochemical oxygen demand (BOD)	1.6 g O ₂ /g substance
Chemical oxygen demand (COD)	2.4 g O ₂ /g substance
ThOD	2.5 g O ₂ /g substance
1-methoxy-2-propanol (107-98-2)	
Persistence and degradability	Biodegradable in the soil. Readily biodegradable in water.
ThOD	1.95 g O ₂ /g substance
Xylene (1330-20-7)	
Persistence and degradability	Biodegradable in the soil. Readily biodegradable in water.

12.3. Bioaccumulative potential

benzyl alcohol (100-51-6)	
Partition coefficient n-octanol/water (Log Pow)	1 – 1.1 (Experimental value, 20 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).
1-methoxy-2-propanol (107-98-2)	
BCF - Fish [1]	1 (<i>Pimephales promelas</i>)
Partition coefficient n-octanol/water (Log Pow)	< 1 (Experimental value, Equivalent or similar to OECD 117, 20 °C)

RAPTOR ANTI-CORROSIVE EPOXY PRIMER HARDENER

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

1-methoxy-2-propanol (107-98-2)	
Bioaccumulative potential	Not bioaccumulative.
Xylene (1330-20-7)	
BCF - Fish [1]	7.2 – 25.9 (56 day(s), Oncorhynchus mykiss, Flow-through system, Fresh water, Read-across)
Partition coefficient n-octanol/water (Log Pow)	3.2 (Read-across, 20 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

12.4. Mobility in soil

benzyl alcohol (100-51-6)	
Surface tension	39 mN/m (20 °C)
Ecology - soil	No (test)data on mobility of the substance available.
1-methoxy-2-propanol (107-98-2)	
Surface tension	0.0707 N/m (20 °C, 1 g/l, OECD 115: Surface Tension of Aqueous Solutions)
Ecology - soil	Low potential for adsorption in soil.
Xylene (1330-20-7)	
Surface tension	28.01 – 29.76 mN/m (25 °C)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	2.73 (log Koc, Equivalent or similar to OECD 121, Read-across)
Ecology - soil	Low potential for adsorption in soil. May be harmful to plant growth, blooming and fruit formation.

12.5. Other adverse effects

SECTION 13: Disposal considerations

13.1. Disposal 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 (DOT)	: UN3470 Paint, corrosive, flammable, 8 (3), II
UN-No.(DOT)	: UN3470
Proper Shipping Name (DOT)	: Paint, corrosive, flammable
Class (DOT)	: 8 - Class 8 - Corrosive material 49 CFR 173.136
Packing group (DOT)	: II - Medium Danger
Subsidiary risk (DOT)	: 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120
Hazard labels (DOT)	: 8 - Corrosive 3 - Flammable liquid



DOT Packaging Non Bulk (49 CFR 173.xxx)	: 202
DOT Packaging Bulk (49 CFR 173.xxx)	: 243

RAPTOR ANTI-CORROSIVE EPOXY PRIMER HARDENER

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

DOT Special Provisions (49 CFR 172.102)	: 367 - For the purposes of documentation and package marking: a. The proper shipping name "Paint related material" may be used for consignments of packages containing "Paint" and "Paint related material" in the same package; b. The proper shipping name "Paint related material, corrosive, flammable" may be used for consignments of packages containing "Paint, corrosive, flammable" and "Paint related material, corrosive, flammable" in the same package; c. The proper shipping name "Paint related material, flammable, corrosive" may be used for consignments of packages containing "Paint, flammable, corrosive" and "Paint related material, flammable, corrosive" in the same package; and d. The proper shipping name "Printing ink related material" may be used for consignments of packages containing "Printing ink" and "Printing ink related material" in the same package. IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). 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. T7 - 4 178.274(d)(2) Normal..... 178.275(d)(3) TP2 - a. The maximum degree of filling must not exceed the degree of filling determined by the following: (image) Where: tr is the maximum mean bulk temperature during transport, tf is the temperature in degrees celsius of the liquid during filling, and a is the mean coefficient of cubical expansion of the liquid between the mean temperature of the liquid during filling (tf) and the maximum mean bulk temperature during transportation (tr) both in degrees celsius. b. For liquids transported under ambient conditions may be calculated using the formula: (image) Where: d15 and d50 are the densities (in units of mass per unit volume) of the liquid at 15 C (59 F) and 50 C (122 F), respectively. 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)	: 154
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	: 1 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	: 30 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.
DOT Vessel Stowage Other	: 40 - Stow "clear of living quarters"
Emergency Response Guide (ERG) Number	: 132
Other information	: No supplementary information available.

Transportation of Dangerous Goods

Transport document description (TDG)	: UN3470 PAINT, CORROSIVE, FLAMMABLE, 8 (3), II
UN-No. (TDG)	: UN3470
Proper Shipping Name (TDG)	: PAINT, CORROSIVE, FLAMMABLE
TDG Primary Hazard Classes	: 8 - Class 8 - Corrosives
Packing group (TDG)	: II - Medium Danger
TDG Subsidiary Classes	: 3
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% nitrocellulose if the nitrocellulose contains not more than 12.6% nitrogen (by dry mass), 142 - The following shipping names may be used to meet the requirements of Part 3 (Documentation) and Part 4 (Dangerous Goods Safety Marks) when these dangerous goods are offered for transport in the same means of containment: (a) "PAINT RELATED MATERIAL" may be used for a means of containment containing both paint and paint related material; (b) "PAINT RELATED MATERIAL, CORROSIVE, FLAMMABLE" may be used for a means of containment containing both paint, corrosive, flammable, and paint related material, corrosive, flammable; (c) "PAINT RELATED MATERIAL, FLAMMABLE, CORROSIVE" may be used for a means of containment containing both paint, flammable, corrosive, and paint related material, flammable, corrosive; and (d) "PRINTING INK RELATED MATERIAL" may be used for a means of containment containing both printing ink and printing ink related material.

RAPTOR ANTI-CORROSIVE EPOXY PRIMER HARDENER

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Explosive Limit and Limited Quantity Index : 1 L
Passenger Carrying Road Vehicle or Passenger Carrying Railway Vehicle Index : 1 L

Transport by sea

Transport document description (IMDG) : UN 1263 PAINT RELATED MATERIAL, 3, III
UN-No. (IMDG) : 1263
Proper Shipping Name (IMDG) : PAINT RELATED MATERIAL
Class (IMDG) : 3 - Flammable liquids
Packing group (IMDG) : III - substances presenting low danger
Limited quantities (IMDG) : 5 L

Air transport

Transport document description (IATA) : UN 1263 Paint, 3, III
UN-No. (IATA) : 1263
Proper Shipping Name (IATA) : Paint
Class (IATA) : 3 - Flammable Liquids
Packing group (IATA) : III - Minor Danger

SECTION 15: Regulatory information

15.1. US Federal regulations

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

Xylene	CAS-No. 1330-20-7	23 – 43%
--------	-------------------	----------

m-phenylenebis(methylamine) (1477-55-0)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

benzyl alcohol (100-51-6)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

1-methoxy-2-propanol (107-98-2)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Xylene (1330-20-7)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Listed on EPA Hazardous Air Pollutant (HAPS)

Listed on EPA Hazardous Air Pollutant (HAPS)

CERCLA RQ : 100 lb

15.2. International regulations

CANADA

m-phenylenebis(methylamine) (1477-55-0)

Listed on the Canadian DSL (Domestic Substances List)

benzyl alcohol (100-51-6)

Listed on the Canadian DSL (Domestic Substances List)

1-methoxy-2-propanol (107-98-2)

Listed on the Canadian DSL (Domestic Substances List)

Xylene (1330-20-7)

Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

National regulations

No additional information available

RAPTOR ANTI-CORROSIVE EPOXY PRIMER HARDENER

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

15.3. US State regulations

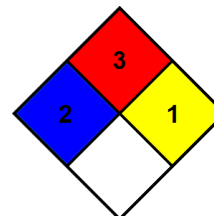
California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

Component	State or local regulations
m-phenylenebis(methylamine)(1477-55-0)	U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - New York - Reporting of Releases Part 597 - List of Hazardous Substances
benzyl alcohol(100-51-6)	U.S. - Massachusetts - Right To Know List; U.S. - Pennsylvania - RTK (Right to Know) List
1-methoxy-2-propanol(107-98-2)	U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Acceptable Ambient Concentrations; U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - New York City - Right to Know Hazardous Substances List; U.S. - Pennsylvania - RTK (Right to Know) List
Xylene(1330-20-7)	U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities; U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Acceptable Ambient Concentrations; U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - New York City - Right to Know Hazardous Substances List; U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: Other information

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

- Revision date : 07/18/2018
- NFPA health hazard : 2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.
- NFPA fire hazard : 3 - Liquids and solids (including finely divided suspended solids) that can be ignited under almost all ambient temperature conditions.
- NFPA reactivity : 1 - Materials that in themselves are normally stable but can become unstable at elevated temperatures and pressures.



SDS US GHS (GHS HazCom2012)

For professional use only.

The information contained within this Safety Data Sheet (SDS) is believed to be correct as of the date issued however it is subject to change from time to time. It does not purport to be all inclusive or exhaustive and shall only be used as a guide. U-POL makes no warranties, expressed or implied, including but not limited to, any implied warranty of fitness for a given purpose or usage. It is the Buyers responsibility to ensure the suitability of the products for their own use and to check the information is up to date. U-POL cannot be held responsible for the suitability of use for any of its products, considering the wide range of factors such as application, substrates and handling methods. Since these conditions of use are outside of our control, the company shall not be held liable for any damage resulting from handling or from contact with the product detailed. Moreover, addition of reducers, hardeners or other additives over and above U-POL's recommendations for use, may substantially alter the composition and hazards of the product. U-POL data sheets are available via the U-POL website at WWW.U-POL.COM.