

SAFETY DATA SHEET

According to the Global Harmonized System, GHS and Hazard Communication Standard, HCS



DURALAMTM - SKU: DAL - Vacuum Infusion Resin

SDS Number: 16006 ©

Version 1 Revision Date : 06/07/2019 Issue Date : 06/10/2019 Date of Previous Issue : N/A

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION:

Product information:

| | |
|----------------------|--|
| Trade name: | DURALAM - DAL - Vacuum Infusion Resin |
| Type / usage: | Liquid polymer resin used in composite matrix fabrications |
| Chemical family: | Aromatic |
| Supplier details: | Ortholam Inc. Richmond, VA 23238 USA |
| Telephone: | +1-804-318-6042 |
| EHS email address: | info@ortholam.us |
| Emergency telephone: | 24 hours:+1-804-318-6042 |

2. HAZARDS IDENTIFICATION

GHS Classification

| | |
|---|---------------------------------|
| Flammable liquid: | Category 3 |
| Skin irritation: | Category 2 |
| Skin sensitization: | Category 2 |
| Eye irritation: | Category 2 |
| Specific target organ systemic toxicity - single exposure: | Category 3 (Respiratory system) |
| Specific target organ systemic toxicity - repeated exposure (Inhalation): | Category 1 (Auditory system) |
| Chronic Aquatic toxicity: | Category 3 |
| Reproductive Toxicity: | Category 3 |
| Aspiration hazard: | Category 3 |

GHS Labeling and Hazard pictograms:



Signal Word: Danger

Hazard Statements: Hazards:

H226: Flammable liquid and vapor.
H304: May be fatal if swallowed and enters airways.
H315: Causes skin irritation.
H319: Causes serious eye irritation.
H332: Harmful if inhaled.
H335: May cause respiratory irritation.
H372: Causes damage to organs through prolonged or repeated exposure if inhaled.
H361d: Suspected of damaging the unborn child.
H351: Suspected of causing cancer.
Hxxx: Concentrated vapors are heavier than air.

Precautionary Statements: Prevention:

P210: Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P223: Keep container tightly closed.
P240: Ground/bond container and receiving equipment.
P241: Use explosion-proof electrical/ ventilating/ lighting/ handling equipment. P242: Use only non-sparking tools.
P243: Take precautionary measures against static discharge.
P260: Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.
P262: Do not get in eyes, on skin, or on clothing.
P264: Wash skin thoroughly after handling.
P270: Do not eat, drink or smoke when using this product.
P271: Use only outdoors or in a well-ventilated area.
P280: Wear protective gloves/ eye protection/ face protection.

Response:

P370+P378: In case of fire; use dry sand, dry chemical powder, CO₂, water spray or foam to extinguish.
P303+P306+P360: If on skin or hair; Take off all contaminated clothing and rinse/ wash skin with soap and water/shower.
P304+P340: If inhaled; remove person to fresh air and keep comfortable for breathing.
P308+P314: If exposed or concerned; get medical advice/attention if you feel unwell.
P305+P351+P338: If in eyes; rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P332+P313: If skin irritation occurs; get medical advice/ attention.
P337+P313: If eye irritation persists; get medical advice/ attention.
P363: Take off contaminated clothing and wash before reuse.

Storage:

P403+P235: Store in a well-ventilated place. Keep cool.
P223: Keep container tightly closed.
P405: Store locked up.

P410+P411: Protect from sunlight and store at temperature not exceeding 28°C/82°F

Disposal:

P501: Dispose of contents and/or container in accordance with all local, regional, national and international regulations, to an approved waste disposal plant.

Other hazards:

Static Accumulating liquid

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture: Mixture

Chemical nature: Static Accumulator

Chemical nature: Aspiration hazard and a defatter

Hazardous and non-hazardous ingredients:

| Chemical Name | CAS-No. | Content (%) | GHS Classification |
|-----------------------|-------------|-------------|------------------------------|
| Styrene | 100-42-5 | 20 ~ 30% | H226, H304, H319, H332, H372 |
| Methacrylate monomer | Proprietary | > 20% | H226, H315, H317, H335 |
| Proprietary component | Proprietary | < 20% | Not classified |
| Vinyl Ester polymer | Proprietary | 30 ~ 40% | Not classified |

Any concentration shown as a range is to protect confidentiality or is due to batch variation.
The specific chemical identity of and/or exact percentage content for one or more ingredients has been withheld as a trade secret.

4. FIRST AID MEASURES

General advice: Move out of dangerous area and remove contaminated clothing. Seek medical assistance if needed. Call a POISON CENTRE or doctor/physician if exposed and you feel unwell. Show this Safety Data Sheet to the doctor in attendance. Do not leave the victim unattended.

In case of Inhalation: Move the victim to a safe well ventilated area as soon as possible. Remove restrictive clothing and allow the victim to rest. If the victim is not breathing/unconscious, or if breathing becomes irregular or ceases, place in recovery position and apply artificial mouth to mouth resuscitation immediately, and where required supply oxygen.

Following skin contact: Immediately flush skin with plenty of water. Remove contaminated clothing and shoes. If irritation persists, seek medical attention. Wash contaminated clothing before reuse.

After eye contact: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Use of neutral baby shampoo will aid removal. If irritation persists, seek medical attention.

If swallowed: Wash out mouth with water. Removes dentures if present. Stop if the victim 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 as low as possible, so that vomit does not enter the lungs. Seek immediate medical attention. Never give anything by mouth to an unconscious person such as milk or alcoholic beverages.

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Most important symptoms and effects, both acute and delayed:

Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include the following;
stomach or intestinal upset (nausea, vomiting, diarrhea) irritation (nose, throat, airways), confusion.

Skin Contact: Causes skin irritation.

Eye Contact: Causes serious eye irritation.

Inhalation: Harmful if inhaled. May cause respiratory irritation.
Causes damage to organs through prolonged or repeated exposure if inhaled.

Ingestion: Irritating to mouth, throat and stomach.

Notes to Physician: The symptoms and hazards are as expected from the hazards as shown in Section 2. Treat symptomatically. Contact a poison treatment specialist immediately if large quantities have been ingested or inhaled.

See Section 11 for toxicological information.

5. FIREFIGHTING MEASURES

Suitable extinguishing media: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Foam
Dry chemical powder
Carbon dioxide (CO₂)
Water spray, (fog)
Product is compatible with standard fire-fighting agents.

Unsuitable extinguishing media: Do not use a high volume water jet. Do not use a solid water stream as it may scatter and spread the fire.

Specific hazards during firefighting: Flammable vapor mixtures in air. Flammable liquid.
In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapors are 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 sewers may create a fire or explosion hazard. Beware of vapors accumulating to form explosive concentrations.

Special prevention action for Fire-Fighters: Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain. Never use welding or cutting torch on or near drum (even empty) because product (even just the residue) can ignite explosively.

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Hazardous combustion products: Decomposition products may include the following materials: toxic fumes such as; carbon dioxide, carbon monoxide, sulfur oxides, halogenated compounds, metal oxides and hydrocarbons.

Special protective equipment for firefighters: In the event of fire, Fire-Fighters should wear appropriate protective equipment and self-contained breathing apparatus, SCBA, with a full face shield operated in positive pressure mode.

Further information: Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
Use a water spray to cool fully closed containers.
:
Polymerization will take place under fire conditions. If polymerization occurs in a closed container, there is a possibility it will rupture violently. Cool storage containers with water, if exposed to fire.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions and emergency procedures: Evacuate personnel to safe areas. Shut off and remove all sources of ignition. Do not touch or walk through spilled material. No flares, smoking or open flames in hazard area.
Use personal protective equipment.
Avoid breathing vapor or mist.
Provide adequate ventilation.
Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.
Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Non-emergency personnel shall not be involved in any action without suitable training.

Emergency Responders: Take note of the personal protection specialized clothing and equipment required to deal with a spillage in Section 8. Wear an appropriate respirator when ventilation is inadequate. Put on all appropriate personal protective equipment.

Environmental precautions: Prevent spilled product from contaminating soil, and runoff from entering waterways, drains and sewers. Prevent further leakage or spillage if safe to do so.
If the product contaminates rivers and lakes or drains inform respective environmental authorities. May be harmful to the environment if released in large quantities.
Comply with all applicable federal, state, and local regulations.

Methods and materials for containment and cleaning up: **Small Spill:** Stop leak and contain spillage if without risk, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in appropriate disposal container for disposal according to local / national regulations (see Section 13). Use spark proof tools and explosion-proof equipment.

Large Spills: Stop leak and contain spillage if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillage 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 containers for disposal in accordance with local / national regulations (see Section 13) Use spark proof tools and explosion-proof equipment. Contaminated absorbent material may pose the same hazard as the spilled product. Dispose of via a licensed waste disposal contractor.



7. HANDLING AND STORAGE

Precautions for safe handling:

Persons with a history of skin sensitization problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this material is being used.
Smoking, eating and drinking should be prohibited in the application area.
Open containers carefully as content may be under pressure.
Avoid contact with skin, eyes and clothing, wash hands and face before eating.
Keep containers closed when not in use.
For personal protection see Section 8.

Keep away from heat, sparks and flames or other sources of ignition.
Non-sparking tools should be used.
Container is hazardous when empty.

Secondary operations, such as grinding and sanding, may produce dust. Maintain good housekeeping and provide appropriate exhaust ventilation where dust is formed. Do not permit dust layers to accumulate, for example, on floors, ledges, and equipment, in order to avoid any potential for dust explosion hazards.
For further guidance on prevention of dust explosions, refer to National Fire Protection Association (NFPA) 654: "Standard for the Prevention of Fire and Dust Explosions, from the Manufacturing, Processing and Handling of Combustible Particulate Solids".

Conditions for safe storage:

Keep container tightly closed in a dry, cool and well-ventilated place, away from incompatible materials, (see Section 10).
Segregate from oxidizing materials.
Store in compliance with local regulations.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Observe all label and Technical Data Sheet precautions.
No smoking.
Electrical installations / working materials must comply with the appropriate technological safety standards.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

| STYRENE | | 100-42-5 |
|--------------------|---------------------------------------|-----------------------|
| ACGIH | Time weighted average exposure limit: | 20 ppm |
| ACGIH | Short term exposure limit: | 40 ppm |
| NIOSH | Recommended exposure limit (REL): | 50 ppm |
| NIOSH | Recommended exposure limit (REL): | 215 mg/m ³ |
| NIOSH | Short term exposure limit: | 100 ppm |
| NIOSH | Short term exposure limit: | 425 mg/m ³ |
| OSHA Z2 | Time weighted average: | 100 ppm |
| OSHA Z2 | Ceiling limit value: | 200 ppm |
| OSHA Z2 | Maximum concentration: | 600 ppm |
| Methylmethacrylate | | 80-62-6 |
| ACGIH | Time weighted average exposure limit: | 50 ppm |
| ACGIH | Short term exposure limit: | 100 ppm |
| NIOSH | Recommended exposure limit (REL): | 100 ppm |
| NIOSH | Recommended exposure limit (REL): | 410 mg/m ³ |
| OSHA Z1 | Permissible exposure limit: | 100 ppm |
| OSHA Z1 | Permissible exposure limit: | 410 mg/m ³ |
| ACGIH NIC | Time weighted average: | 50 ppm |
| ACGIH NIC | Short term exposure limit (STEL): | 100 ppm |

General Advice: These recommendations provide general advice for handling this product. Personal Protective Equipment should be selected for individual applications based on the task being performed and the risks involved and should be approved by a specialist before handling this product, and should be worn at all times if a risk assessment indicates this is necessary.

Engineering measures: Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.
Provide appropriate exhaust ventilation at places where dust is formed.

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

Personal protective equipment:

Respiratory protection: Use a properly fitted NIOSH approved air-purifying respirator with an appropriate cartridge and/or filter may be necessary under circumstances where airborne concentrations are expected to exceed exposure limits (if applicable), or if overexposure has otherwise been determined. Protection provided by air-purifying respirators is limited. Use a positive pressure, air-supplied respirator if there is any potential for uncontrolled release, exposure levels are not known, or any other circumstances where an air-purifying respirator may not provide adequate protection.

Hand protection: Chemical resistant gloves complying with an approved standard should be worn at all times when handling chemical products. with the producers of the protective gloves. Discard gloves that show tears, pinholes, or signs of wear.

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Eye protection: Wear chemical splash goggles when there is the potential for exposure of the eyes to liquid, vapor or mist. Safety eyewear should comply with an approved safety standard.

Skin and body protection: Wear as appropriate based on the risk assessment and task being performed;
Impervious clothing
Safety shoes
Flame-resistant clothing
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|-----------------------------|--|
| Appearance | : liquid |
| Physical state | : liquid |
| Colour | : light amber |
| Odour | : pungent |
| Odour Threshold | : no data available |
| pH | : no data available |
| Freezing point | : no data available |
| Boiling point/boiling range | : 275 °F / 135 °C : |
| Flash point | : 110 °F / 43 °C Method: Seta closed cup |
| Evaporation rate | : < 1 Ethyl Ether |
| Flammability (solid, gas) | : May form combustible dust and vapor concentrations in air (during processing). |
| Flammability (liquids) | : Static Accumulating liquid |
| Upper explosion limit | : 5 %(V) |
| Lower explosion limit | : 2 %(V) |

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| | |
|---|--------------------------------------|
| Vapour pressure | : 0.730 kPa (25 °C) |
| Relative vapour density | : > 1 AIR=1 |
| Relative density | : No data available |
| Density | : 1.077 g/cm ³ (20 °C) |
| Water solubility | : insoluble |
| Partition coefficient: n-octanol/water | : No data available |
| Thermal decomposition | : No data available |
| Viscosity, kinematic | : 250~350 mm ² /s (40 °C) |

10. STABILITY AND REACTIVITY

| | |
|------------------------------------|--|
| Reactivity | : No decomposition if stored and applied as directed. No specific test data available for this product or its ingredients. |
| Chemical stability | : This product is stable under recommended storage and handling conditions. |
| Possibility of hazardous reactions | : Under normal conditions of storage and use, hazardous reactions will not occur. Vapors may form an explosive mixture with air. |
| Conditions to avoid | : Avoid all potential sources of ignition such as hot surfaces, sparks and flames. Excessive heat, exposure to air and exposure to sunlight. |
| Incompatible materials | : Acids and oxidizing agents/materials, peroxides and metal salts. |
| Hazardous decomposition products | : Carbon dioxide and carbon monoxide, hydrocarbons. |

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure: Inhalation
Skin contact
Eye contact
Ingestion

Acute toxicity

Not classified based on available information.

Components: STYRENE:

Acute oral toxicity : LD50 Oral (Rat): > 2,000 mg/kg

Acute inhalation toxicity : LC 50 (Rat): 11.8 mg/l, 2770 ppm

Exposure time: 4 h

Test atmosphere: vapour

No observed adverse effect level (Humans): 100 ppm

Exposure time: 7 h

Test atmosphere: vapour

Acute dermal toxicity : LD 50 (Rat): > 2,000 mg/kg

Method: OECD Test Guideline 402

Assessment: No adverse effect has been observed in acute dermal toxicity tests.

Skin corrosion/irritation

Causes skin irritation.

Product:

Remarks: May cause skin irritation and/or dermatitis. Result:
Repeated exposure may cause skin dryness or cracking.

Components: STYRENE:

Species: Rabbit

Result: Irritating to skin

Serious eye damage/eye irritation

Causes serious eye irritation.

Product:

Remarks: Vapours may cause irritation to the eyes, respiratory system and the skin., Causes serious eye irritation.

Components: STYRENE:

Result: Irritating to eyes

Remarks: Vapour during processing may be irritating to the respiratory tract and to the eyes.

Respiratory or skin sensitisation

Skin sensitisation: Not classified based on available information.

Respiratory sensitisation: Not classified based on available information.

Components: STYRENE:

Exposure routes: Skin contact

Species: Guinea pig

Assessment: Does not cause skin sensitisation.

Result: negative

Exposure routes: inhalation (vapour)

Species: Humans

Assessment: Does not cause respiratory sensitisation.

Result: negative

Germ cell mutagenicity

Not classified based on available information.

Carcinogenicity

Not classified based on available information.

Product:

Carcinogenicity - Styrene has been tested for carcinogenicity in rats and
Assessment: mice. Styrene caused lung tumors in mice only. These
tumors are not considered to be relevant to humans.

Reproductive toxicity

Not classified based on available information.

STOT - single exposure

May cause respiratory irritation.

Components: STYRENE:

Assessment: May cause respiratory irritation.

STOT - repeated exposure

Causes damage to organs (Auditory system) through prolonged or repeated exposure if inhaled.

Components: STYRENE:

Exposure routes: inhalation (vapour)

Target Organs: Auditory system

Assessment: Causes damage to organs through prolonged or repeated exposure.

Repeated dose toxicity

Components: STYRENE:

Species: Human

85 mg/m³

Application Route: inhalation (vapour)

Species: Human

615 mg/kg

Application Route: Skin contact

Aspiration toxicity

Not classified based on available information.

Product:

No aspiration toxicity classification

Components: STYRENE:

May be fatal if swallowed and enters airways.

Further information

Product:

Remarks: Solvents may degrease the skin.

Carcinogenicity: STYRENE 100-42-5

IARC Group 2B: Possibly carcinogenic to humans.

OSHA No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

NTP Reasonably anticipated to be a human carcinogen.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Components: STYRENE:

| | |
|--|--|
| Toxicity to fish | : LC 50 (Pimephales promelas (fathead minnow)): 4.02 mg/l Exposure time: 96 h |
| Toxicity to daphnia and other aquatic invertebrates | : EC 50 (Water flea (Daphnia magna)): 4.7 mg/l Exposure time: 48 h |
| Toxicity to algae | : ErC50 (Pseudokirchneriella subcapitata (green algae)): 4.9 mg/L Exposure time: 72 h |
| Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) | : NOEC (Water flea (Daphnia magna)): 1.01 mg/l Exposure time: 21 d |
| Toxicity to bacteria | : EC 50 (activated sludge): ca. 500 mg/l Exposure time: 0.5 h |
| Toxicity to soil dwelling organisms | : NOEC (Eisenia fetida (earthworms)): 34 mg/kg Exposure time: 14 d Method: OECD Test Guideline 207 |

Persistence and degradability

Components: STYRENE:

| | |
|------------------|--|
| Biodegradability | : Result: Readily biodegradable Biodegradation: > 60 % Exposure time: 10 d |
|------------------|--|

Bioaccumulative potential

Components: STYRENE:

| | |
|--|--|
| Bioaccumulation | : Bioconcentration factor (BCF): < 100 : |
| Partition coefficient: n-octanol/water | log Pow: 2.96 (25 °C) |

Mobility in soil

Components: STYRENE:

| | |
|---|------------|
| Distribution among environmental compartments | : Koc: 352 |
|---|------------|

Other adverse effects

Product:

| | |
|-----------------------------------|---|
| Additional ecological information | : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal., Toxic to aquatic life. |
|-----------------------------------|---|

Components: STYRENE:

| | |
|-------------------------------------|---|
| Results of PBT and vPvB assessment: | : This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB). |
|-------------------------------------|---|

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods:

General advice: The generation of waste should be avoided or minimized wherever possible.
Attempt to use the product completely in accordance with intended use.
Avoid release to the environment. The product should not be allowed to enter drains, water courses or the soil.
Do not contaminate ponds, waterways or ditches with chemical or used container. Empty containers may retain some product residues. Decontaminate empty containers before recycling. Disposal of waste contents after polymerization using an approved hardening agent under controlled conditions is recommended.
Dispose of contents / container using a licensed waste management company and in accordance with local, state, national environmental legislation, or other requirements listed in environmental permits. Consult a regulatory specialist to determine appropriate state or local reporting requirements, for assistance with waste characterization, or other hazardous waste disposal criteria.

Contaminated packaging: Empty residual contents. Dispose of as unused waste product.
Empty containers should be sent to an approved waste handling company for recycling or landfill disposal.
Do not re-use empty containers.
Do not burn, or use a cutting torch on the empty container.
Follow all warnings even after the container is emptied.
Recommend crushing or puncturing used containers to prevent unauthorized use of used containers.

14. TRANSPORT INFORMATION

Local and International Transport Regulations

U.S. DEPARTMENT OF TRANSPORTATION (U.S. DOT - ROAD)

UN Number: 1866
Proper Shipping Name: Resin Solution, flammable
Hazard Class: 3
Packing Group: III
Marine Pollutant: Not classified as a marine pollutant in limited quantity.

INTERNATIONAL MARITIME DANGEROUS GOODS (IMDG)

UN Number: 1866
Proper Shipping Name: Resin Solution, flammable
Hazard Class: 3
Packing Group: III
Marine Pollutant: Not classified as a marine pollutant in limited quantity.

INTERNATIONAL AIR TRANSPORT ASSOCIATION (IATA) - Passenger & Cargo Aircraft UN

Number: 1866
Proper shipping name: Resin Solution, flammable
Hazard Class: 3
Packing Group: III
Marine Pollutant: Not classified as a marine pollutant in limited quantity.

15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

The customer is responsible for determining the PPE requirements for use with this product.

This product is a hazardous chemical as defined by the OSHA Hazard Communication Standard 29CFR 1910.1200.

TCSA = Toxic Substances Control Act for the United States and Puerto Rico.

SARA 311/312 Hazards : Reactivity Hazard
Fire Hazard
Acute Health Hazard
Chronic Health Hazard

SARA 313 Component(s) STYRENE MONOMER 100-42-5

California Prop 65 WARNING! This product contains a chemical known to the State of California to cause cancer.

BENZENE 71-43-2

CATECHOL 120-80-9

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

METHANOL 67-56-1

ETHYLBENZENE 100-41-4

TOLUENE 108-88-3

The components of this product are reported in the following inventories:

TSCA : On TSCA Inventory

DSL : On the inventory, or in compliance with the inventory

AICS : On the inventory, or in compliance with the inventory

ENCS : On the inventory, or in compliance with the inventory

KECI : On the inventory, or in compliance with the inventory

PICCS : Not in compliance with the inventory

IECSC : On the inventory, or in compliance with the inventory

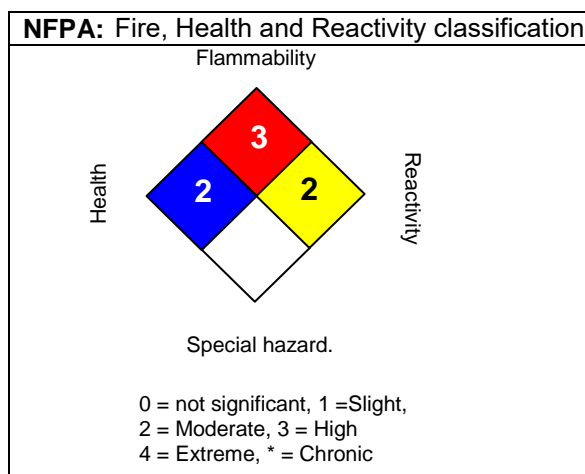
Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TSCA (USA)

Comment: Marine Pollutants - DOT requirements specific to Marine Pollutants do not apply to non-bulk packagings transported by motor vehicle, rail cars or aircraft.

16. OTHER INFORMATION

National Fire Protection Association (USA)



NFPA Flammable and Combustible Liquids Classification

Flammable Liquid Class IC

Health: 2

Flammability: 3

Reactivity: 2

Full text of H-Statements

H226: Flammable liquid and vapor.

H304: May be fatal if swallowed and enters airways.

H315: Causes skin irritation.

H319: Causes serious eye irritation.

H332: Harmful if inhaled.

H335: May cause respiratory irritation.

H372: Causes damage to organs through prolonged or repeated exposure if inhaled.

H361d: Suspected of damaging the unborn child.

H351: Suspected of causing cancer.

Further Information:

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication, and furnished in good faith without warranty, from sources believed to be reliable. The information provided is intended only as a guide for the safe handling, use, processing, storage, transportation, disposal and is not to be construed as a warranty or quality specification. Recipients are responsible to determine that the product is suitable for their circumstances and for ensuring that the product is used, handled, stored, and disposed of safely in compliance with local, state and federal laws. The information relates only to the specific product designated and may not be valid for the product used in combination with any other products, materials or process, unless specified in the text. Ortholam Inc. disclaims liability for any loss, damage or personal injury that arises from, or is in any way related to the use of the information contained in this safety data sheet.

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Revision information: The following sections contain revisions or new statements: 0

List of abbreviations and acronyms that are commonly used with this and other safety data sheets:

ACGIH : American Conference of Industrial Hygienists
BEI : Biological Exposure Index
CAS : Chemical Abstracts Service (Division of the American Chemical Society).
CMR : Carcinogenic, Mutagenic or Toxic for Reproduction
FG : Food grade
GHS : Globally Harmonized System of Classification and Labeling of Chemicals.
H-statement : Hazard Statement
IATA : International Air Transport Association.
IATA-DGR : Dangerous Goods Regulation by the "International Air Transport Association" (IATA).

ICAO : International Civil Aviation Organization
ICAO-TI (ICAO) : Technical Instructions by the "International Civil Aviation Organization"
IMDG : International Maritime Code for Dangerous Goods
ISO : International Organization for Standardization
logPow : octanol-water partition coefficient
LCxx : Lethal Concentration, for xx percent of test population
LDxx : Lethal Dose, for xx percent of test population.
ICxx : Inhibitory Concentration for xx of a substance
Ecxx : Effective Concentration of xx
N.O.S.: Not Otherwise Specified
OECD : Organization for Economic Co-operation and Development
OEL : Occupational Exposure Limit
P-Statement : Precautionary Statement
PBT : Persistent , Bioaccumulative and Toxic
PPE : Personal Protective Equipment
STEL : Short-term exposure limit
STOT : Specific Target Organ Toxicity
TLV : Threshold Limit Value
TWA : Time-weighted average
vPvB : Very Persistent and Very Bioaccumulative
WEL : Workplace Exposure Level

CERCLA : Comprehensive Environmental Response, Compensation, and Liability Act
DOT : Department of Transportation
FIFRA : Federal Insecticide, Fungicide, and Rodenticide Act
HMIRC : Hazardous Materials Information Review Commission
HMIS : Hazardous Materials Identification System
NFPA : National Fire Protection Association
NIOSH : National Institute for Occupational Safety and Health
OSHA : Occupational Safety and Health Administration
PMRA : Health Canada Pest Management Regulatory Agency
RTK : Right to Know
WHMIS : Workplace Hazardous Materials Information System