



DRIVING SURFACE PERFECTION

# RAPTOR HARDENER 1.7 VOC

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations  
SDS ID: RLH17K-R-US-SDS  
Issue date: 5/9/2016 Revision date: 1/17/2020 Supersedes: 9/27/2019 Version: 3.0

### SECTION 1: Identification

#### 1.1. Identification

Product form	: Mixture
Trade name	: RAPTOR HARDENER 1.7 VOC
Product code	: RLH17/250, RLH17/1
UP Number	: UP0828, UP4822, UP5126
Other means of identification	: Component of: UP5025, UP5039, UP5045, UP0820V, UP0820VG, UP0821V, UP0821VG, UP0825, UP0829

#### 1.2. Recommended use and restrictions on use

Use of the substance/mixture	: Coatings and paints, thinners, paint removers
Recommended use	: Hardener

#### 1.3. Supplier

U-POL US Inc Inc.  
50 Applied Bank Blvd., Suite 300 Glen Mills  
Pennsylvania, PA 19342  
United States  
T (610) 746 7081  
[technicalsupport@u-pol.com](mailto:technicalsupport@u-pol.com) - [www.u-pol.com](http://www.u-pol.com)

#### 1.4. Emergency telephone number

Emergency number	: CHEMTREC - 1-800-424-9300
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### SECTION 2: Hazard(s) identification



#### 2.1. Classification of the substance or mixture

##### GHS US classification

Flammable liquids Category 2	Highly flammable liquid and vapor
Serious eye damage/eye irritation Category 2	Causes serious eye irritation
Skin sensitization, Category 1	May cause an allergic skin reaction
Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation	May cause respiratory irritation
Specific target organ toxicity – Single exposure, Category 3, Narcosis	May cause drowsiness or dizziness

#### 2.2. GHS Label elements, including precautionary statements

##### GHS US labeling

Hazard pictograms (GHS US)	:	 
Signal word (GHS US)	:	Danger
Hazard statements (GHS US)	:	Highly flammable liquid and vapor May cause an allergic skin reaction Causes serious eye irritation May cause respiratory irritation May cause drowsiness or dizziness
Precautionary statements (GHS US)	:	If medical advice is needed, have product container or label at hand. Keep out of reach of children.

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Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
Keep container tightly closed.  
Use only non-sparking tools.  
Take precautionary measures against static discharge.  
Avoid breathing fume, spray, vapors.  
Wash hands thoroughly after handling.  
Use only outdoors or in a well-ventilated area.  
Contaminated work clothing must not be allowed out of the workplace.  
Wear face protection, protective clothing, protective gloves.  
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
If inhaled: Remove person to fresh air and keep comfortable for breathing.  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
Call a POISON CENTER if you feel unwell.  
If skin irritation or rash occurs: Get medical advice/attention.  
If eye irritation persists: Get medical advice/attention.  
Wash contaminated clothing before reuse.  
In case of fire: Use foam, extinguishing powder, dry sand to extinguish.  
Store in a well-ventilated place. Keep cool.  
Store locked up.  
Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

### 2.3. Other hazards which do not result in classification

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
methyl acetate	CAS-No.: 79-20-9	43 – 63	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336
hexamethylene diisocyanate oligomers	CAS-No.: 28182-81-2	< 43	Acute Tox. 4 (Inhalation), H332 Skin Sens. 1, H317 STOT SE 3, H335
n-butyl acetate	CAS-No.: 123-86-4	< 5	Flam. Liq. 3, H226 STOT SE 3, H336
solvent naphtha (petroleum), light aromatic	CAS-No.: 64742-95-6	< 5	Flam. Liq. 3, H226 STOT SE 3, H336 STOT SE 3, H335 Asp. Tox. 1, H304 Aquatic Chronic 2, H411

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

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### 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. 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 (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. 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	: Highly flammable liquid and vapor.
Hazardous decomposition products in case of fire	: Toxic fumes may be released.

#### 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

Protective equipment	: Safety glasses. Protective clothing. Gloves.
Emergency procedures	: Ventilate spillage area. No open flames, no sparks, and no smoking. Avoid breathing 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 product, pump into suitable containers. Collect spillage.

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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. Use only outdoors or in a well-ventilated area. Avoid breathing vapors, spray, fume. 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.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

RAPTOR HARDENER 1.7 VOC	
No additional information available	
methyl acetate (79-20-9)	
USA - ACGIH - Occupational Exposure Limits	
Local name	Methyl acetate
ACGIH OEL TWA [ppm]	200 ppm
ACGIH OEL STEL [ppm]	250 ppm
Remark (ACGIH)	TLV® Basis: Headache; dizziness; nausea; eye dam (degeneration of ganglion cells in the retina)
Regulatory reference	ACGIH 2021
USA - OSHA - Occupational Exposure Limits	
Local name	Methyl acetate
OSHA PEL (TWA) [1]	610 mg/m <sup>3</sup>
OSHA PEL (TWA) [2]	200 ppm
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1

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<b>n-butyl acetate (123-86-4)</b>	
<b>USA - ACGIH - Occupational Exposure Limits</b>	
Local name	n-Butyl acetate
ACGIH OEL TWA [ppm]	50 ppm
ACGIH OEL STEL [ppm]	150 ppm
Remark (ACGIH)	TLV® Basis: Eye & URT irr
Regulatory reference	ACGIH 2021
<b>USA - OSHA - Occupational Exposure Limits</b>	
Local name	n-Butyl-acetate
OSHA PEL (TWA) [1]	710 mg/m <sup>3</sup>
OSHA PEL (TWA) [2]	150 ppm
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1
<b>solvent naphtha (petroleum), light aromatic (64742-95-6)</b>	
No additional information available	
<b>hexamethylene diisocyanate oligomers (28182-81-2)</b>	
No additional information available	

### 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

#### Personal protective equipment:

Gas mask. Gloves. Protective clothing. Safety glasses.

<b>Materials for protective clothing:</b>
Impermeable clothing
<b>Hand protection:</b>
Protective gloves
<b>Eye protection:</b>
Safety glasses
<b>Skin and body protection:</b>
Wear suitable protective clothing
<b>Respiratory protection:</b>
Air-fed respiratory protective equipment should be worn when this product is sprayed

#### Personal protective equipment symbol(s):



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### 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
Melting point	: No data available
Freezing point	: No data available
Boiling point	: > 35 °C
Flash point	: < 0 °C
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability	: Not applicable.
Vapor pressure	: No data available
Relative vapor density at 20°C	: No data available
Relative density	: No data available
Density	: 1.02 (1.01 – 1.03) g/cm <sup>3</sup>
Solubility	: insoluble in water. soluble in most organic solvents.
Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available

#### 9.2. Other information

VOC content	: 589 g/l
As Packaged Regulatory VOC	: 57 g/l (0.48 lb/gal)
As Packaged Actual VOC	: 22 g/l (0.18 lb/gal)
Percent Solids	: 41.99 wt%
Volatiles	: 58.0 wt%
Water Content	: 0 wt%
Water Content	: 0 vol %
Exempt Compounds by weight	: 55.8 wt%
Exempt Compounds by volume	: 60.8 vol %
% EPA HAPS	: 0 wt%

### 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.

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### 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 (oral) : Not classified  
Acute toxicity (dermal) : Not classified  
Acute toxicity (inhalation) : Not classified

#### methyl acetate (79-20-9)

LD50 oral rat	6482 mg/kg body weight Animal: rat, Animal sex: male, Guideline: OECD Guideline 401 (Acute Oral Toxicity)
LD50 dermal rat	> 2000 mg/kg body weight Animal: rat, Guideline: EU Method B.3 (Acute Toxicity (Dermal)), Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
LC50 Inhalation - Rat	49 mg/l
ATE US (oral)	6482 mg/kg body weight
ATE US (vapors)	49 mg/l/4h
ATE US (dust, mist)	49 mg/l/4h

#### n-butyl acetate (123-86-4)

LD50 oral rat	10760 – 12789 mg/kg body weight (Equivalent or similar to OECD 423, Rat, Male / female, Experimental value, Oral, 14 day(s))
LD50 dermal rabbit	> 14112 mg/kg body weight (Equivalent or similar to OECD 402, Rabbit, Male / female, Experimental value, Dermal, 14 day(s))
LC50 Inhalation - Rat	23.4 mg/l (OECD 403: Acute Inhalation Toxicity, 4 h, Rat, Male / female, Inhalation (mixture of vapour and aerosol), 14 day(s))
LC50 Inhalation - Rat [ppm]	390 ppm/4h
ATE US (oral)	10760 mg/kg body weight
ATE US (gases)	390 ppmV/4h
ATE US (vapors)	23.4 mg/l/4h
ATE US (dust, mist)	23.4 mg/l/4h

#### solvent naphtha (petroleum), light aromatic (64742-95-6)

LD50 oral rat	> 5000 mg/kg body weight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity)
LD50 dermal rabbit	> 3160 mg/kg (OECD Test Guideline 402)

#### hexamethylene diisocyanate oligomers (28182-81-2)

LD50 oral rat	> 2500 mg/kg (OECD Test Guideline 423, rat, female)
LD50 dermal rat	> 2000 mg/kg (OECD Test Guideline 402, rat, male/female)
ATE US (gases)	4500 ppmV/4h
ATE US (vapors)	11 mg/l/4h

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<b>hexamethylene diisocyanate oligomers (28182-81-2)</b>	
ATE US (dust, mist)	0.39 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
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: May cause respiratory irritation. May cause drowsiness or dizziness.
<b>methyl acetate (79-20-9)</b>	
STOT-single exposure	May cause drowsiness or dizziness.
<b>n-butyl acetate (123-86-4)</b>	
STOT-single exposure	May cause drowsiness or dizziness.
<b>solvent naphtha (petroleum), light aromatic (64742-95-6)</b>	
STOT-single exposure	May cause drowsiness or dizziness. May cause respiratory irritation.
<b>hexamethylene diisocyanate oligomers (28182-81-2)</b>	
STOT-single exposure	May cause respiratory irritation.
STOT-repeated exposure	: Not classified
<b>methyl acetate (79-20-9)</b>	
LOAEC (inhalation, rat, vapor, 90 days)	2000 mg/l
NOAEC (inhalation, rat, vapor, 90 days)	1057 mg/m <sup>3</sup>
Aspiration hazard	: Not classified
Viscosity, kinematic	: No data available
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.

## 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.

<b>methyl acetate (79-20-9)</b>	
LC50 - Fish [1]	250 – 350 mg/l Test organisms (species): Danio rerio (previous name: Brachydanio rerio)
EC50 - Crustacea [1]	1026.7 mg/l Test organisms (species): Daphnia magna
<b>n-butyl acetate (123-86-4)</b>	
LC50 - Fish [1]	18 mg/l Test organisms (species): Pimephales promelas
EC50 - Crustacea [1]	44 mg/l Test organisms (species): Daphnia sp.
LC50 - Fish [2]	62 mg/l (Leuciscus idus, static system)
ErC50 algae	397 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Read-across, GLP)



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<b>n-butyl acetate (123-86-4)</b>	
NOEC (chronic)	23 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC chronic crustacea	23 mg/l

### 12.2. Persistence and degradability

<b>methyl acetate (79-20-9)</b>	
Persistence and degradability	Readily biodegradable in water.

<b>n-butyl acetate (123-86-4)</b>	
Persistence and degradability	Readily biodegradable in water.
ThOD	2.21 g O <sub>2</sub> /g substance

<b>solvent naphtha (petroleum), light aromatic (64742-95-6)</b>	
Persistence and degradability	May cause long-term adverse effects in the environment.

### 12.3. Bioaccumulative potential

<b>methyl acetate (79-20-9)</b>	
BCF - Fish [1]	< 1 (Pisces, Literature study)
Partition coefficient n-octanol/water (Log Pow)	0.18 (Experimental value, 20 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

<b>n-butyl acetate (123-86-4)</b>	
Partition coefficient n-octanol/water (Log Pow)	2.3 (Experimental value, OECD 117: Partition Coefficient (n-octanol/water), HPLC method, 25 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

<b>solvent naphtha (petroleum), light aromatic (64742-95-6)</b>	
Partition coefficient n-octanol/water (Log Pow)	2.1 – 6
Bioaccumulative potential	Not established.

### 12.4. Mobility in soil

<b>methyl acetate (79-20-9)</b>	
Surface tension	24 mN/m (20 °C)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	0.18 (log Koc, OECD 121: Estimation of the Adsorption Coefficient (Koc) on Soil and on Sewage Sludge using High Performance Liquid Chromatography (HPLC), Experimental value, GLP)
Ecology - soil	Highly mobile in soil.

<b>n-butyl acetate (123-86-4)</b>	
Surface tension	61.3 mN/m (20 °C, 0.1 %, OECD 115: Surface Tension of Aqueous Solutions)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	1.268 – 1.844 (log Koc, SRC PCKOCWIN v2.0, Calculated value)
Ecology - soil	Highly mobile in soil. Not toxic to plants.

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### 12.5. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Disposal 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

### 14.1. UN number

DOT NA No	:	UN1263
UN-No. (TDG)	:	UN1263
UN-No. (IMDG)	:	1263
UN-No. (IATA)	:	1263

### 14.2. UN proper shipping name

Proper Shipping Name (DOT)	:	Paint related material
Proper Shipping Name (TDG)	:	PAINT RELATED MATERIAL
Proper Shipping Name (IMDG)	:	PAINT RELATED MATERIAL
Proper Shipping Name (IATA)	:	Paint

### 14.3. Transport hazard class(es)

#### DOT

Transport hazard class(es) (DOT)	:	3
Hazard labels (DOT)	:	3

#### TDG

Transport hazard class(es) (TDG)	:	3
Hazard labels (TDG)	:	3

#### IMDG

Transport hazard class(es) (IMDG)	:	3
Hazard labels (IMDG)	:	3



#### IATA

Transport hazard class(es) (IATA)	:	3
Hazard labels (IATA)	:	3



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### 14.4. Packing group

Packing group (DOT)	: II
Packing group (TDG)	: II
Packing group (IMDG)	: II
Packing group (IATA)	: II

### 14.5. Environmental hazards

Other information : No supplementary information available.

### 14.6. Special precautions for user

**DOT**  
UN-No.(DOT) : UN1263

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- 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).
- 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.
- 383 - Packages containing toy plastic or paper caps for toy pistols described as "UN0349, Articles, explosive, n.o.s. (Toy caps), 1.4S" or "NA0337, Toy caps, 1.4S" are not subject to the subpart E (labeling) requirements of this part when offered for transportation by motor vehicle, rail freight, cargo vessel, and cargo aircraft and, notwithstanding the packing method assigned in §173.62 of this subchapter, in conformance with the following conditions:
- B52 - Notwithstanding the provisions of 173.24b of this subchapter, non-reclosing pressure relief devices are authorized on DOT 57 portable tanks.
- B131 - When transported by highway, rail, or cargo vessel, waste Paint and Paint related material (UN1263; PG II and PG III), when in plastic or metal inner packagings of not more than 26.5 L (7 gallons), are excepted from the marking requirements in §172.301(a) and (c) and the labeling requirements in §172.400(a), when further packed in the following specification and non-specification bulk outer packagings and under the following conditions:
- a. Primary receptacles must conform to the general packaging requirements of subpart B of part 173 of this subchapter and may not leak. If they do leak, they must be overpacked in packagings conforming to the specification requirements of part 178 of this subchapter or in salvage packagings conforming to the requirements in §173.12 of this subchapter.
- b. Primary receptacles must be further packed in non-specification bulk outer packagings such as cubic yard boxes, plastic rigid-wall bulk containers, dump trailers, and roll-off containers. Bulk outer packagings must be liquid tight through design or by the use of lining materials.
- c. Primary receptacles may also be further packed in specification bulk outer packagings. Authorized specification bulk outer packagings are UN11G fiberboard intermediate bulk containers (IBC) and UN13H4 woven plastic, coated and with liner flexible intermediate bulk containers (FIBCs) meeting the Packing Group II performance level and lined with a plastic liner of at least 6 mil thickness.
- d. All inner packagings placed inside bulk outer packagings must be blocked and braced to prevent movement during transportation that could cause the container to open or fall over. Specification IBCs and FIBCs are to be secured to a pallet.
- 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.
- 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

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DOT Packaging Non Bulk (49 CFR 173.xxx)	: 173
DOT Packaging Bulk (49 CFR 173.xxx)	: 242
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.

### TDG

UN-No. (TDG)	: UN1263
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.
Explosive Limit and Limited Quantity Index	: 5 L
Excepted quantities (TDG)	: E2
Passenger Carrying Road Vehicle or Passenger Carrying Railway Vehicle Index	: 5 L
Emergency Response Guide (ERG) Number	: 128

### IMDG

Special provision (IMDG)	: 163, 367
Limited quantities (IMDG)	: 5 L
Excepted quantities (IMDG)	: E2
Packing instructions (IMDG)	: P001
Packing provisions (IMDG)	: PP1
IBC packing instructions (IMDG)	: IBC02
Tank instructions (IMDG)	: T4
Tank special provisions (IMDG)	: TP1, TP8, TP28
EmS-No. (Fire)	: F-E - FIRE SCHEDULE Echo - NON-WATER-REACTIVE FLAMMABLE LIQUIDS
EmS-No. (Spillage)	: S-E - SPILLAGE SCHEDULE Echo - FLAMMABLE LIQUIDS, FLOATING ON WATER
Stowage category (IMDG)	: B
Properties and observations (IMDG)	: Miscibility with water depends upon the composition.

### IATA

PCA Excepted quantities (IATA)	: E2
PCA Limited quantities (IATA)	: Y341
PCA limited quantity max net quantity (IATA)	: 1L
PCA packing instructions (IATA)	: 353
PCA max net quantity (IATA)	: 5L
CAO packing instructions (IATA)	: 364
CAO max net quantity (IATA)	: 60L
Special provision (IATA)	: A3, A72, A192

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ERG code (IATA) : 3L

### 14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

Commercial status of components according to the United States Environmental Protection Agency's Toxic Substances Control Act (TSCA):

Name	CAS-No.	Listing	Commercial status	Flags
methyl acetate	79-20-9	Present	Active	
n-butyl acetate	123-86-4	Present	Active	
solvent naphtha (petroleum), light aromatic	64742-95-6	Present	Active	
hexamethylene diisocyanate oligomers	28182-81-2	Present	Active	XU

This product or mixture is not known to contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

#### n-butyl acetate (123-86-4)

CERCLA RQ 5000 lb

### 15.2. International regulations

#### CANADA

#### methyl acetate (79-20-9)

Listed on the Canadian DSL (Domestic Substances List)

#### n-butyl acetate (123-86-4)

Listed on the Canadian DSL (Domestic Substances List)

#### solvent naphtha (petroleum), light aromatic (64742-95-6)

Listed on the Canadian DSL (Domestic Substances List)

#### hexamethylene diisocyanate oligomers (28182-81-2)

Listed on the Canadian DSL (Domestic Substances List)

#### EU-Regulations

No additional information available

#### National regulations

#### n-butyl acetate (123-86-4)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

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### solvent naphtha (petroleum), light aromatic (64742-95-6)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

### 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

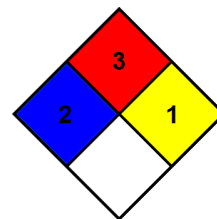
Component	State or local regulations
methyl acetate(79-20-9)	U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Acceptable Ambient Concentrations; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - New York City - Right to Know Hazardous Substances List; U.S. - Pennsylvania - RTK (Right to Know) List
n-butyl acetate(123-86-4)	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 : 01/17/2020

- 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.



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.