

## X4C Marble Clear Gel coat

### Section 1. Identification

<b>GHS product identifier</b>	: Marble Clear Gel coat
<b>Product code</b>	: X4C Clear Gel Coat
<b>Other means of identification</b>	: Unsaturated Polyester Resin Gel Coat
<b>Product type</b>	: Liquid.

#### Relevant identified uses of the substance or mixture and uses advised against

Industrial applications.

<b>Supplier's details</b>	: LILLY RAM CHEMICAL COMPANY 16170 Cedar Lane Loop Willis, TX 77378
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<b>Emergency telephone number (with hours of operation)</b>	: CHEMTREC 24-Hour Emergency Telephone US and Canada 800.424.9300 Outside US and Canada +1 703.741.5970
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### Section 2. Hazards identification

<b>OSHA/HCS status</b>	: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
<b>Classification of the substance or mixture</b>	: FLAMMABLE LIQUIDS - Category 2 ACUTE TOXICITY (inhalation) - Category 4 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SKIN SENSITIZATION - Category 1 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (hearing organs, liver, nervous system) - Category 1  Percentage of the mixture consisting of ingredient(s) of unknown oral toxicity: 1% Percentage of the mixture consisting of ingredient(s) of unknown dermal toxicity: 40.5% Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: 6%

#### GHS label elements

##### Hazard pictograms



##### Signal word

: Danger

##### Hazard statements

: Highly flammable liquid and vapor.  
Harmful if inhaled.  
Causes serious eye irritation.  
Causes skin irritation.  
May cause an allergic skin reaction.  
May cause respiratory irritation.  
Causes damage to organs through prolonged or repeated exposure. (hearing organs,

## Section 2. Hazards identification

(liver, nervous system)

### Precautionary statements

#### Prevention

: Wear protective gloves. Wear eye or face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. 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. Do not breathe vapor. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace.

#### Response

: Get medical attention if you feel unwell. IF INHALED: Remove person to fresh air and keep 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. Wash contaminated clothing before reuse. If skin irritation or rash 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 in a well-ventilated place. Keep cool. Store containers in a safe place.

#### Disposal

: Dispose of contents and container in accordance with all local, regional, national and international regulations. Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

#### Hazards not otherwise classified

: None known.

## Section 3. Composition/information on ingredients

#### Substance/mixture

: Mixture

#### Other means of identification

: Unsaturated Polyester Resin Gel Coat

Ingredient name	%	CAS number
styrene	<= 35.0	100-42-5
methyl methacrylate	<= 2.0	80-62-6
Styrene, methyl-	<= 2.0	25013-15-4

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.

VOC content is listed in Section 9.

Environmental composition is shown in Section 15.

## 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. Buffered baby shampoo will aid in removal of resin.

## 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. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Skin contact** : Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. 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 following exposure or if feeling unwell. 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. May cause respiratory irritation.
- Skin contact** : Causes skin irritation. May cause an allergic skin reaction.
- Ingestion** : No known significant effects or critical hazards.

#### Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:  
pain or irritation  
watering  
redness
- Inhalation** : Adverse symptoms may include the following:  
respiratory tract irritation  
coughing
- 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** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- 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. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

## Section 4. First aid measures

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

### Extinguishing media

**Suitable extinguishing media** : Use dry chemical, CO<sub>2</sub>, water spray (fog) or foam.

**Unsuitable extinguishing media** : Do not use water jet.

**Specific hazards arising from the chemical** : Highly flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard. 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.

**Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide  
nitrogen oxides  
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 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".

**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. Dispose of via a licensed waste disposal contractor. Absorb with an inert material and transfer the spilled material and absorbent to an appropriate waste disposal container. Wear appropriate respirator when ventilation is inadequate. Wear eye/face protection.

## 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. 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. Wear appropriate respiratory protection. Wear protective clothing and eye or face protection:

## Section 7. Handling and storage

### Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. 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. 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. See Section 10 for incompatible materials before handling or use. Store containers in a safe place.

## Section 8. Exposure controls/personal protection

### Control parameters

#### Occupational exposure limits

Ingredient name	Exposure limits
styrene	<p><b>ACGIH TLV (United States, 3/2017).</b>            TWA: 20 ppm 8 hours.            TWA: 85 mg/m<sup>3</sup> 8 hours.            STEL: 40 ppm 15 minutes.            STEL: 170 mg/m<sup>3</sup> 15 minutes.</p> <p><b>OSHA PEL 1989 (United States, 3/1989).</b>            TWA: 50 ppm 8 hours.            TWA: 215 mg/m<sup>3</sup> 8 hours.            STEL: 100 ppm 15 minutes.            STEL: 425 mg/m<sup>3</sup> 15 minutes.</p> <p><b>OSHA PEL Z2 (United States, 2/2013).</b>            TWA: 100 ppm 8 hours.</p>

## Section 8. Exposure controls/personal protection

methyl methacrylate	<p>CEIL: 200 ppm  AMP: 600 ppm 5 minutes.  <b>NIOSH REL (United States, 10/2016).</b>  TWA: 50 ppm 10 hours.  TWA: 215 mg/m<sup>3</sup> 10 hours.  STEL: 100 ppm 15 minutes.  STEL: 425 mg/m<sup>3</sup> 15 minutes.  <b>ACGIH TLV (United States, 3/2017). Skin sensitizer.</b>  TWA: 50 ppm 8 hours.  STEL: 100 ppm 15 minutes.  <b>OSHA PEL 1989 (United States, 3/1989).</b>  TWA: 100 ppm 8 hours.  TWA: 410 mg/m<sup>3</sup> 8 hours.  <b>NIOSH REL (United States, 10/2016).</b>  TWA: 100 ppm 10 hours.  TWA: 410 mg/m<sup>3</sup> 10 hours.  <b>OSHA PEL (United States, 6/2016).</b>  TWA: 100 ppm 8 hours.  TWA: 410 mg/m<sup>3</sup> 8 hours.</p>
Styrene, methyl-	<p><b>ACGIH TLV (United States, 3/2017).</b>  TWA: 50 ppm 8 hours.  TWA: 242 mg/m<sup>3</sup> 8 hours.  STEL: 100 ppm 15 minutes.  STEL: 483 mg/m<sup>3</sup> 15 minutes.  <b>OSHA PEL 1989 (United States, 3/1989).</b>  TWA: 100 ppm 8 hours.  TWA: 480 mg/m<sup>3</sup> 8 hours.  <b>NIOSH REL (United States, 10/2016).</b>  TWA: 100 ppm 10 hours.  TWA: 480 mg/m<sup>3</sup> 10 hours.  <b>OSHA PEL (United States, 6/2016).</b>  TWA: 100 ppm 8 hours.  TWA: 480 mg/m<sup>3</sup> 8 hours.</p>

**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. Contaminated work clothing should not be allowed out of the workplace. 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: chemical splash goggles.



## Section 8. Exposure controls/personal protection

### Skin protection

- 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.
- 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.
- Color** : Colorless.
- Odor** : Aromatic. Sweetish.
- Odor threshold** : 0.1 ppm
- pH** : Not applicable.
- Melting point** : Not available.
- Boiling point** : 100 to 145°C (212 to 293°F)
- Flash point** : Closed cup: 10 to 31°C (50 to 87.8°F)
- Evaporation rate** : 0.5 to 3.1 (butyl acetate = 1)
- Lower and upper explosive (flammable) limits** : Lower: 0.9%  
Upper: 12.5%
- Vapor pressure** : 0.67 to 3.7 kPa (5 to 28 mm Hg) [room temperature]
- Vapor density** : 3.5 to 3.6 [Air = 1]
- Relative density** : 1.03 to 1.08
- Solubility** : Not available.
- Solubility in water** : Not applicable.
- Partition coefficient: n-octanol/water** : Not available.
- Auto-ignition temperature** : Not available.
- Viscosity** : Not available.
- VOC content** : 42.7 % (w/w) As shipped, including monomers and additives.

## 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.  
Hazardous polymerization may occur under certain conditions of storage or use. Keep away from heat and direct sunlight. Keep away from heat and flame. Keep away from oxidizing agents.
- Incompatible materials** : Reactive or incompatible with the following materials:  
oxidizing materials  
Reactive or incompatible with the following materials: metals, acids and alkalis.  
Incompatible with alkali metals. Incompatible with some alkalis. Incompatible with some strong acids. Incompatible with copper alloys, brass.
- 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

Product/ingredient name	Result	Species	Dose	Exposure
styrene	LC50 Inhalation Gas.	Rat	2770 ppm	4 hours
	LC50 Inhalation Vapor	Rat	11800 mg/m <sup>3</sup>	4 hours
	LD50 Oral	Rat	2650 mg/kg	-
methyl methacrylate	LC50 Inhalation Vapor	Rat	78000 mg/m <sup>3</sup>	4 hours
	LD50 Dermal	Rabbit	>5 g/kg	-
	LD50 Oral	Rat	7872 mg/kg	-
Styrene, methyl-	LD50 Oral	Rat	2255 mg/kg	-

#### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
styrene	Eyes - Mild irritant	Human	-	50 parts per million	-
	Eyes - Moderate irritant	Rabbit	-	24 hours 100 milligrams	-
	Eyes - Severe irritant	Rabbit	-	100 milligrams	-
	Skin - Mild irritant	Rabbit	-	500 milligrams	-
Styrene, methyl-	Skin - Moderate irritant	Rabbit	-	100 Percent	-
	Eyes - Mild irritant	Rabbit	-	90 milligrams	-
	Skin - Moderate irritant	Rabbit	-	100 Percent	-

#### Sensitization

Not available.

#### Mutagenicity



## Section 11. Toxicological information

Not available.

### Carcinogenicity

Not available.

**Conclusion/Summary** : Styrene manufacturers have determined that the weight of evidence for the carcinogenicity of this substance does not meet the criteria for classification.

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

Product/ingredient name	OSHA	IARC	NTP
styrene	-	2B	Reasonably anticipated to be a human carcinogen.
methyl methacrylate	-	3	-
Styrene, methyl-	-	3	-

### Reproductive toxicity

Not available.

### Teratogenicity

Not available.

### Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
styrene	Category 3	Not applicable.	Respiratory tract irritation
methyl methacrylate	Category 3	Not applicable.	Respiratory tract irritation
Styrene, methyl-	Category 3	Not applicable.	Respiratory tract irritation

### Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
styrene	Category 1	Inhalation	hearing organs
Styrene, methyl-	Category 2	Not determined	liver and nervous system

A study of long term effects of workers exposed to styrene levels in the range of 25-35 ppm for an 8-hour TWA indicated a possible mild hearing loss.

### Aspiration hazard

Name	Result
styrene	ASPIRATION HAZARD - Category 1

**Information on the likely routes of exposure** : Not available.

### Potential acute health effects

**Eye contact** : Causes serious eye irritation.

## Section 11. Toxicological information

- Inhalation** : Harmful if inhaled. May cause respiratory irritation.
- Skin contact** : Causes skin irritation. May cause an allergic skin reaction.
- Ingestion** : No known significant effects or critical hazards.

### Symptoms related to the physical, chemical and toxicological characteristics

- Eye contact** : Adverse symptoms may include the following:  
pain or irritation  
watering  
redness
- Inhalation** : Adverse symptoms may include the following:  
respiratory tract irritation  
coughing
- 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** : Causes damage to organs through prolonged or repeated exposure. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
- Carcinogenicity** : No known significant effects or critical hazards.
- 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

Route	ATE value
Oral	6678.5 mg/kg
Inhalation (gases)	8034.4 ppm
Inhalation (vapors)	34.23 mg/l

## Section 12. Ecological information

### Toxicity

Product/ingredient name	Result	Species	Exposure
styrene	Acute EC50 1400 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours
	Acute EC50 720 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
	Acute EC50 4700 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 52 mg/l Marine water	Crustaceans - Artemia salina	48 hours
	Acute LC50 4020 µg/l Fresh water	Fish - Pimephales promelas	96 hours
	Chronic NOEC 63 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
methyl methacrylate	Acute LC50 130000 µg/l Fresh water	Fish - Pimephales promelas - Adult	96 hours
Styrene, methyl-	Acute EC50 1 to 10 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 8.9 mg/l Marine water	Crustaceans - Chaetogammarus marinus - Young	48 hours

### Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
styrene	OECD	70 % - Readily - 28 days	-	-

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
styrene	-	-	Readily

### Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
styrene	0.35	13.49	low
methyl methacrylate	1.38	-	low
Styrene, methyl-	3.35	100 to 320	low

### Mobility in soil

**Soil/water partition coefficient (K<sub>oc</sub>)** : 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 13. Disposal considerations

### United States - RCRA Toxic hazardous waste "U" List

Ingredient	CAS #	Status	Reference number
Methyl methacrylate (I,T); 2-Propenoic acid, 2-methyl-, methyl ester (I,T)	80-62-6	Listed	U162

## Section 14. Transport information

	DOT Classification	Mexico Classification	TDG Classification	IATA	IMDG
UN number	UN1866	UN1866	UN1866	UN1866	UN1866
UN proper shipping name	RESIN SOLUTION	RESIN SOLUTION	RESIN SOLUTION	RESIN SOLUTION	RESIN SOLUTION
Transport hazard class(es)	3 	3 	3 	3 	3 
Packing group	III	III	III	III	III
Environmental hazards	No.	No.	No.	No.	No.

### Additional information

#### DOT Classification

: **Reportable quantity** 2900.5 lbs / 1316.8 kg [329.73 gal / 1248.2 L]. Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.

#### TDG Classification

: Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.18-2.19 (Class 3).

**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

: **TSCA 8(a) PAIR:** Siloxanes and Silicones, di-Me; vinyltoluene; octamethylcyclotetrasiloxane

**TSCA 8(a) CDR Exempt/Partial exemption:** Not determined

**Clean Water Act (CWA) 307:** ethylbenzene; Naphthenic acids, copper salts

**Clean Water Act (CWA) 311:** styrene; xylene; ethylbenzene; methyl methacrylate

### Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs)

: Styrene  
Xylenes  
Ethyl benzene  
Methyl methacrylate  
Glycol ethers  
Cobalt Compounds  
Cumene

## Section 15. Regulatory information

Ethylene glycol

**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

No products were found.

**SARA 304 RQ** : Not applicable.

### SARA 311/312

**Classification** : FLAMMABLE LIQUIDS - Category 2  
 ACUTE TOXICITY (inhalation) - Category 4  
 SKIN IRRITATION - Category 2  
 EYE IRRITATION - Category 2A  
 SKIN SENSITIZATION - Category 1  
 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3  
 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (hearing organs, liver, nervous system) - Category 1

### SARA 313

	Product name	CAS number	%
<b>Form R - Reporting requirements</b>	styrene	100-42-5	<= 35.0
	methyl methacrylate	80-62-6	<= 5.0
<b>Supplier notification</b>	styrene	100-42-5	34.48
	methyl methacrylate	80-62-6	4.60

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.

Any concentration shown as exact is based on formula.

### State regulations

**Massachusetts** : The following components are listed: STYRENE; PHENYLETHYLENE; VINYL TOLUENE; METHYLSTYRENE; METHYL METHACRYLATE

**New York** : The following components are listed: Styrene; Methyl methacrylate; 2-Propenoic acid, 2-methyl-, methyl ester

**New Jersey** : The following components are listed: STYRENE MONOMER; BENZENE, ETHENYL-; VINYL TOLUENE; BENZENE, ETHENYLMETHYL-; METHYL METHACRYLATE; 2-PROPENOIC ACID, 2-METHYL-, METHYL ESTER

**Pennsylvania** : The following components are listed: BENZENE, ETHENYL-; BENZENE, ETHENYLMETHYL-; 2-PROPENOIC ACID, 2-METHYL-, METHYL ESTER

**California Prop. 65** : The following components are listed. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).  
 Styrene  
 Cumene  
 Ethylbenzene  
 Ethylene Glycol

### Inventory list

**Australia** : Not determined.

**Canada** : Not determined.

**China** : Not determined.

**Europe** : Not determined.

## Section 15. Regulatory information

<b>Japan</b>	: Japan inventory (ENCS): Not determined. Japan inventory (ISHL): Not determined.
<b>Malaysia</b>	: Not determined.
<b>New Zealand</b>	: Not determined.
<b>Philippines</b>	: Not determined.
<b>Republic of Korea</b>	: Not determined.
<b>Taiwan</b>	: Not determined.
<b>Thailand</b>	: Not determined.
<b>Turkey</b>	: Not determined.
<b>United States</b>	: Not determined.
<b>Viet Nam</b>	: 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 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.

### 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

## Section 16. Other information

Classification	Justification
FLAMMABLE LIQUIDS - Category 2 ACUTE TOXICITY (inhalation) - Category 4 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SKIN SENSITIZATION - Category 1 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (hearing organs, liver, nervous system) - Category 1	On basis of test data Calculation method Calculation method Calculation method Calculation method Calculation method Calculation method

### History

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<b>For questions about the SDS, contact</b>	:	Health, Safety and Environmental Department composites@lillyram.com

### Key to abbreviations

:	ATE = Acute Toxicity Estimate
	BCF = Bioconcentration Factor
	GHS = Globally Harmonized System of Classification and Labelling of Chemicals
	IATA = International Air Transport Association
	IBC = Intermediate Bulk Container
	IMDG = International Maritime Dangerous Goods
	LogPow = logarithm of the octanol/water partition coefficient
	MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
	UN = United Nations

### References

:	29 CFR 1910.1200 Hazard Communication Standard, March 2012
	CCR Title 27 Division 4 Office of Environmental Health Hazard Assessment (California Prop. 65)
	American Composites Manufacturers Association
	Styrene Information and Research Center

▣ Indicates information that has changed from previously issued version.

### 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.