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

1.1. Product identifier
Product form: Mixture
Product name: HAR/SF-US - UP0739
Product group: Catalyst

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
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 (UK +44 (0) 1933 230310 (07:30 - 17:00hrs UK time))

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture
GHS-US classification
Flam. Liq. 2 H225
Self-react. D H242
Skin Corr. 1B H314
STOT SE 3 H335
STOT SE 3 H336
Full text of H-phrases: see section 16

2.2. Label elements
GHS-US labeling
Hazard pictograms (GHS-US):

Signal word (GHS-US): Danger
Hazard statements (GHS-US):
H225 - Highly flammable liquid and vapor
H242 - Heating may cause a fire
H314 - Causes severe skin burns and eye damage
H335 - May cause respiratory irritation
H336 - May cause drowsiness or dizziness

Precautionary statements (GHS-US):
P210 - Keep away from heat, hot surfaces, open flames, sparks. - No smoking
P280 - Wear eye protection, protective clothing, protective gloves
P301+P330+P331 - If swallowed: rinse mouth. Do NOT induce vomiting
P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P312 - Call a POISON CENTER if you feel unwell

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. **Substance**

Not applicable

3.2. **Mixture**

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>GHS-US classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIACETONE ALCOHOL</td>
<td>(CAS No) 123-42-2</td>
<td>5-43</td>
<td>Eye Irrit. 2A, H319</td>
</tr>
</tbody>
</table>

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. Immediately call a poison center or doctor/physician. Call a POISON CENTER or doctor/physician if you feel unwell.

First-aid measures after skin contact: Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing. Immediately call a poison center or doctor/physician. Repeated exposure may cause skin dryness or cracking.

First-aid measures after eye contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center or doctor/physician.

First-aid measures after ingestion: Rinse mouth. Do NOT induce vomiting. Immediately call a poison center or doctor/physician.

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

Symptoms/injuries: Causes severe skin burns and eye damage.

Symptoms/injuries after inhalation: 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**


Unsuitable extinguishing media: Do not use a heavy water stream.

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

Fire hazard: Highly flammable liquid and vapor.

Explosion hazard: May form flammable/explosive vapor-air mixture.

Reactivity: Thermal decomposition generates: Corrosive vapors.

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: Gloves. Protective clothing. Safety glasses.

Emergency procedures: Evacuate unnecessary personnel.

6.1.2. **For emergency responders**

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

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: 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. Use only non-sparking tools. Do not breathe fume, vapors. Avoid breathing fume, vapors. Use only outdoors or in a well-ventilated area.
Hygiene measures: Wash hands thoroughly after handling. 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. Comply with applicable regulations.
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 in fireproof place. Keep container tightly closed.
Incompatible products: Strong bases. Strong acids.
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
<table>
<thead>
<tr>
<th>HAR/SF-US - UP0739</th>
<th>ACGIH</th>
<th>Not applicable</th>
<th>OSHA</th>
<th>Not applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>ethyl acetate (141-78-6)</td>
<td>ACGIH</td>
<td>ACGIH TWA (ppm)</td>
<td>400 ppm</td>
<td></td>
</tr>
<tr>
<td>ACGIH</td>
<td>Remark (ACGIH)</td>
<td>URT &amp; eye ir</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OSHA</td>
<td>OSHA PEL (TWA) (mg/m³)</td>
<td>1400 mg/m³</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OSHA</td>
<td>OSHA PEL (TWA) (ppm)</td>
<td>400 ppm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>cyclohexanone, peroxide (12262-58-7)</td>
<td>ACGIH</td>
<td>Not applicable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OSHA</td>
<td>Not applicable</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DIACETONE ALCOHOL (123-42-2)</td>
<td>ACGIH</td>
<td>ACGIH TWA (ppm)</td>
<td>50 ppm</td>
<td></td>
</tr>
<tr>
<td>ACGIH</td>
<td>Remark (ACGIH)</td>
<td>URT &amp; eye ir</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OSHA</td>
<td>OSHA PEL (TWA) (mg/m³)</td>
<td>240 mg/m³</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OSHA</td>
<td>OSHA PEL (TWA) (ppm)</td>
<td>50 ppm</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
8.2. Exposure controls


Materials for protective clothing: Impermeable clothing.

Hand protection: Wear protective gloves.

Eye protection: Chemical goggles or face shield.

Skin and body protection: Wear suitable protective clothing.

Respiratory protection: Where exposure through inhalation may occur from use, respiratory protection equipment is recommended.

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

Color: Colorless

Odor: Characteristic

Odor threshold: No data available

pH: No data available

Relative evaporation rate (butyl acetate=1): No data available

Melting point: -10 °C

Freezing point: No data available

Boiling point: > 35 °C

Flash point: 6 °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

Solubility: No data available

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

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Thermal decomposition generates: Corrosive vapors.

10.2. Chemical stability

Highly flammable liquid and vapor. May form flammable/explosive vapor-air mixture. Heating may cause a fire.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures. Open flame.
**10.5. Incompatible materials**
Strong acids. Strong bases.

**10.6. Hazardous decomposition products**

**SECTION 11: Toxicological information**

**11.1. Information on toxicological effects**

Acute toxicity: Not classified

<table>
<thead>
<tr>
<th>cyclohexanone, peroxide (12262-58-7)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ATE US (oral)</td>
<td>500.000 mg/kg body weight</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>Causes severe skin burns and eye damage.</td>
</tr>
<tr>
<td>Serious eye damage/irritation</td>
<td>Not classified</td>
</tr>
<tr>
<td>Respiratory or skin sensitization</td>
<td>Not classified</td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>Reproductive toxicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>Specific target organ toxicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>Specific target organ toxicity</td>
<td>Based on available data, the classification criteria are not met</td>
</tr>
<tr>
<td>Aspiration hazard</td>
<td>Not classified</td>
</tr>
<tr>
<td>Potential adverse human health effects and symptoms</td>
<td>Based on available data, the classification criteria are not met.</td>
</tr>
<tr>
<td>Symptoms/injuries after inhalation</td>
<td>May cause respiratory irritation. May cause drowsiness or dizziness.</td>
</tr>
</tbody>
</table>

**SECTION 12: Ecological information**

**12.1. Toxicity**

No additional information available

**12.2. Persistence and degradability**

HAR/SF-US - UP0739

| Persistence and degradability | Not established. |

**12.3. Bioaccumulative potential**

HAR/SF-US - UP0739

| Bioaccumulative potential | Not established. |

**12.4. Mobility in soil**

No additional information available

**12.5. Other adverse effects**

Effect on ozone layer: 

Effect on the global warming: No known ecological damage caused by 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.
Waste disposal recommendations: Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to Dispose in a safe manner in accordance with local/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: UN3105 Organic peroxide type D, liquid, 5.2, II
UN-No.(DOT): UN3105
Proper Shipping Name (DOT): Organic peroxide type D, liquid
Transport hazard class(es) (DOT): 5.2 - Class 5.2 - Organic Peroxide 49 CFR 173.128
Hazard labels (DOT): 5.2 - Organic peroxide

DOT Symbols: G - Identifies PSN requiring a technical name
Packing group (DOT): II - Medium Danger
DOT Packaging Exceptions (49 CFR 173.xxx): 152
DOT Packaging Non Bulk (49 CFR 173.xxx): 225
DOT Packaging Bulk (49 CFR 173.xxx): None
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27): 5 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 173.75): 10 L
DOT Vessel Stowage Location: D - The material must be stowed “on deck only” 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, but the material is prohibited on passenger vessels in which the limiting number of passengers is exceeded.
DOT Vessel Stowage Other: 12 - Keep as cool as reasonably practicable, 40 - Stow “clear of living quarters”, 52 - Stow “separated from” acids, 53 - Stow “separated from” alkaline compounds

Additional information
Other information: No supplementary information available.

ADR
Transport document description: UN 3105 ORGANIC PEROXIDE TYPE D, LIQUID, 5.2, (D)
Class (ADR): 5.2 - Organic peroxide
Classification code (ADR): P1
Hazard labels (ADR): 5.2 - Organic peroxide

Tunnel restriction code (ADR): D
LQ: 125ml
Excepted quantities (ADR): E0

Transport by sea
UN-No. (IMDG): 3105
Proper Shipping Name (IMDG): ORGANIC PEROXIDE TYPE D, LIQUID
Class (IMDG): 5.2 - Organic peroxide

Air transport
UN-No. (IATA): 3105
Proper Shipping Name (IATA): Organic peroxide type d, liquid
**HAR/SF-US - UP0739**

**Safety Data Sheet**

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

| Class (IATA) | 5.2 - Organic Peroxides |

**SECTION 15: Regulatory information**

**15.1. US Federal regulations**

This product or mixture does not 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.

**ethyl acetate (141-78-6)**

<table>
<thead>
<tr>
<th>Listed on the United States TSCA (Toxic Substances Control Act) inventory</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Not subject to reporting requirements of the United States SARA Section 313</td>
<td></td>
</tr>
<tr>
<td>RQ (Reportable quantity, section 304 of EPA's List of Lists)</td>
<td>5000 lb</td>
</tr>
</tbody>
</table>

**cyclohexanone, peroxide (12262-58-7)**

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

**DIACETONE ALCOHOL (123-42-2)**

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

15.2. International regulations

**CANADA**

No additional information available

**EU-Regulations**

No additional information available

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

| Flam. Liq. | H225 |
| Self-react. D | H242 |
| Skin Corr. 1B | H314 |
| STOT SE 3 | H335 |
| STOT SE 3 | H336 |

Full text of H-phrases: see section 16

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

15.2.2. National 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 and/or reproductive harm

**SECTION 16: Other information**

Other information : None.
<table>
<thead>
<tr>
<th>Full text of H-phrases:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Tox. 4 (Oral)</td>
<td>Acute toxicity (oral) Category 4</td>
</tr>
<tr>
<td>Eye Irrit. 2A</td>
<td>Serious eye damage/eye irritation Category 2A</td>
</tr>
<tr>
<td>Flam. Liq. 2</td>
<td>Flammable liquids Category 2</td>
</tr>
<tr>
<td>Org. Perox. A</td>
<td>Organic Peroxide Category A</td>
</tr>
<tr>
<td>Self-react. D</td>
<td>Self-reactive substances and mixtures Category D</td>
</tr>
<tr>
<td>Skin Corr. 1B</td>
<td>Skin corrosion/irritation Category 1B</td>
</tr>
<tr>
<td>STOT SE 3</td>
<td>Specific target organ toxicity (single exposure) Category 3</td>
</tr>
<tr>
<td>STOT SE 3</td>
<td>Specific target organ toxicity (single exposure) Category 3</td>
</tr>
<tr>
<td>H225</td>
<td>Highly flammable liquid and vapor</td>
</tr>
<tr>
<td>H240</td>
<td>Heating may cause an explosion</td>
</tr>
<tr>
<td>H242</td>
<td>Heating may cause a fire</td>
</tr>
<tr>
<td>H302</td>
<td>Harmful if swallowed</td>
</tr>
<tr>
<td>H314</td>
<td>Causes severe skin burns and eye damage</td>
</tr>
<tr>
<td>H319</td>
<td>Causes serious eye irritation</td>
</tr>
<tr>
<td>H335</td>
<td>May cause respiratory irritation</td>
</tr>
<tr>
<td>H336</td>
<td>May cause drowsiness or dizziness</td>
</tr>
</tbody>
</table>

**NFPA health hazard**: 2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.

**NFPA fire hazard**: 3 - Liquids and solids that can be ignited under almost all ambient conditions.

**NFPA reactivity**: 1 - Normally stable, but can become unstable at elevated temperatures and pressures or may react with water with some release of energy, but not violently.

**NFPA specific hazard**: OX - This denotes an oxidizer, a chemical which can greatly increase the rate of combustion/fire.

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**SDS US UPOL**

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. U-POL does not assume any liability for the suitability of the product 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.