URALAC® SH978 S1E5-50

SAFETY DATA SHEET

Section 1. Identification

GHS product identifier : URALAC® SH978 S1E5-50
Other means of identification : Not available.
Product type : Liquid.
Material uses : Resin system used in the production of coatings.
Supplier : DSM Coating Resins, Inc.
31 Columbia Nitrogen Road
Augusta, GA 30903
USA
Tel.: +1 (706) 849 6700
Fax: +1 (706) 849 6682
www.dsmcoatingresins.com

e-mail address of person responsible for this SDS : DSMRESINS.SDS@dsm.com
(Communication in English only please)

Emergency telephone number : DSM Coating Resins, Inc.
(706) 849-6439
(During normal business hours)
CHEMTREC (within the U.S.A.):
(800)424-9300 (24 hour)
CHEMTREC (International):
(01)(703)527-3887 [USA] (24 hour)

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Classification of the substance or mixture : FLAMMABLE LIQUIDS - Category 3
CARCINOGENICITY - Category 2
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3

GHS label elements

Hazard pictograms : 

Signal word : Warning
Hazard statements : H226 - Flammable liquid and vapor.
H351 - Suspected of causing cancer.
H335 - May cause respiratory irritation.

Precautionary statements

Prevention : P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P280 - Wear protective gloves: 4 - 8 hours (breakthrough time): fluor rubber (0.70 mm); < 1 hour (breakthrough time): Nitril rubber (0.4 mm). Wear eye or face protection. Wear protective clothing.
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P241 - Use explosion-proof electrical, ventilating, lighting and all material-handling equipment.
P242 - Use only non-sparking tools.
P243 - Take precautionary measures against static discharge.
P240 - Ground container and receiving equipment.
P233 - Keep container tightly closed.
P271 - Use only outdoors or in a well-ventilated area.
P261 - Avoid breathing vapor.

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Response:
P308 + P313 - IF exposed or concerned: Get medical attention.
P304 + P340 + P312 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell.
P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.

Storage:
P405 - Store locked up.
P233 - Keep container tightly closed.
P403 - Store in a well-ventilated place.
P235 - Keep cool.

Disposal:
P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental label elements:
Avoid contact with skin and clothing. Wash thoroughly after handling.

Hazards not otherwise classified:
Prolonged or repeated contact may dry skin and cause irritation.

HMIS® IV
Hazardous Material Information System (U.S.A.)

Health: 2
Flammability: 2
Physical hazards: 0

The PPE (Personal Protection Equipment) designation in the HMIS is provided for use by employees at supplier sites only. Other users of this product are encouraged to evaluate the hazards of the product and assign PPE that is applicable to their specific situations.

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on SDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

Section 3. Composition/information on ingredients

Substance/mixture: Mixture
Other means of identification: Not available.

CAS number: Not applicable.

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>%</th>
<th>CAS number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solvent naphtha (petroleum), light arom.</td>
<td>10 - 25</td>
<td>64742-95-6</td>
</tr>
<tr>
<td>1,2,4-trimethylbenzene</td>
<td>5 - 10</td>
<td>95-63-6</td>
</tr>
<tr>
<td>Cumene</td>
<td>0.1-1</td>
<td>98-82-8</td>
</tr>
</tbody>
</table>

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact: Wash skin thoroughly with soap and water or use recognized skin cleanser. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion: Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact: No known significant effects or critical hazards.
Inhalation: May cause respiratory irritation.
Skin contact: No known significant effects or critical hazards.
Ingestion: No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact: No specific data.
Inhalation: Adverse symptoms may include the following:
- respiratory tract irritation
- coughing
Skin contact: Adverse symptoms may include the following:
- irritation
- dryness
- cracking
Ingestion: No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician: Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments: No specific treatment.

Protection of first-aiders: No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)
Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media: Use dry chemical, CO₂, water spray (fog) or foam.

Unsuitable extinguishing media: Do not use water jet.

Specific hazards arising from the chemical: Flammable liquid and vapor. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Runoff to sewer may create fire or explosion hazard.

Hazardous thermal decomposition products: Decomposition products may include the following materials:
- carbon dioxide
- carbon monoxide
- (dense) black smoke
- aldehydes
- organic acids

Special protective actions for fire-fighters: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Environmental precautions

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders: If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Methods and materials for containment and cleaning up

Small spill: Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor.

Large spill: Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.
Section 7. Handling and storage

Precautions for safe handling

Protective measures: Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities: Store in accordance with local regulations. Store in a segregated and approved area. Store in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10). Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Store in original container, protected from direct sunlight.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Hydrocarbons, C9, aromatics
1,2,4-trimethylbenzene

None.

ACGIH TLV (United States, 3/2017).
TWA: 25 ppm 8 hours.
TWA: 123 mg/m³ 8 hours.

TWA: 25 ppm 8 hours.
TWA: 125 mg/m³ 8 hours.

NIOSH REL (United States, 10/2016).
TWA: 25 ppm 10 hours.
TWA: 125 mg/m³ 10 hours.

Benzene, (1-methylethyl)-

Absorbed through skin.
TWA: 50 ppm 8 hours.
TWA: 245 mg/m³ 8 hours.

NIOSH REL (United States, 10/2016).
Absorbed through skin.
TWA: 50 ppm 10 hours.
TWA: 245 mg/m³ 10 hours.

ACGIH TLV (United States, 3/2017).
TWA: 50 ppm 8 hours.

OSHA PEL (United States, 6/2016). Absorbed through skin.
TWA: 50 ppm 8 hours.
TWA: 245 mg/m³ 8 hours.
Appropriate engineering controls: Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Hand protection: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. 4 - 8 hours (breakthrough time): fluor rubber (0.70 mm) < 1 hour (breakthrough time): Nitril rubber (0.4 mm)

Body protection: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

Other skin protection: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection: Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

| Appearance | Physical state | Liquid. [Clear to slightly hazy liquid.] |
| Color | Yellowish. [Light] |
| Odor | Characteristic. |
| Odor threshold | Not available. |
| pH | Not available. |
| Melting point | Not available. |
| Boiling point | Not available. |
| Flash point | Closed cup: 119.3°F (48.5°C) [Closed cup, ISO 1523] |
| Evaporation rate | Not available. |
| Flammability (solid, gas) | Not available. |
| Lower and upper explosive (flammable) limits | Not available. |
Vapor pressure : Not available.
Vapor density : Not available.
Relative density : 1.13 (Water = 1)
Density (g/cm³) : 1.13 g/cm³ (23°C)
Bulk density : Not available.
Solubility : Not available.
Solubility in water : Not available.
Solubility at room temperature : Not available.
Partition coefficient: n-octanol/water : Not available.
Auto-ignition temperature : Not available.
Decomposition temperature : Not available.
Viscosity : Dynamic (room temperature): 6800 to 8800 mPa·s (6800 to 8800 cP)
Kinematic (room temperature): >60.39 cm²/s (>6039 cSt)
Kinematic (40°C (104°F)): >0.205 cm²/s (>20.5 cSt)

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.
Chemical stability : The product is stable.
Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.
Incompatible materials : Reactive or incompatible with the following materials: oxidizing materials
Hazardous decomposition products : No specific data.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Dose</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solvent naphtha (petroleum), light arom.</td>
<td>LC50 Inhalation Vapor</td>
<td>Rat</td>
<td>≥6193 mg/m³ (Maximum attainable vapor concentration)</td>
<td>4 hours</td>
</tr>
<tr>
<td></td>
<td>LD50 Dermal</td>
<td>Rabbit-Male, Female</td>
<td>&gt;3160 mg/kg (LD0 = 3160 mg/kg)</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>LD50 Oral</td>
<td>Rat-Female</td>
<td>3492 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>LD50 Oral</td>
<td>Rat-Male</td>
<td>&gt;6984 mg/kg (LD0 = 6984)</td>
<td>-</td>
</tr>
<tr>
<td>1,2,4-trimethylbenzene</td>
<td>LC50 Inhalation Vapor</td>
<td>Rat</td>
<td>18 mg/l</td>
<td>4 hours</td>
</tr>
<tr>
<td></td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>5 g/kg</td>
<td>-</td>
</tr>
</tbody>
</table>

Irritation/Corrosion

Date of issue/Date of revision : 28 August 2018
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## Carcinogenicity
Not available.

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Route of exposure</th>
<th>Species</th>
<th>Result</th>
<th>Score</th>
<th>Exposure</th>
<th>Observation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solvent naphtha (petroleum), light arom.</td>
<td>skin</td>
<td>Guinea pig</td>
<td>Not sensitizing</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Mutagenicity

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Test</th>
<th>Experiment</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solvent naphtha (petroleum), light arom.</td>
<td>OECD 471 Bacterial Reverse Mutation Test</td>
<td>Experiment: In vitro Subject: Bacteria Metabolic activation: Without &amp; with metabolic activation</td>
<td>Negative</td>
</tr>
<tr>
<td></td>
<td>OECD 476 In vitro Mammalian Cell Gene Mutation Test</td>
<td>Experiment: In vitro Subject: Mammalian-Animal Cell: Germ Metabolic activation: Without &amp; with metabolic activation</td>
<td>Negative</td>
</tr>
<tr>
<td></td>
<td>OECD 473 In vitro Mammalian Chromosomal Aberration Test</td>
<td>Experiment: In vitro Subject: Mammalian-Animal Cell: Germ Metabolic activation: Without &amp; with metabolic activation</td>
<td>Negative</td>
</tr>
<tr>
<td></td>
<td>OECD 479 Genetic Toxicology: In vitro Sister Chromatid Exchange Assay in Mammalian Cells</td>
<td>Experiment: In vitro Subject: Mammalian-Animal Cell: Germ Metabolic activation: Without &amp; with metabolic activation</td>
<td>Negative</td>
</tr>
<tr>
<td></td>
<td>OECD 475 Mammalian Bone Marrow Chromosomal Aberration Test</td>
<td>Experiment: In vivo Subject: Mammalian-Animal</td>
<td>Negative</td>
</tr>
</tbody>
</table>

## Sensitization

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Route of exposure</th>
<th>Species</th>
<th>Score</th>
<th>Exposure</th>
<th>Observation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solvent naphtha (petroleum), light arom.</td>
<td>Skin - Erythema/Eschar</td>
<td>Rabbit</td>
<td>1.9</td>
<td>4 hours 0.5 ml</td>
<td>24 to 72 hours</td>
</tr>
<tr>
<td></td>
<td>Skin - Edema</td>
<td>Rabbit</td>
<td>&lt;0. 000000001</td>
<td>4 hours 0.5 ml</td>
<td>24 to 72 hours</td>
</tr>
<tr>
<td></td>
<td>Eyes - Iris lesion</td>
<td>Rabbit</td>
<td>&lt;0. 00000001</td>
<td>0.1 ml</td>
<td>24 to 72 hours</td>
</tr>
<tr>
<td></td>
<td>Eyes - Cornea opacity</td>
<td>Rabbit</td>
<td>&lt;0. 00000001</td>
<td>0.1 ml</td>
<td>24 to 72 hours</td>
</tr>
<tr>
<td></td>
<td>Eyes - Edema of the conjunctivae</td>
<td>Rabbit</td>
<td>&lt;0. 00000001</td>
<td>0.1 ml</td>
<td>24 to 72 hours</td>
</tr>
</tbody>
</table>

## Reproductive toxicity

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Maternal toxicity</th>
<th>Fertility</th>
<th>Development toxin</th>
<th>Species</th>
<th>Dose</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solvent naphtha (petroleum), light arom.</td>
<td>-</td>
<td>Negative</td>
<td>-</td>
<td>Rat - Male, Female</td>
<td>Inhalation: 1500 ppm ( NOAEC )</td>
<td>-</td>
</tr>
</tbody>
</table>

## Teratogenicity

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Maternal toxicity</th>
<th>Fertility</th>
<th>Development toxin</th>
<th>Species</th>
<th>Dose</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cumene</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>
Specific target organ toxicity (single exposure)

<table>
<thead>
<tr>
<th>Name</th>
<th>Category</th>
<th>Route of exposure</th>
<th>Target organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solvent naphtha (petroleum), light arom.</td>
<td>Category 3</td>
<td>Not applicable.</td>
<td>Respiratory tract irritation, Narcotic effects</td>
</tr>
<tr>
<td>1,2,4-trimethylbenzene</td>
<td>Category 3</td>
<td>Not applicable.</td>
<td>Respiratory tract irritation</td>
</tr>
<tr>
<td>Cumene</td>
<td>Category 3</td>
<td>Not applicable.</td>
<td>Respiratory tract irritation</td>
</tr>
</tbody>
</table>

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

<table>
<thead>
<tr>
<th>Name</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solvent naphtha (petroleum), light arom.</td>
<td>ASPIRATION HAZARD - Category 1</td>
</tr>
<tr>
<td>1,2,4-trimethylbenzene</td>
<td>ASPIRATION HAZARD - Category 1</td>
</tr>
<tr>
<td>Cumene</td>
<td>ASPIRATION HAZARD - Category 1</td>
</tr>
</tbody>
</table>

Information on the likely routes of exposure

Potential acute health effects

Eye contact : No known significant effects or critical hazards.
Inhalation : May cause respiratory irritation.
Skin contact : No known significant effects or critical hazards.
Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No specific data.
Inhalation : Adverse symptoms may include the following: respiratory tract irritation, coughing.
Skin contact : Adverse symptoms may include the following: irritation, dryness, cracking.
Ingestion : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.
Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.
Potential delayed effects : Not available.

Potential chronic health effects

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Dose</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solvent naphtha (petroleum), light arom.</td>
<td>Sub-chronic NOAEL Oral Chronic NOAEC Inhalation Vapor</td>
<td>Rat - Male, Female Rat - Male</td>
<td>600 mg/kg /day 1800 mg/m³</td>
<td>- 6 hours /day; 5 days per week</td>
</tr>
</tbody>
</table>
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General
- Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.

Carcinogenicity
- Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity
- No known significant effects or critical hazards.

Teratogenicity
- No known significant effects or critical hazards.

Developmental effects
- No known significant effects or critical hazards.

Fertility effects
- No known significant effects or critical hazards.

Numerical measures of toxicity

### Acute toxicity estimates

<table>
<thead>
<tr>
<th>Route</th>
<th>ATE value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td>17073.1 mg/kg</td>
</tr>
<tr>
<td>Inhalation (vapors)</td>
<td>238.4 mg/l</td>
</tr>
</tbody>
</table>

Section 12. Ecological information

**Toxicity**

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solvent naphtha (petroleum), light arom.</td>
<td>Acute EC50 2.9 mg/l Fresh water</td>
<td>Algae</td>
<td>72 hours</td>
</tr>
<tr>
<td></td>
<td>Acute EC50 3.2 mg/l Fresh water</td>
<td>Daphnia</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 9.2 mg/l Fresh water</td>
<td>Fish</td>
<td>96 hours</td>
</tr>
<tr>
<td>1,2,4-trimethylbenzene</td>
<td>Acute LC50 4910 µg/l Marine water</td>
<td>Crustaceans - Elasmopus pectenicrus - Adult</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 7720 µg/l Fresh water</td>
<td>Fish - Pimephales promelas</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Acute EC50 2.1 mg/l</td>
<td>Daphnia</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute IC50 2.01 mg/l</td>
<td>Algae</td>
<td>72 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 4.7 to 4.8 mg/l Fresh water</td>
<td>Fish</td>
<td>96 hours</td>
</tr>
<tr>
<td>Cumene</td>
<td>Acute LC50 4910 µg/l Marine water</td>
<td>Crustaceans - Elasmopus pectenicrus - Adult</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 7720 µg/l Fresh water</td>
<td>Fish - Pimephales promelas</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Acute EC50 2.1 mg/l</td>
<td>Daphnia</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute IC50 2.01 mg/l</td>
<td>Algae</td>
<td>72 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 4.7 to 4.8 mg/l Fresh water</td>
<td>Fish</td>
<td>96 hours</td>
</tr>
</tbody>
</table>

**Persistence and degradability**

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Test</th>
<th>Result</th>
<th>Dose</th>
<th>Inoculum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solvent naphtha (petroleum), light arom.</td>
<td>OECD 301F Ready Biodegradability - Manometric Respirometry Test</td>
<td>77 % - Readily - 28 days</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>70 % - Readily - 20 days</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Cumene</td>
<td></td>
<td></td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**Bioaccumulative potential**

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>LogPow</th>
<th>BCF</th>
<th>Potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solvent naphtha (petroleum), light arom.</td>
<td></td>
<td>10 to 2500</td>
<td>high</td>
</tr>
<tr>
<td>1,2,4-trimethylbenzene</td>
<td>3.63</td>
<td>243</td>
<td>low</td>
</tr>
<tr>
<td>Cumene</td>
<td>3.66</td>
<td>35.48</td>
<td>low</td>
</tr>
</tbody>
</table>

**Mobility in soil**

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Soil/water partition coefficient ($K_{ow}$) : Not available.

Other adverse effects : No known significant effects or critical hazards.

### Section 13. Disposal considerations

**Disposal methods**

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

### Section 14. Transport information

<table>
<thead>
<tr>
<th>DOT Classification</th>
<th>TDG Classification</th>
<th>Mexico Classification</th>
<th>ADR/RID</th>
<th>IMDG</th>
<th>IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN number</td>
<td>UN1866</td>
<td>UN1866</td>
<td>UN1866</td>
<td>UN1866</td>
<td>UN1866</td>
</tr>
<tr>
<td>UN proper shipping name</td>
<td>Resin Solution</td>
<td>RESIN SOLUTION</td>
<td>RESINA, SOLUCIONES DE</td>
<td>RESIN SOLUTION</td>
<td>RESIN SOLUTION</td>
</tr>
</tbody>
</table>

**Transport hazard class(es)**

| 3 | 3 | 3 | 3 | 3 | 3 |

**Packing group**

| III | III | III | III | III | III |

**Environmental hazards**


**Additional information**

**DOT Classification**

- This product may be re-classified as "Combustible Liquid," unless transported by vessel or aircraft. Non-bulk packages (less than or equal to 119 gal) of combustible liquids are not regulated as hazardous materials in package sizes less than the product reportable quantity.
- **Limited quantity** Yes.
- **Quantity limitation** Passenger aircraft/rail: 60 L. Cargo aircraft: 220 L.
- **Special provisions** B1, B52, IB3, T2, TP1

**TDG Classification**

- Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.18-2.19 (Class 3).
- **Explosive Limit and Limited Quantity Index** 5
- **Passenger Carrying Road or Rail Index** 60

**Mexico Classification**

- **Special provisions** 223
ADRs/RID: Hazard identification number 30
Limited quantity: 5 L
Viscous substance exemption: This class 3 viscous liquid is not subject to regulation in packagings up to 450 L according to 2.2.3.1.5.1.
Tunnel code: (D/E)

IMDG: Emergency schedules: F-E, _S-E_
Special provisions: 223, 955
Viscous substance exemption: This class 3 viscous liquid is not subject to regulation in packagings up to 30 L according to 2.3.2.5.

Special provisions: A3

Special precautions for user: Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of MARPOL and the IBC Code: Not available.

Section 15. Regulatory information

U.S. Federal regulations: United States inventory (TSCA 8b): All components are listed or exempted.
Clean Water Act (CWA) 307: toluene; benzene
Clean Water Act (CWA) 311: xylene, mixture of isomers; toluene; benzene

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>CAS #</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs)</td>
<td>Xylene (mixture of isomers)</td>
<td>1330-20-7</td>
</tr>
<tr>
<td></td>
<td>Cumene</td>
<td>98-82-8</td>
</tr>
<tr>
<td></td>
<td>Toluene</td>
<td>108-88-3</td>
</tr>
<tr>
<td></td>
<td>Benzene</td>
<td>71-43-2</td>
</tr>
<tr>
<td></td>
<td>methanol</td>
<td>67-56-1</td>
</tr>
</tbody>
</table>

Clean Air Act Section 602 Class I Substances: Not listed
Clean Air Act Section 602 Class II Substances: Not listed
DEA List I Chemicals (Precursor Chemicals): Not listed
DEA List II Chemicals (Essential Chemicals): Not listed

SARA 313

<table>
<thead>
<tr>
<th>Product name</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form R - Reporting requirements</td>
<td>1,2,4-trimethylbenzene</td>
<td>95-63-6</td>
</tr>
<tr>
<td>Supplier notification</td>
<td>1,2,4-trimethylbenzene</td>
<td>95-63-6</td>
</tr>
</tbody>
</table>

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

State regulations: Massachusetts: The following components are listed: PSEUDOCUMENE
New York: The following components are listed: Cumene; Benzene; 1-methylethyl-
Safety Data Sheet  URALAC® SH978 S1E5-50

**New Jersey**: The following components are listed: PSEUDOCUMENE; 1,2,4-TRIMETHYL BENZENE; Hydrocarbons, C9, aromatics; CUMENE; BENZENE, (1-METHYLETHYL)-

**Pennsylvania**: The following components are listed: PSEUDOCUMENE; Hydrocarbons, C9, aromatics; CUMENE; BENZENE, (1-METHYLETHYL)-

**California Prop. 65**

⚠ **WARNING**: This product can expose you to chemicals including Benzene, which is known to the State of California to cause cancer and birth defects or other reproductive harm. This product can expose you to chemicals including Cumene, which is known to the State of California to cause cancer, and Methanol, Toluene, which are known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>No significant risk level</th>
<th>Maximum acceptable dosage level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cumene</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Methanol</td>
<td>-</td>
<td>Yes.</td>
</tr>
<tr>
<td>Toluene</td>
<td>-</td>
<td>Yes.</td>
</tr>
<tr>
<td>Benzene</td>
<td>Yes.</td>
<td>Yes.</td>
</tr>
</tbody>
</table>

**International regulations**

**Chemical Weapon Convention List Schedules I, II & III Chemicals**

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>List name</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not listed.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Montreal Protocol (Annexes A, B, C, E)**

Not listed.

**Stockholm Convention on Persistent Organic Pollutants**

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>List name</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not listed.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Rotterdam Convention on Prior Informed Consent (PIC)**

Not listed.

**UNECE Aarhus Protocol on POPs and Heavy Metals**

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>List name</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not listed.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**International lists**

**Canada inventory**: At least one component is not listed.

**Section 16. Other information**

**National Fire Protection Association (U.S.A.)**


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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.
Procedure used to derive the classification

<table>
<thead>
<tr>
<th>Classification</th>
<th>Justification</th>
</tr>
</thead>
<tbody>
<tr>
<td>FLAMMABLE LIQUIDS - Category 3</td>
<td>On basis of test data</td>
</tr>
<tr>
<td>CARCINOGENICITY - Category 2</td>
<td>Calculation method</td>
</tr>
<tr>
<td>SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3</td>
<td>Calculation method</td>
</tr>
</tbody>
</table>

References : Not available.

Indicates information that has changed from previously issued version.

Notice to reader

The information contained in the Material Safety Data Sheet is based on our data available on the date of publication. The information is intended to aid the user in controlling the handling risks; it is not to be construed as a warranty or specification of the product quality. The information may not be or may not altogether be applicable to combinations of the product with other substances or to particular applications. The user is responsible for ensuring that appropriate precautions are taken and for satisfying themselves that the data are suitable and sufficient for the product's intended purpose. In case of any unclarity we advise consulting the supplier or an expert.