LMK 656MV Polyester Resin
SAFETY DATA SHEET
LMK 656MV Polyester Resin

Section 1. Identification

GHS product identifier : CIPP ISO RESIN
Product code : LMK 656MV Polyester Resin
Other means of identification : Unsaturated Polyester Resin
Product type : Liquid.

Material uses
Product use : Industrial applications.

Supplier's details
: LMK Technologies
1779 Chessie Lane
Ottawa, IL 561350
815.433.1275

Emergency telephone number (with hours of operation)
: CHEMTREC 24-Hour Emergency Telephone 800.424.9300

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
ACUTE TOXICITY: INHALATION - Category 4
SKIN CORROSION/IRRITATION - Category 2
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A
CARCINOGENICITY - Category 2

Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 55.5%

GHS label elements
Hazard pictograms :

Signal word : Warning
Hazard statements : Flammable liquid and vapor.
Harmful if inhaled.
Causes serious eye irritation.
Causes skin irritation.
Suspected of causing cancer.

Precautionary statements

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Version : 2
1/14
Section 2. Hazards identification

Prevention: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Wear protective gloves. Wear eye or face protection. Keep away from heat, sparks, open flames and hot surfaces. - No smoking. Use explosion-proof electrical, ventilating, lighting and all material-handling equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Keep container tightly closed. Use only outdoors or in a well-ventilated area. Avoid breathing vapor. Wash hands thoroughly after handling.

Response: IF exposed or concerned: Get medical attention. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing. If skin irritation occurs: Get medical attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.

Storage: Store containers in a safe place. Store in a well-ventilated place. Keep cool.

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

Hazards not otherwise classified: None known.

Section 3. Composition/information on ingredients

Substance/mixture: Mixture

Other means of identification: Unsaturated Polyester Resin

CAS number/other identifiers:

<table>
<thead>
<tr>
<th>CAS number</th>
<th>Product code</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>LMK 656MV Polyester Resin</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>%</th>
<th>CAS number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Styrene</td>
<td>40.0 - 43.0</td>
<td>100-42-5</td>
</tr>
</tbody>
</table>

Any concentration shown as a range is to protect confidentiality or is due to batch variation. Any concentration shown as exact is based on formula.

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.
Section 4. First aid measures

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: Flush contaminated skin with plenty of water. 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: Causes serious eye irritation.
Inhalation: Harmful if inhaled.
Skin contact: Causes skin irritation.
Ingestion: Irritating to mouth, throat and stomach.

Over-exposure signs/symptoms

Eye contact: Adverse symptoms may include the following:
- pain or irritation
- watering
- redness
Inhalation: No specific data.
Skin contact: Adverse symptoms may include the following:
- irritation
- redness
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. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard.

**Hazardous thermal decomposition products**: Decomposition products may include the following materials:
- carbon dioxide
- carbon monoxide
- metal oxide/oxides

**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

**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 specialised 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".

**Environmental precautions**: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

**Methods and materials for containment and cleaning up**

**Small spill**: Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. 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. Dispose of via a licensed waste disposal contractor.
Section 6. Accidental release measures

**Large spill**

Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. 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). 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). 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. 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**

Do not store above the following temperature: 38°C (100.4°F). Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. 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.

Section 8. Exposure controls/personal protection

**Control parameters**

**Occupational exposure limits**

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Exposure limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Styrene</td>
<td>ACGIH TLV (United States, 4/2014). TWA: 20 ppm 8 hours. TWA: 85 mg/m³ 8 hours. STEL: 40 ppm 15 minutes. STEL: 170 mg/m³ 15 minutes. OSHA PEL 1989 (United States, 3/1989). TWA: 50 ppm 8 hours. TWA: 215 mg/m³ 8 hours. STEL: 100 ppm 15 minutes. STEL: 425 mg/m³ 15 minutes. OSHA PEL Z2 (United States, 2/2013).</td>
</tr>
</tbody>
</table>

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Section 8. Exposure controls/personal protection

<table>
<thead>
<tr>
<th>Appropriate engineering controls</th>
<th>TWA: 100 ppm 8 hours. CEIL: 200 ppm AMP: 600 ppm 5 minutes. NIOSH REL (United States, 10/2013). TWA: 50 ppm 10 hours. TWA: 215 mg/m³ 10 hours. STEL: 100 ppm 15 minutes. STEL: 425 mg/m³ 15 minutes.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Environmental exposure controls</th>
<th>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.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Individual protection measures</th>
<th>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.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Hygiene measures</th>
<th>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.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Eye/face protection</th>
<th>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: chemical splash goggles.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Skin protection</th>
<th>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.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Hand protection</th>
<th>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.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Body protection</th>
<th>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.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Other skin protection</th>
<th>Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.</th>
</tr>
</thead>
</table>

| Respiratory protection | | |
Section 9. Physical and chemical properties

**Appearance**
- **Physical state**: Liquid.
- **Color**: Various
- **Odor**: Characteristic. Aromatic.
- **Odor threshold**: 0.1 ppm
- **pH**: Not available.
- **Melting point**: Not available.
- **Boiling point**: 145°C (293°F)
- **Flash point**: Closed cup: 31.1°C (88°F)
- **Burning time**: Not applicable.
- **Burning rate**: Not applicable.
- **Evaporation rate**: >1 (ether (anhydrous) = 1)
- **Flammability (solid, gas)**: Not available.
- **Lower and upper explosive (flammable) limits**: Lower: 1.1%
  Upper: 6.1%
- **Vapor pressure**: 0.57 kPa (4.3 mm Hg) [room temperature]
- **Vapor density**: 3.6 [Air = 1]
- **Relative density**: 1.08 to 1.1
- **Solubility**: Not available.
- **Solubility in water**: Not applicable.
- **Partition coefficient: n-octanol/water**: Not available.
- **Auto-ignition temperature**: Not available.
- **Decomposition temperature**: Not available.
- **SADT**: Not applicable.
- **Viscosity**: Not available.

**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**: Hazardous reactions or instability may occur under certain conditions of storage or use.

**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. Do not allow vapor to accumulate in low or confined areas.

**Incompatible materials**: Reactive or incompatible with the following materials:
- oxidizing materials
- Reactive or incompatible with the following materials: acids and alkalis.

**Hazardous decomposition products**: Under normal conditions of storage and use, hazardous decomposition products should not be produced.
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>Styrene</td>
<td>LC50 Inhalation Gas.</td>
<td>Rat</td>
<td>2770 ppm</td>
<td>4 hours</td>
</tr>
<tr>
<td></td>
<td>LC50 Inhalation Vapor</td>
<td>Rat</td>
<td>11800 mg/m³</td>
<td>4 hours</td>
</tr>
<tr>
<td></td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>2650 mg/kg</td>
<td>-</td>
</tr>
</tbody>
</table>

Irritation/Corrosion

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Score</th>
<th>Exposure</th>
<th>Observation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Styrene</td>
<td>Eyes - Mild irritant</td>
<td>Human</td>
<td>-</td>
<td>50 parts per million</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Eyes - Moderate irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 100 milligrams</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Eyes - Severe irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>100 milligrams</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Skin - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>500 milligrams</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Skin - Moderate irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>100 Percent</td>
<td>-</td>
</tr>
</tbody>
</table>

Sensitization
Not available.

Mutagenicity
Not available.

Carcinogenicity
Not available.

Conclusion/Summary
Styrene manufacturers vary on their determination that the GHS hazard classification criteria for carcinogenicity has been met.

Styrene is listed by IARC as a possible carcinogen to humans (Group 2B) based on "limited evidence" in humans, "limited evidence" in animals and "other relevant data". The United States NTP listed styrene as reasonably anticipated to be a human carcinogen based on "limited evidence" from studies in humans, "sufficient evidence" from studies in experimental animals, and supporting data on mechanisms of carcinogenesis. The significance of these results for humans has not been established through risk assessment.

Classification

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>OSHA</th>
<th>IARC</th>
<th>NTP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Styrene</td>
<td>-</td>
<td>2B</td>
<td>Reasonably anticipated to be a human carcinogen.</td>
</tr>
</tbody>
</table>

Reproductive toxicity
Not available.

Teratogenicity
Not available.

Specific target organ toxicity (single exposure)
Not available.

Specific target organ toxicity (repeated exposure)
Not available.

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Section 11. Toxicological information

Aspiration hazard
Not available.

Information on the likely routes of exposure

Potential acute health effects

Eye contact : Causes serious eye irritation.
Inhalation : Harmful if inhaled.
Skin contact : Causes skin irritation.
Ingestion : Irritating to mouth, throat and stomach.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
- pain or irritation
- watering
- redness
Inhalation : No specific data.
Skin contact : Adverse symptoms may include the following:
- irritation
- redness
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
Not available.

General : No known significant effects or critical hazards.
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
Section 11. Toxicological information

<table>
<thead>
<tr>
<th>Route</th>
<th>ATE value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td>2681.5 mg/kg</td>
</tr>
<tr>
<td>Inhalation (gases)</td>
<td>2882.7 ppm</td>
</tr>
<tr>
<td>Inhalation (vapors)</td>
<td>12.28 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>Styrene</td>
<td>Acute EC50 1400 µg/l Fresh water</td>
<td>Algae - Pseudokirchneriella subcapitata</td>
<td>72 hours</td>
</tr>
<tr>
<td></td>
<td>Acute EC50 720 µg/l Fresh water</td>
<td>Algae - Pseudokirchneriella subcapitata</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Acute EC50 4700 µg/l Fresh water</td>
<td>Daphnia - Daphnia magna</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 52000 µg/l Marine water</td>
<td>Crustaceans - Artemia salina - Nauplii</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 4020 µg/l Fresh water</td>
<td>Fish - Pimephales promelas</td>
<td>96 hours</td>
</tr>
<tr>
<td>Chronic NOEC 63 µg/l Fresh water</td>
<td>Algae - Pseudokirchneriella subcapitata</td>
<td></td>
<td>96 hours</td>
</tr>
</tbody>
</table>

**Persistence and degradability**

Not available.

**Bioaccumulative potential**

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>LogPow</th>
<th>BCF</th>
<th>Potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Styrene</td>
<td>0.35</td>
<td>13.49</td>
<td>low</td>
</tr>
</tbody>
</table>

**Mobility in soil**

- **Soil/water partition coefficient (Koc)**: 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...
# Section 13. Disposal considerations

with soil, waterways, drains and sewers.

## Section 14. Transport information

<table>
<thead>
<tr>
<th>DOT Classification</th>
<th>Mexico Classification</th>
<th>IMDG</th>
<th>IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>UN number</strong></td>
<td>UN1866</td>
<td>UN1866</td>
<td>UN1866</td>
</tr>
<tr>
<td><strong>UN proper shipping name</strong></td>
<td>RESIN SOLUTION (styrene)</td>
<td>RESIN SOLUTION (styrene)</td>
<td>RESIN SOLUTION (styrene)</td>
</tr>
<tr>
<td><strong>Transport hazard class(es)</strong></td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>![Fire]</td>
<td>![Fire]</td>
<td>![Fire]</td>
<td>![Fire]</td>
</tr>
<tr>
<td><strong>Packing group</strong></td>
<td>III</td>
<td>III</td>
<td>III</td>
</tr>
<tr>
<td><strong>Environmental hazards</strong></td>
<td>Yes.</td>
<td>Yes.</td>
<td>Yes.</td>
</tr>
<tr>
<td><strong>Additional information</strong></td>
<td>Reportable quantity 2338.8 lbs / 1061.8 kg [257.35 gal / 974.16 L] Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**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 73/78 and the IBC Code**: Not available.
Section 15. Regulatory information

U.S. Federal regulations:
- TSCA 8(a) PAIR: 4-tert-butylpyrocatechol
- TSCA 8(a) CDR Exempt/Partial exemption: Not determined
- United States inventory (TSCA 8b): All components are listed or exempted.
- Clean Water Act (CWA) 307: Naphthenic acids, copper salts
- Clean Water Act (CWA) 311: styrene; styrene

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs):
- Listed

Clean Air Act Section 602 Class I Substances:
- Not listed

Clean Air Act Section 602 Class II Substances:
- Not listed

SARA 302/304
Composition/information on ingredients

<table>
<thead>
<tr>
<th>Name</th>
<th>%</th>
<th>EHS</th>
<th>SARA 302 TPQ (lbs)</th>
<th>SARA 302 TPQ (gallons)</th>
<th>SARA 304 RQ (lbs)</th>
<th>SARA 304 RQ (gallons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,4-dihydroxybenzene</td>
<td>0.00</td>
<td>Yes</td>
<td>500 / 10000</td>
<td>-</td>
<td>100</td>
<td>-</td>
</tr>
</tbody>
</table>

SARA 304 RQ: 1000000 lbs / 4540000 kg [1100313 gal / 4165137.6 L]

SARA 311/312
Classification:
- Fire hazard
- Immediate (acute) health hazard
- Delayed (chronic) health hazard

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>styrene</td>
<td>100-42-5</td>
</tr>
<tr>
<td>Supplier notification</td>
<td>styrene</td>
<td>100-42-5</td>
</tr>
</tbody>
</table>

State regulations
- Massachusetts: The following components are listed: STYRENE MONOMER; STYRENE MONOMER
- New York: The following components are listed: Styrene; Styrene
- New Jersey: The following components are listed: STYRENE MONOMER; BENZENE, ETHENYL-; STYRENE MONOMER; BENZENE, ETHENYL-
- Pennsylvania: The following components are listed: BENZENE, ETHENYL-; BENZENE, ETHENYL-
- California Prop. 65
  WARNING: This product contains less than 1% of a chemical known to the State of California to cause birth defects or other reproductive harm.

Date of issue/Date of revision: 6/1/2015.
Date of previous issue: 5/8/2015.
Version: 2
Section 15. Regulatory information

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Cancer</th>
<th>Reproductive</th>
<th>No significant risk level</th>
<th>Maximum acceptable dosage level</th>
</tr>
</thead>
<tbody>
<tr>
<td>methanol</td>
<td>No.</td>
<td>Yes.</td>
<td>No.</td>
<td>23000 µg/day (ingestion) 47000 µg/day (inhalation)</td>
</tr>
</tbody>
</table>

International regulations

- **International lists**
  - **Australia inventory (AICS):** All components are listed or exempted.
  - **China inventory (IECSC):** All components are listed or exempted.
  - **Japan inventory:** Not determined.
  - **Korea inventory:** All components are listed or exempted.
  - **Malaysia Inventory (EHS Register):** Not determined.
  - **New Zealand Inventory of Chemicals (NZIoC):** All components are listed or exempted.
  - **Philippines inventory (PICCS):** Not determined.
  - **Taiwan inventory (CSNN):** All components are listed or exempted.

Canada inventory

- Not determined.

Section 16. Other information

**Hazardous Material Information System (U.S.A.)**

Health: 2
Flammability: 3
Physical hazards: 1

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 are not required on SDSs 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 mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

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

Health: 2
Flammability: 3
Instability/Reactivity: 1
Special:

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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.

**History**

Date of printing: 6/1/2015.
### Section 16. Other information

- **Date of issue/Date of revision**: 6/1/2015.
- **Date of previous issue**: 5/8/2015.
- **Version**: 2
- **Prepared by**: Quality and Safety Department
- **Email**: For questions regarding the SDS contact: info@lmktechnologies.com

<table>
<thead>
<tr>
<th>Key to abbreviations</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATE</td>
<td>Acute Toxicity Estimate</td>
</tr>
<tr>
<td>BCF</td>
<td>Bioconcentration Factor</td>
</tr>
<tr>
<td>GHS</td>
<td>Globally Harmonized System of Classification and Labelling of Chemicals</td>
</tr>
<tr>
<td>IATA</td>
<td>International Air Transport Association</td>
</tr>
<tr>
<td>IBC</td>
<td>Intermediate Bulk Container</td>
</tr>
<tr>
<td>IMDG</td>
<td>International Maritime Dangerous Goods</td>
</tr>
<tr>
<td>LogPow</td>
<td>logarithm of the octanol/water partition coefficient</td>
</tr>
<tr>
<td>UN</td>
<td>United Nations</td>
</tr>
</tbody>
</table>

**References**


**Notice to reader**

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.