



RAPTOR HARDENER (RLHV-US)

Safety Data Sheet

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

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DRIVING SURFACE PERFECTION

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixture
Product name : RAPTOR HARDENER (RLHV-US)
Product group : 2K Hardener
Other means of identification : UP4821, UP4824, UP0827, UP5010

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

1.3. Details of the supplier of the safety data sheet

Supplier

U-POL US Inc
108 Commerce Way
Stockertown PA 18083 - USA
T 1-800-340-7824 - F 1-800-787-5150
technical.department@u-pol.com - www.u-pol.com

1.4. Emergency telephone number

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

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification

Flam. Liq. 2 H225
Eye Irrit. 2 H319
Skin Sens. 1 H317
Carc. 2 H351
STOT SE 3 H335
STOT SE 3 H336
STOT RE 2 H373

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 vapour
H317 - May cause an allergic skin reaction
H319 - Causes serious eye irritation
H335 - May cause respiratory irritation
H336 - May cause drowsiness or dizziness
H351 - Suspected of causing cancer
H373 - May cause damage to organs (hearing organs) through prolonged or repeated exposure (Inhalation)

Precautionary statements (GHS-US) :

P210 - Keep away from heat, hot surfaces, open flames, sparks. - No smoking.
P260 - Do not breathe vapors, spray, fume.
P264 - Wash hands thoroughly after handling.
P280 - Wear eye protection, protective gloves, protective clothing.
P337+P313 - If eye irritation persists: Get medical advice/attention.
P403+P235 - Store in a well-ventilated place. Keep cool.
P501 - Dispose of contents/container to hazardous or special waste collection point, in

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accordance with local, regional, national and/or international regulation

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	%	GHS-US classification
Hexamethylene Diisocyanate Oligomers	(CAS-No.) 28182-81-2	< 43	Acute Tox. 4 (Inhalation), H332 Skin Sens. 1, H317 STOT SE 3, H335
methyl acetate	(CAS-No.) 79-20-9	23 - 43	Flam. Liq. 2, H225 Eye Irrit. 2A, H319 STOT SE 3, H336
4-CHLORO BENZOTRIFLUORIDE	(CAS-No.) 98-56-6	5 - 23	Flam. Liq. 3, H226 Skin Sens. 1, H317 Aquatic Chronic 2, H411
xylene	(CAS-No.) 1330-20-7	5 - 23	Flam. Liq. 3, H226 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation:dust,mist), H332 Skin Irrit. 2, H315
Solvent naphtha (petroleum), light aromatic		< 5	Flam. Liq. 3, H226 STOT SE 3, H336 STOT SE 3, H335 Asp. Tox. 1, H304 Aquatic Chronic 2, H411
ethylbenzene	(CAS-No.) 100-41-4	< 5	Flam. Liq. 2, H225 Acute Tox. 4 (Inhalation), H332 Carc. 2, H351 STOT RE 2, H373 Asp. Tox. 1, H304

Full text of H-phrases: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: IF exposed or concerned: Get medical advice/attention.
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. If skin irritation or rash occurs: Get medical advice/attention.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
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	: May cause drowsiness or dizziness.
Symptoms/effects after inhalation	: May cause respiratory irritation.
Symptoms/effects after skin contact	: May cause an allergic skin reaction.
Symptoms/effects after eye contact	: Eye irritation.

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 vapour.
Reactivity	: Highly flammable liquid and vapour.

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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

Protective equipment : Safety glasses. Protective clothing. Gloves.
Emergency procedures : Ventilate spillage area. No open flames, no sparks, and no smoking. Do not breathe vapors, fume, spray. Avoid contact with skin and eyes.

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

For containment : Contain released substance, pump into suitable containers. Collect spillage.
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. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe vapors, fume, spray. Use only outdoors or in a well-ventilated area. Avoid contact with skin and eyes.
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. Store locked up.
Storage temperature : < 25 °C
Storage area : Store in a well-ventilated place.
Special rules on packaging : Keep only in original container.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

RAPTOR HARDENER (RLHV-US)		
ACGIH	Not applicable	
OSHA	Not applicable	
methyl acetate (79-20-9)		
ACGIH	ACGIH TWA (ppm)	200 ppm
ACGIH	ACGIH STEL (ppm)	250 ppm
ACGIH	Remark (ACGIH)	eye & URT irr
OSHA	OSHA PEL (TWA) (mg/m ³)	610 mg/m ³

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methyl acetate (79-20-9)		
OSHA	OSHA PEL (TWA) (ppm)	200 ppm

4-CHLORO BENZOTRIFLUORIDE (98-56-6)		
ACGIH	Not applicable	
OSHA	Not applicable	

ethylbenzene (100-41-4)		
ACGIH	ACGIH TWA (ppm)	20 ppm
ACGIH	Remark (ACGIH)	URT irr; kidney dam (nephropathy)
OSHA	OSHA PEL (TWA) (mg/m ³)	435 mg/m ³
OSHA	OSHA PEL (TWA) (ppm)	100 ppm

xylene (1330-20-7)		
ACGIH	ACGIH TWA (ppm)	100 ppm
ACGIH	ACGIH STEL (ppm)	150 ppm
ACGIH	Remark (ACGIH)	URT & eye irr; CNS impair
OSHA	OSHA PEL (TWA) (mg/m ³)	435 mg/m ³
OSHA	OSHA PEL (TWA) (ppm)	100 ppm

Solvent naphtha (petroleum), light aromatic		
ACGIH	Not applicable	
OSHA	Not applicable	

Hexamethylene Diisocyanate Oligomers (28182-81-2)		
ACGIH	Not applicable	
OSHA	Not applicable	

8.2. Exposure controls

Appropriate engineering controls	: Ensure good ventilation of the work station.
Materials for protective clothing	: Impermeable clothing.
Hand protection	: Protective gloves.
Eye protection	: Safety glasses.
Skin and body protection	: Wear suitable protective clothing.
Respiratory protection	: Air-fed respiratory protective equipment should be worn when this product is sprayed.
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
Appearance	: Liquid.
Color	: Colorless
Odor	: aromatic
Odor threshold	: No data available
pH	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: > 35 °C
Flash point	: < 0 °C
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available

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Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: No data available
Specific gravity / density	: 1.04 - 1.06
Solubility	: insoluble in water. soluble in most organic solvents.
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Explosion limits	: No data available

9.2. Other information

VOC content - Actual	: 118 g/l
VOC content - Regulatory	: 245 g/l

SECTION 10: Stability and reactivity

10.1. Reactivity

Highly flammable liquid and vapour.

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

Acute toxicity : Not classified

ethylbenzene (100-41-4)	
ATE US (gases)	4500 ppmV/4h
ATE US (vapors)	11 mg/l/4h
ATE US (dust, mist)	1.5 mg/l/4h
xylene (1330-20-7)	
ATE US (dermal)	1100 mg/kg body weight
ATE US (dust, mist)	1.5 mg/l/4h
Hexamethylene Diisocyanate Oligomers (28182-81-2)	
LD50 oral rat	> 2500 mg/kg
LD50 dermal rat	> 2000 mg/kg
ATE US (gases)	4500 ppmV/4h
ATE US (vapors)	11 mg/l/4h
ATE US (dust, mist)	1.5 mg/l/4h

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

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Carcinogenicity : Suspected of causing cancer.

ethylbenzene (100-41-4)	
IARC group	2B - Possibly carcinogenic to humans
xylene (1330-20-7)	
IARC group	3 - Not classifiable

Reproductive toxicity : Not classified
Specific target organ toxicity – single exposure : May cause respiratory irritation. May cause drowsiness or dizziness.

Specific target organ toxicity – repeated exposure : May cause damage to organs (hearing organs) through prolonged or repeated exposure (Inhalation).

Aspiration hazard : Not classified
Symptoms/effects after inhalation : May cause respiratory irritation.
Symptoms/effects after skin contact : May cause an allergic skin reaction.
Symptoms/effects after eye contact : Eye irritation.

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.

12.2. Persistence and degradability

Solvent naphtha (petroleum), light aromatic	
Persistence and degradability	May cause long-term adverse effects in the environment.

12.3. Bioaccumulative potential

Solvent naphtha (petroleum), light aromatic	
Bioaccumulative potential	Not established.

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Effect on the ozone layer : No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional legislation (waste) : Disposal must be done according to official regulations.
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

In accordance with DOT
Not regulated for transport

Additional information

Other information : No supplementary information available.

ADR

Transport document description : UN 1263 PAINT RELATED MATERIAL, 3, II, (D/E)

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Packing group (ADR) : II
Class (ADR) : 3 - Flammable liquid
Hazard identification number (Kemler No.) : 33
Classification code (ADR) : F1
Hazard labels (ADR) : 3 - Flammable liquids



Orange plates :



Tunnel restriction code (ADR) : D/E
LQ : 5I
Excepted quantities (ADR) : E2

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

UN-No. (IATA) : 1263
Proper Shipping Name (IATA) : Paint
Class (IATA) : 3 - Flammable Liquids
Packing group (IATA) : II - Medium Danger

SECTION 15: Regulatory information

15.1. US Federal regulations

methyl acetate (79-20-9)

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

4-CHLORO BENZOTRIFLUORIDE (98-56-6)

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

ethylbenzene (100-41-4)

Listed on the United States TSCA (Toxic Substances Control Act) inventory
Subject to reporting requirements of United States SARA Section 313

CERCLA RQ : 1000 lb

SARA Section 313 - Emission Reporting : 0.1 %

xylene (1330-20-7)

Listed on the United States TSCA (Toxic Substances Control Act) inventory
Subject to reporting requirements of United States SARA Section 313

CERCLA RQ : 100 lb

SARA Section 313 - Emission Reporting : 1 %

Solvent naphtha (petroleum), light aromatic

Not listed on the United States TSCA (Toxic Substances Control Act) inventory

Hexamethylene Diisocyanate Oligomers (28182-81-2)

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

15.2. International regulations

CANADA

methyl acetate (79-20-9)

Listed on the Canadian DSL (Domestic Substances List)

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ethylbenzene (100-41-4)

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

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Flam. Liq. 2 H225

Eye Irrit. 2 H319

Skin Sens. 1 H317

STOT SE 3 H335

STOT SE 3 H336

Aquatic Chronic 3 H412

Full text of H statements : see section 16

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

15.2.2. National regulations

ethylbenzene (100-41-4)

Listed on IARC (International Agency for Research on Cancer)

Listed on EPA Hazardous Air Pollutant (HAPS)

xylene (1330-20-7)

Listed on EPA Hazardous Air Pollutant (HAPS)

Solvent naphtha (petroleum), light aromatic

Not listed on the Canadian DSL (Domestic Substances List)/NDSL (Non-Domestic Substances List)

15.3. US State regulations

ethylbenzene (100-41-4)

U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)
Yes	No	No	No	54 µg/day

SECTION 16: Other information

Revision date : 11/21/2017

Full text of H-phrases:

H225	Highly flammable liquid and vapour
H226	Flammable liquid and vapor
H304	May be fatal if swallowed and enters airways
H312	Harmful in contact with skin
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H332	Harmful if inhaled
H335	May cause respiratory irritation
H336	May cause drowsiness or dizziness
H351	Suspected of causing cancer
H373	May cause damage to organs through prolonged or repeated exposure
H411	Toxic to aquatic life with long lasting effects

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