



# SLOW HARDENER (S2033-US)

## Safety Data Sheet S2033-US

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 : SLOW HARDENER (S2033-US)  
Product group : 2K Hardener  
Other means of identification : UP2333, UP2335

##### 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](mailto:technical.department@u-pol.com) - [www.u-pol.com](http://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. 3 H226  
Skin Sens. 1 H317  
STOT SE 3 H335  
STOT SE 3 H336  
Aquatic Chronic 2 H411

##### 2.2. Label elements

###### GHS-US labeling

Hazard pictograms (GHS-US) :



Signal word (GHS-US) :

Warning

Hazard statements (GHS-US) :

H226 - Flammable liquid and vapor  
H317 - May cause an allergic skin reaction  
H335 - May cause respiratory irritation  
H336 - May cause drowsiness or dizziness  
H411 - Toxic to aquatic life with long lasting effects

Precautionary statements (GHS-US) :

P210 - Keep away from heat, hot surfaces, open flames, sparks. - No smoking.  
P261 - Avoid breathing fume, spray, vapors.  
P273 - Avoid release to the environment.  
P280 - Wear face protection, protective clothing, protective gloves.  
P302+P352 - If on skin: Wash with plenty of water  
P312 - Call a POISON CENTER if you feel unwell  
P501 - 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

No additional information available

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### 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	23-43	Acute Tox. 4 (Inhalation), H332 Skin Sens. 1, H317 STOT SE 3, H335
Solvent naphtha (petroleum), light aromatic		23 - 43	Flam. Liq. 3, H226 STOT SE 3, H336 STOT SE 3, H335 Asp. Tox. 1, H304 Aquatic Chronic 2, H411
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

Full text of H-phrases: see section 16

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

- First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
- First-aid measures after inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
- First-aid measures after skin contact : Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention. Get medical advice/attention. Wash contaminated clothing before reuse. Repeated exposure may cause skin dryness or cracking.
- First-aid measures after eye contact : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persists.
- First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

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

- Symptoms/effects after inhalation : May cause an allergic skin reaction. May cause respiratory irritation. May cause drowsiness or dizziness.

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

No additional information available

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

- Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.
- Unsuitable extinguishing media : Do not use a heavy water stream.

### 5.2. Special hazards arising from the substance or mixture

- Fire hazard : Flammable liquid and vapor.
- Explosion hazard : May form flammable/explosive vapor-air mixture.

### 5.3. Advice for firefighters

- Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Remove ignition sources. Use special care to avoid static electric charges. No open flames. No smoking.

#### 6.1.1. For non-emergency personnel

- Protective equipment : Safety glasses. Protective clothing. Gloves.

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Emergency procedures : Evacuate unnecessary personnel.

### 6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection. Avoid breathing spray, vapors.

Emergency procedures : Ventilate area.

### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters. Avoid release to the environment.

### 6.3. Methods and material for containment and cleaning up

For containment : Contain leaking substance. Collect spillage.

Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

### 6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection. For further information refer to section 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Additional hazards when processed : Handle empty containers with care because residual vapors are flammable.

Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor. No open flames. No smoking. Take precautionary measures against static discharge. Use only non-sparking tools. Avoid breathing spray, vapors. Use only outdoors or in a well-ventilated area.

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

### 7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment. Use explosion-proof electrical, Lighting equipment equipment.

Storage conditions : Keep only in the original container in a cool, well ventilated place away from : Ignition sources, Heat sources, Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep container tightly closed.

Incompatible products : Strong bases. Strong acids.

Incompatible materials : Sources of ignition. Direct sunlight. Heat sources.

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

SLOW HARDENER (S2033-US)	
ACGIH	Not applicable
OSHA	Not applicable
Solvent naphtha (petroleum), light aromatic	
ACGIH	Not applicable
OSHA	Not applicable
Hexamethylene Diisocyanate Oligomers (28182-81-2)	
ACGIH	Not applicable
OSHA	Not applicable
Solvent naphtha (petroleum), light aromatic	
ACGIH	Not applicable
OSHA	Not applicable

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### 8.2. Exposure controls

Personal protective equipment : Avoid all unnecessary exposure. Gas mask. Gloves. Protective clothing. Safety glasses.



Materials for protective clothing : Impermeable clothing.  
Hand protection : Wear protective gloves.  
Eye protection : Chemical goggles or safety glasses.  
Skin and body protection : Wear suitable protective clothing.  
Respiratory protection : Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. Air-fed respiratory protective equipment should be worn when this product is sprayed.  
Other information : Do not eat, drink or smoke during use.

## 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 : No data available  
Freezing point : No data available  
Boiling point : No data available  
Flash point : 42 °C  
Auto-ignition temperature : No data available  
Decomposition temperature : No data available  
Flammability (solid, gas) : No data available  
Vapor pressure : No data available  
Relative vapor density at 20 °C : No data available  
Relative density : No data available  
Specific gravity / density : 0.97 - 0.99 g/cm<sup>3</sup>  
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 : 625 g/l  
VOC content - Regulatory : 625 g/l

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No additional information available

### 10.2. Chemical stability

Flammable liquid and vapor. May form flammable/explosive vapor-air mixture.

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### 10.3. Possibility of hazardous reactions

Not established.

### 10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures. Open flame. Overheating. Heat. Sparks.

### 10.5. Incompatible materials

Strong acids. Strong bases.

### 10.6. Hazardous decomposition products

fume. Carbon monoxide. Carbon dioxide. May release flammable gases.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Not classified

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 : Not classified

Respiratory or skin sensitization : May cause an allergic skin reaction.

Germ cell mutagenicity : Not classified

Based on available data, the classification criteria are not met

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

Based on available data, the classification criteria are not met

Specific target organ toxicity – single exposure : May cause respiratory irritation. May cause drowsiness or dizziness.

Specific target organ toxicity – repeated exposure : Not classified

Aspiration hazard : Not classified

Potential Adverse human health effects and symptoms : Based on available data, the classification criteria are not met.

Symptoms/effects after inhalation : May cause an allergic skin reaction. May cause respiratory irritation. May cause drowsiness or dizziness.

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - water : Toxic to aquatic life with long lasting effects.

### 12.2. Persistence and degradability

SLOW HARDENER (S2033-US)	
Persistence and degradability	May cause long-term adverse effects in the environment.
Solvent naphtha (petroleum), light aromatic	
Persistence and degradability	May cause long-term adverse effects in the environment.
Solvent naphtha (petroleum), light aromatic	
Persistence and degradability	May cause long-term adverse effects in the environment.

### 12.3. Bioaccumulative potential

SLOW HARDENER (S2033-US)	
Bioaccumulative potential	Not established.

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

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 ozone layer : No additional information available  
Effect on the global warming : No known effects from this product.  
Other information : Avoid release to the environment.

## 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.  
Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to Remove waste in accordance with local and/or national regulations.  
Additional information : Handle empty containers with care because residual vapors are flammable.  
Ecology - waste materials : Avoid release to the environment.

## SECTION 14: Transport information

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

A red diamond-shaped hazard label with a white flame icon in the center. Below the flame, the text "FLAMMABLE LIQUID" is written in white. At the bottom of the diamond, the number "3" is displayed in white.

Packing group (DOT) : II - Medium Danger

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 (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

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

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

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DOT Quantity Limitations Passenger aircraft/rail : 5 L  
(49 CFR 173.27)

DOT Quantity Limitations Cargo aircraft only (49 : 60 L  
CFR 175.75)

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.

### Additional information

Other information : No supplementary information available.

### ADR

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

Packing group (ADR) : III

Class (ADR) : 3 - Flammable liquid

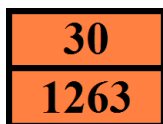
Hazard identification number (Kemler No.) : 30

Classification code (ADR) : F1

Hazard labels (ADR) : 3 - Flammable liquids



Orange plates :



Tunnel restriction code (ADR) : D/E

LQ : 5I

Excepted quantities (ADR) : E1

### Transport by sea

UN-No. (IMDG) : 1263

Proper Shipping Name (IMDG) : PAINT RELATED MATERIAL

Class (IMDG) : 3 - Flammable liquids

Packing group (IMDG) : III - substances presenting low danger

### Air transport

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

hexamethylene-di-isocyanate	CAS-No. 822-06-0	< 5%
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#### 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

#### Solvent naphtha (petroleum), light aromatic

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

### 15.2. International regulations

#### CANADA

No additional information available

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### EU-Regulations

No additional information available

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

Flam. Liq. 3 H226  
Skin Sens. 1 H317  
STOT SE 3 H335  
STOT SE 3 H336  
Aquatic Chronic 2 H411

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

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

#### 15.2.2. National regulations

##### Solvent naphtha (petroleum), light aromatic

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

##### Solvent naphtha (petroleum), light aromatic

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

### 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

## SECTION 16: Other information

Revision date : 10/26/2017

Other information : None.

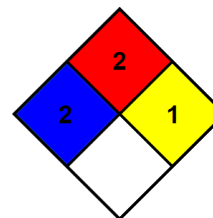
Full text of H-phrases:

H226	Flammable liquid and vapor
H304	May be fatal if swallowed and enters airways
H317	May cause an allergic skin reaction
H332	Harmful if inhaled
H335	May cause respiratory irritation
H336	May cause drowsiness or dizziness
H411	Toxic to aquatic life with long lasting effects

NFPA health hazard : 2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.

NFPA fire hazard : 2 - Materials that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur.

NFPA reactivity : 1 - Materials that in themselves are normally stable but can become unstable at elevated temperatures and pressures.



SDS US UPOL

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