

Safety Data Sheet

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations Revision Date: 01/31/2017 Date of issue: 01/05/2016

Version: 1.1

SECTION 1: IDENTIFICATION

1.1. Product Identifier
Product Form: Mixture
Product Name: Repair Mix
Product Code: R50RK85, R50TFIX

Form #: 7096

1.2. Intended Use of the Product

Use of the substance/mixture: FRP liner and roof repair mix to be used with ArmorTuf®, ArmorTuf®- NXT, and Kemlite® panels.

1.3. Name, Address, and Telephone of the Responsible Party

Company

Crane Composites Inc 23525 W. Eames Street Channahon, IL 60410-3220 US

T 1.815.467.8600

1.4. Emergency Telephone Number

Emergency Number : CHEMTREC 1.800.424.9300

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the Substance or Mixture

GHS-US classification

Flam. Liq. 3	H226
Skin Irrit. 2	H315
Eye Irrit. 2A	H319
Muta. 1B	H340
Carc. 1B	H350
Repr. 2	H361
STOT SE 3	H335
STOT RE 1	H372
Aquatic Acute 3	H402
Full text of H-phrases:	see section 16

2.2. Label Elements

GHS-US Labeling

Hazard Pictograms (GHS-US)







Signal Word (GHS-US) : Danger

Hazard Statements (GHS-US) : H226 - Flammable liquid and vapor.

H315 - Causes skin irritation.

H319 - Causes serious eye irritation. H335 - May cause respiratory irritation. H340 - May cause genetic defects.

H350 - May cause cancer.

H361 - Suspected of damaging fertility or the unborn child.

H372 - Causes damage to organs through prolonged or repeated exposure.

H402 - Harmful to aquatic life.

Precautionary Statements (GHS-US) : P201 - Obtain special instructions before use.

P202 - Do not handle until all safety precautions have been read and understood. P210 - Keep away from extremely high or low temperatures, ignition sources, and

incompatible materials. - No smoking. P233 - Keep container tightly closed.

P240 - Ground/bond container and receiving equipment.

P241 - Use explosion-proof electrical, ventilating, and lighting equipment.

P242 - Use only non-sparking tools.

P243 - Take precautionary measures against static discharge.

P260 - Do not breathe vapors, mist, or spray.

01/31/2017 EN (English US) 1/10

Safety Data Sheet

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

P264 - Wash hands, forearms, and other exposed areas thoroughly after handling.

P270 - Do not eat, drink or smoke when using this product.

P271 - Use only outdoors or in a well-ventilated area.

P273 - Avoid release to the environment.

P280 - Wear protective gloves, protective clothing, and eye protection.

P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304+P340 - If inhaled: Remove person to fresh air and keep at rest in a position comfortable for breathing.

P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

P308+P313 - If exposed or concerned: Get medical advice/attention.

P312 - Call a poison center or doctor if you feel unwell.

P321 - Specific treatment (see section 4 on this SDS).

P332+P313 - If skin irritation occurs: Get medical advice/attention.

P337+P313 - If eye irritation persists: Get medical advice/attention.

P362+P364 - Take off contaminated clothing and wash it before reuse.

P370+P378 - In case of fire: Use dry chemical powder, alcohol-resistant foam, carbon dioxide to extinguish.

P403+P235 - Store in a well-ventilated place. Keep cool.

P405 - Store locked up.

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

2.3. Other Hazards

Polymerization will occur if the product is exposed to temperatures exceeding 150°F (650°C) or if contaminated with peroxides, metal salts, and polymerization catalysts. Exposure may aggravate pre-existing eye, skin, or respiratory conditions.

2.4. Unknown Acute Toxicity (GHS-US)

No data available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substance

Not applicable

3.2. Mixture

Name	Product Identifier	%	GHS-US classification
Unsaturated polyester resin	(CAS No) Not available	48 - 80	Not classified
Limestone	(CAS No) 1317-65-3	2 - 28	Not classified
Styrene	(CAS No) 100-42-5	13 - 20	Flam. Liq. 3, H226 Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation:vapor), H332 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Carc. 1B, H350 Repr. 2, H361 STOT SE 3, H335 STOT RE 1, H372 Asp. Tox. 1, H304
			Aquatic Acute 2, H401 Aquatic Chronic 3, H412
Perlite	(CAS No) 93763-70-3	0 - 5	Not classified
Zinc sulfide	(CAS No) 1314-98-3	2 - 4	Not classified
Silica, amorphous	(CAS No) 7631-86-9	2 - 4	Not classified

01/31/2017 EN (English US) 2/10

Safety Data Sheet

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

Solvent naphtha, petroleum, light aromatic	(CAS No) 64742-95-6	0.07 - 0.4	Flam. Liq. 1, H224 Skin Irrit. 2, H315 Muta. 1B, H340 Carc. 1B, H350 Repr. 2, H361 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Acute 2, H401 Aquatic Chronic 2, H411
4-Methoxyphenol	(CAS No) 150-76-5	0.01 - 0.03	Comb. Dust Acute Tox. 4 (Oral), H302 Eye Irrit. 2A, H319 Skin Sens. 1, H317 Repr. 2, H361 Aquatic Acute 3, H402 Aquatic Chronic 3, H412
Hexanoic acid, 2-ethyl-, cobalt(2+) salt (2:1)	(CAS No) 136-52-7	0.05 - 0.02	Acute Tox. 4 (Oral), H302 Eye Irrit. 2A, H319 Skin Sens. 1, H317 Repr. 2, H361 Aquatic Acute 1, H400 Aquatic Chronic 3, H412

Full text of H-phrases: see section 16

SECTION 4: FIRST AID MEASURES

4.1. Description of First Aid Measures

First-aid Measures General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid Measures After Inhalation: When symptoms occur: go into open air and ventilate suspected area. Obtain medical attention if breathing difficulty persists.

First-aid Measures After Skin Contact: Remove contaminated clothing. Drench affected area with water for at least 15 minutes. Obtain medical attention if irritation develops or persists.

First-aid Measures After Eye Contact: Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention.

First-aid Measures After Ingestion: Rinse mouth. Do NOT induce vomiting. Obtain medical attention.

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

Symptoms/Injuries: Causes serious eye irritation. Causes skin irritation. May cause respiratory irritation. There are potential chronic health effects to consider.

Symptoms/Injuries After Inhalation: Irritation of the respiratory tract and the other mucous membranes. In high concentrations may cause narcotic effects. Symptoms may include dizziness, headache, nausea and loss of co-ordination. May cause pulmonary edema.

Symptoms/Injuries After Skin Contact: Redness, pain, swelling, itching, burning, dryness, and dermatitis.

Symptoms/Injuries After Eye Contact: Contact causes severe irritation with redness and swelling of the conjunctiva.

Symptoms/Injuries After Ingestion: Ingestion is likely to be harmful or have adverse effects.

Chronic Symptoms: May cause genetic defects. May cause cancer. Suspected of damaging fertility or the unborn child. Causes damage to organs through prolonged or repeated exposure. Repeated or prolonged inhalation of fumes or vapors may result in hearing loss. Repeated or prolonged skin contact may cause dermatitis and defatting.

4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed

If exposed or concerned, get medical advice and attention. If medical advice is needed, have product container or label at hand.

SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing Media

Suitable Extinguishing Media: Dry chemical powder, alcohol-resistant foam, carbon dioxide (CO₂). Water may be ineffective but water should be used to keep fire-exposed container cool.

Unsuitable Extinguishing Media: Do not use a heavy water stream. A heavy water stream may spread burning liquid.

5.2. Special Hazards Arising From the Substance or Mixture

Fire Hazard: Flammable liquid and vapor. Vapors are heavier than air and may travel considerable distance to an ignition source and flash back to source of vapors.

01/31/2017 EN (English US) 3/10

Safety Data Sheet

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

Explosion Hazard: May form flammable or explosive vapor-air mixture. Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries.

Reactivity: Reacts violently with strong oxidizers. Increased risk of fire or explosion.

5.3. Advice for Firefighters

Precautionary Measures Fire: Under fire conditions, hazardous fumes will be present. Exercise caution when fighting any chemical fire.

Firefighting Instructions: Use water spray or fog for cooling exposed containers. In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

Other Information: Do not allow run-off from fire fighting to enter drains or water courses.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Do not breathe vapor, mist or spray. Do not get in eyes, on skin, or on clothing. Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking. Use special care to avoid static electric charges.

6.1.1. For Non-emergency Personnel

Protective Equipment: Use appropriate personal protection equipment (PPE).

Emergency Procedures: Evacuate unnecessary personnel.

6.1.2. For Emergency Responders

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit. Eliminate ignition sources.

6.2. Environmental Precautions Prevent entry to sewers and public waters. Avoid release to the environment.

6.3. Methods and Material for Containment and Cleaning Up

For Containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. As an immediate precautionary measure, isolate spill or leak area in all directions.

Methods for Cleaning Up: Clean up spills immediately and dispose of waste safely. Absorb and/or contain spill with inert material. Transfer spilled material to a suitable container for disposal. Do not take up in combustible material such as: saw dust or cellulosic material. Use only non-sparking tools. Contact competent authorities after a spill.

6.4. Reference to Other Sections

See Section 8, Exposure Controls and Personal Protection. See Section 13, Disposal Considerations.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for Safe Handling

Additional Hazards When Processed: Handle empty containers with care because residual vapors are flammable.

Precautions for Safe Handling: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe vapors, mist, spray. Do not get in eyes, on skin, or on clothing. Take precautionary measures against static discharge. Use only non-sparking tools. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures. Do not eat, drink or smoke when using this product.

7.2. Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Comply with applicable regulations. Take action to prevent static discharges. Ground and bond container and receiving equipment. Use explosion-proof electrical, ventilating, and lighting equipment.

Storage Conditions: Store in a dry, cool place. Store in a well-ventilated place. Keep container tightly closed. Keep in fireproof place. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials.

Incompatible Products: Strong oxidizers. Strong acids. Metal salts. Polymerization catalysts.

Storage Temperature: < 23.9 °C (75 °F)

7.3. Specific End Use(s) FRP Liner Repair (ArmorTuf® and Kemlite®)

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control Parameters

For substances listed in section 3 that are not listed here, there are no established exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), AIHA (WEEL), NIOSH (REL), or OSHA (PEL).

Styrene (100	Styrene (100-42-5)		
USA ACGIH	ACGIH TWA (ppm)	20 ppm	
USA ACGIH	ACGIH STEL (ppm)	40 ppm	
USA ACGIH	ACGIH chemical category	Not Classifiable as a Human Carcinogen	

01/31/2017 EN (English US) 4/10

Safety Data Sheet

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

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USA ACGIH	Biological Exposure Indices (BEI)	400 mg/g Kreatinin (Medium: urine - Time: end of shift - Parameter:
		Mandelic acid plus phenylglyoxylic acid (nonspecific)
		40 μg/l (Medium: urine - Time: end of shift - Parameter: Styrene)
USA NIOSH	NIOSH REL (TWA) (mg/m³)	215 mg/m³
USA NIOSH	NIOSH REL (TWA) (ppm)	50 ppm
USA NIOSH	NIOSH REL (STEL) (mg/m³)	425 mg/m³
USA NIOSH	NIOSH REL (STEL) (ppm)	100 ppm
USA IDLH	US IDLH (ppm)	700 ppm
USA OSHA	OSHA PEL (TWA) (ppm)	100 ppm
USA OSHA	OSHA PEL (Ceiling) (ppm)	200 ppm
Limestone (1	317-65-3)	
USA NIOSH	NIOSH REL (TWA) (mg/m³)	10 mg/m³ (total dust)
		5 mg/m³ (respirable dust)
USA OSHA	OSHA PEL (TWA) (mg/m³)	15 mg/m³ (total dust)
		5 mg/m³ (respirable fraction)
Silica, amorp	hous (7631-86-9)	
USA NIOSH	NIOSH REL (TWA) (mg/m³)	6 mg/m³
USA IDLH	US IDLH (mg/m³)	3000 mg/m³
USA OSHA	OSHA PEL (TWA) (mg/m³)	6 mg/m³
USA OSHA	OSHA PEL (TWA) (ppm)	20 mppcf (80mg/m³/%SiO ₂)
Perlite (9376	3-70-3)	
USA NIOSH	NIOSH REL (TWA) (mg/m³)	10 mg/m³ (total dust)
		5 mg/m³ (respirable dust)
USA OSHA	OSHA PEL (TWA) (mg/m³)	15 mg/m³ (General Industry - total dust)
4-Methoxyph	nenol (150-76-5)	
USA ACGIH	ACGIH TWA (mg/m³)	5 mg/m³
USA NIOSH	NIOSH REL (TWA) (mg/m³)	5 mg/m³
		•

8.2. Exposure Controls

Appropriate Engineering Controls

: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed. Gas detectors should be used when flammable gases or vapors may be released. Proper grounding procedures to avoid static electricity should be followed. Use explosion-proof equipment.

Personal Protective Equipment

: Gloves. Protective clothing. Protective goggles. Insufficient ventilation: wear respiratory protection.









Materials for Protective Clothing

: Chemically resistant materials and fabrics. Wear fire/flame resistant/retardant clothing.

Hand Protection: Wear protective gloves.Eye Protection: Chemical safety goggles.

Skin and Body Protection : Wear suitable protective clothing.

Respiratory Protection : If exposure limits are exceeded or irritation is experienced, approved respiratory

protection should be worn.

Other Information : When using, do not eat, drink or smoke.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on Basic Physical and Chemical Properties
Physical State : Liquid

Appearance : White thick liquid paste

Odor : Styrene

Odor Threshold: No data availablepH: No data availableEvaporation Rate: No data availableMelting Point: No data available

01/31/2017 EN (English US) 5/10

Safety Data Sheet

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

Freezing Point : -30.4 °C (-22.7 °F) (Styrene) Boiling Point : 146 °C (294.8 °F) (Styrene)

Flash Point : 32 °C (89.6 °F) SetaFlash Closed Cup

Auto-ignition Temperature: 490 ° C (914 °F) (Styrene)Decomposition Temperature: No data availableFlammability (solid, gas): No data available

Vapor Pressure : 0.85 kPa @ 77°F (25°C) (Styrene)

Relative Vapor Density at 20 °C : 3.6 (Air = 1) (Styrene) **Relative Density** : No data available

Specific gravity / density : 1 - 1.3 (Water=1) @ 77°F (25°C)

Solubility: No data availablePartition Coefficient: N-Octanol/Water: No data availableViscosity: No data availableLower Flammable Limit: 1.1 % (Styrene)Upper Flammable Limit: 7 % (Styrene)

9.2. Other Information

VOC content : 35 - 42 %

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity: Reacts violently with strong oxidizers. Increased risk of fire or explosion.

- 10.2. Chemical Stability: Flammable liquid and vapor. May form flammable or explosive vapor-air mixture.
- **10.3. Possibility of Hazardous Reactions:** Hazardous polymerization can occur. May polymerize violently or explosively if contaminated or overheated.
- **10.4. Conditions to Avoid:** Direct sunlight, extremely high or low temperatures, heat, hot surfaces, sparks, open flames, incompatible materials, and other ignition sources.
- 10.5. Incompatible Materials: Strong oxidizers. Strong acids. Metal salts. Polymerization catalysts.
- **10.6. Hazardous Decomposition Products:** Thermal decomposition generates: Carbon oxides (CO, CO₂). Hydrocarbons. Irritating or toxic vapors.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information On Toxicological Effects

Acute Toxicity: Not classified

Styrene (100-42-5) LD50 Oral Rat	Active Foliation Not discontinu		
LC50 Inhalation Rat 11.7 mg/l/4h Zinc sulfide (1314-98-3) LD50 Oral Rat > 2 g/kg LC50 Inhalation Rat > 5040 mg/m³ (Exposure time: 4 h) Silica, amorphous (7631-86-9) LD50 Oral Rat > 5000 mg/kg LD50 Dermal Rabbit > 2000 mg/kg LC50 Inhalation Rat > 2.2 mg/l (Exposure time: 1 h) Solvent naphtha, petroleum, light aromatic (64742-95-6) LD50 Oral Rat 8400 mg/kg LD50 Dermal Rabbit > 2000 mg/kg LC50 Inhalation Rat 3400 ppm/4h Hexanoic acid, 2-ethyl-, cobalt(2+) salt (2:1) (136-52-7) LD50 Oral Rat LD50 Oral Rat 1.22 g/kg Perlite (93763-70-3) LD50 Oral Rat 12960 mg/kg (Mouse) 4-Methoxyphenol (150-76-5) 4	Styrene (100-42-5)		
Zinc sulfide (1314-98-3) LD50 Oral Rat > 5040 mg/m³ (Exposure time: 4 h) Silica, amorphous (7631-86-9) LD50 Oral Rat > 5000 mg/kg LD50 Dermal Rabbit > 2000 mg/kg LC50 Inhalation Rat > 2.2 mg/l (Exposure time: 1 h) Solvent naphtha, petroleum, light aromatic (6474≥-95-6) LD50 Oral Rat 8400 mg/kg LD50 Dermal Rabbit > 2000 mg/kg LC50 Inhalation Rat 3400 ppm/4h Hexanoic acid, 2-ethyl-, cobalt(2+) salt (2:1) (136-5-7) LD50 Oral Rat Perlite (93763-70-3) 1.22 g/kg Perlite (93763-70-3) 12960 mg/kg (Mouse) 4-Methoxyphenol (150-76-5)	LD50 Oral Rat	1000 mg/kg	
LD50 Oral Rat > 2 g/kg LC50 Inhalation Rat > 5040 mg/m³ (Exposure time: 4 h) Silica, amorphous (7631-86-9)	LC50 Inhalation Rat	11.7 mg/l/4h	
LC50 Inhalation Rat > 5040 mg/m³ (Exposure time: 4 h) Silica, amorphous (7631-86-9) LD50 Oral Rat > 5000 mg/kg LD50 Dermal Rabbit > 2000 mg/kg LC50 Inhalation Rat > 2.2 mg/l (Exposure time: 1 h) Solvent naphtha, petroleum, light aromatic (6474≥-95-6) LD50 Oral Rat 8400 mg/kg LD50 Dermal Rabbit > 2000 mg/kg LC50 Inhalation Rat 3400 ppm/4h Hexanoic acid, 2-ethyl-, cobalt(2+) salt (2:1) (136-52-7) LD50 Oral Rat 1.22 g/kg Perlite (93763-70-3) LD50 Oral Rat 12960 mg/kg (Mouse) 4-Methoxyphenol (150-76-5)	Zinc sulfide (1314-98-3)		
Silica, amorphous (7631-86-9) LD50 Oral Rat > 5000 mg/kg LD50 Dermal Rabbit > 2000 mg/kg LC50 Inhalation Rat > 2.2 mg/l (Exposure time: 1 h) Solvent naphtha, petroleum, light aromatic (64742-95-6) LD50 Oral Rat 8400 mg/kg LD50 Dermal Rabbit > 2000 mg/kg LC50 Inhalation Rat 3400 ppm/4h Hexanoic acid, 2-ethyl-, cobalt(2+) salt (2:1) (136-5-7) LD50 Oral Rat 1.22 g/kg Perlite (93763-70-3) LD50 Oral Rat 12960 mg/kg (Mouse) 4-Methoxyphenol (150-76-5)	LD50 Oral Rat	> 2 g/kg	
LD50 Oral Rat > 5000 mg/kg LD50 Dermal Rabbit > 2000 mg/kg LC50 Inhalation Rat > 2.2 mg/l (Exposure time: 1 h) Solvent naphtha, petroleum, light aromatic (64742-95-6) The state of the stat	LC50 Inhalation Rat	> 5040 mg/m³ (Exposure time: 4 h)	
LD50 Dermal Rabbit > 2000 mg/kg LC50 Inhalation Rat > 2.2 mg/l (Exposure time: 1 h) Solvent naphtha, petroleum, light aromatic (6474≥-95-6) LD50 Oral Rat 8400 mg/kg LD50 Dermal Rabbit > 2000 mg/kg LC50 Inhalation Rat 3400 ppm/4h Hexanoic acid, 2-ethyl-, cobalt(2+) salt (2:1) (136-52-7) LD50 Oral Rat 1.22 g/kg Perlite (93763-70-3) LD50 Oral Rat 12960 mg/kg (Mouse) 4-Methoxyphenol (150-76-5)	Silica, amorphous (7631-86-9)		
LC50 Inhalation Rat > 2.2 mg/l (Exposure time: 1 h) Solvent naphtha, petroleum, light aromatic (64742-95-6) LD50 Oral Rat 8400 mg/kg LD50 Dermal Rabbit > 2000 mg/kg LC50 Inhalation Rat 3400 ppm/4h Hexanoic acid, 2-ethyl-, cobalt(2+) salt (2:1) (136-52-7) LD50 Oral Rat LD50 Oral Rat 1.22 g/kg Perlite (93763-70-3) LD50 Oral Rat 4-Methoxyphenol (150-76-5) 12960 mg/kg (Mouse)	LD50 Oral Rat	> 5000 mg/kg	
Solvent naphtha, petroleum, light aromatic (64742-95-6) LD50 Oral Rat 8400 mg/kg LD50 Dermal Rabbit > 2000 mg/kg LC50 Inhalation Rat 3400 ppm/4h Hexanoic acid, 2-ethyl-, cobalt(2+) salt (2:1) (136-52-7) LD50 Oral Rat 1.22 g/kg Perlite (93763-70-3) LD50 Oral Rat 12960 mg/kg (Mouse) 4-Methoxyphenol (150-76-5)	LD50 Dermal Rabbit	> 2000 mg/kg	
LD50 Oral Rat 8400 mg/kg LD50 Dermal Rabbit > 2000 mg/kg LC50 Inhalation Rat 3400 ppm/4h Hexanoic acid, 2-ethyl-, cobalt(2+) salt (2:1) (136-5-7) LD50 Oral Rat 1.22 g/kg Perlite (93763-70-3) LD50 Oral Rat 12960 mg/kg (Mouse) 4-Methoxyphenol (150-76-5)	LC50 Inhalation Rat	> 2.2 mg/l (Exposure time: 1 h)	
LD50 Dermal Rabbit > 2000 mg/kg LC50 Inhalation Rat 3400 ppm/4h Hexanoic acid, 2-ethyl-, cobalt(2+) salt (2:1) (136-52-7) LD50 Oral Rat 1.22 g/kg Perlite (93763-70-3) LD50 Oral Rat 12960 mg/kg (Mouse) 4-Methoxyphenol (150-76-5)	Solvent naphtha, petroleum, light aromatic (64742	2-95-6)	
LC50 Inhalation Rat 3400 ppm/4h Hexanoic acid, 2-ethyl-, cobalt(2+) salt (2:1) (136-52-7) LD50 Oral Rat 1.22 g/kg Perlite (93763-70-3) LD50 Oral Rat 12960 mg/kg (Mouse) 4-Methoxyphenol (150-76-5)	LD50 Oral Rat	8400 mg/kg	
Hexanoic acid, 2-ethyl-, cobalt(2+) salt (2:1) (136-52-7) LD50 Oral Rat 1.22 g/kg Perlite (93763-70-3) LD50 Oral Rat 12960 mg/kg (Mouse) 4-Methoxyphenol (150-76-5)	LD50 Dermal Rabbit	> 2000 mg/kg	
LD50 Oral Rat 1.22 g/kg Perlite (93763-70-3) 12960 mg/kg (Mouse) 4-Methoxyphenol (150-76-5) 4-Methoxyphenol (150-76-5)	LC50 Inhalation Rat	3400 ppm/4h	
Perlite (93763-70-3) LD50 Oral Rat 12960 mg/kg (Mouse) 4-Methoxyphenol (150-76-5)	Hexanoic acid, 2-ethyl-, cobalt(2+) salt (2:1) (136-52-7)		
LD50 Oral Rat 12960 mg/kg (Mouse) 4-Methoxyphenol (150-76-5)	LD50 Oral Rat	1.22 g/kg	
4-Methoxyphenol (150-76-5)	Perlite (93763-70-3)		
	LD50 Oral Rat	12960 mg/kg (Mouse)	
LDEO Ovel Pot	4-Methoxyphenol (150-76-5)		
TOOO HIR/kg	LD50 Oral Rat	1600 mg/kg	

Skin Corrosion/Irritation: Causes skin irritation.

Serious Eye Damage/Irritation: Causes serious eye irritation.

Respiratory or Skin Sensitization: Not classified **Germ Cell Mutagenicity:** May cause genetic defects.

Carcinogenicity: May cause cancer.

01/31/2017 EN (English US) 6/10

Safety Data Sheet

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

Styrene (100-42-5)		
IARC group	2B	
National Toxicology Program (NTP) Status	Reasonably anticipated to be Human Carcinogen.	
OSHA Hazard Communication Carcinogen List	In OSHA Hazard Communication Carcinogen list.	
Silica, amorphous (7631-86-9)		
IARC group	3	

Reproductive Toxicity: Suspected of damaging fertility or the unborn child.

Specific Target Organ Toxicity (Single Exposure): May cause respiratory irritation.

Specific Target Organ Toxicity (Repeated Exposure): Causes damage to organs through prolonged or repeated exposure.

Aspiration Hazard: Not classified

Symptoms/Injuries After Inhalation: Irritation of the respiratory tract and the other mucous membranes. In high concentrations may cause narcotic effects. Symptoms may include dizziness, headache, nausea and loss of co-ordination. May cause pulmonary edema.

Symptoms/Injuries After Skin Contact: Redness, pain, swelling, itching, burning, dryness, and dermatitis.

Symptoms/Injuries After Eye Contact: Contact causes severe irritation with redness and swelling of the conjunctiva.

Symptoms/Injuries After Ingestion: Ingestion is likely to be harmful or have adverse effects.

Chronic Symptoms: May cause genetic defects. May cause cancer. Suspected of damaging fertility or the unborn child. Causes damage to organs through prolonged or repeated exposure. Repeated or prolonged inhalation of fumes or vapors may result in hearing loss. Repeated or prolonged skin contact may cause dermatitis and defatting.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecology - General : Harmful to aquatic life.

Styrene (100-42-5)	
LC50 Fish 1	3.24 - 4.99 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
EC50 Daphnia 1	3.3 - 7.4 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC 50 Fish 2	19.03 - 33.53 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])
NOEC (acute)	44 mg/kg (Exposure time: 14 Days - Species: Eisenia foetida [soil dry weight])
Silica, amorphous (7631-86-9)	
LC50 Fish 1	5000 mg/l (Exposure time: 96 h - Species: Brachydanio rerio [static])
EC50 Daphnia 1	7600 mg/l (Exposure time: 48 h - Species: Ceriodaphnia dubia)
Solvent naphtha, petroleum, light aromatic (64742-95-6)	
LC50 Fish 1	9.22 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss)
EC50 Daphnia 1	6.14 mg/l (Exposure time: 48 h - Species: Daphnia magna)
4-Methoxyphenol (150-76-5)	
LC50 Fish 1	84.3 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
LC 50 Fish 2	28.5 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [flow-through])

12.2. Persistence and Degradability Not established

12.3. Bioaccumulative Potential

2.3. Dioaccumulative rotential	
Styrene (100-42-5)	
BCF fish 1	13.5
Log Pow	2.95
Silica, amorphous (7631-86-9)	
BCF fish 1 (no bioaccumulation expected)	
4-Methoxyphenol (150-76-5)	
Log Pow	1.34

12.4. Mobility in Soil No additional information available

12.5. Other Adverse Effects

Other Information : Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

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

Additional Information: Handle empty containers with care because residual vapors are flammable. EPA Hazardous Waste Number: D001 (Ignitability).

01/31/2017 EN (English US) 7/10

Safety Data Sheet

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

Ecology – Waste Materials: Avoid release to the environment. This material is hazardous to the aquatic environment. Keep out of sewers and waterways.

SECTION 14: TRANSPORT INFORMATION

14.1. In Accordance with DOT

Meets the ORM-D classification for USA domestic shipments **Proper Shipping Name** : RESIN SOLUTION flammable

Hazard Class : 3
Identification Number : UN1866
Label Codes : 3
Packing Group : III
ERG Number : 127

Proper Shipping Name : RESIN SOLUTION

Hazard Class : 3
Identification Number : UN1866
Packing Group : III
Label Codes : 3
EmS-No. (Fire) : F-E
EmS-No. (Spillage) : S-E

14.3. In Accordance with IATA

14.2. In Accordance with IMDG

Proper Shipping Name : RESIN SOLUTION

Packing Group : III
Identification Number : UN1866
Hazard Class : 3
Label Codes : 3
ERG Code (IATA) : 3L



SECTION 15: REGULATORY INFORMATION

15.1 US Federal Regulations

Repair Mix		
SARA Section 311/312 Hazard Classes	Fire hazard	
	Immediate (acute) health hazard	
	Delayed (chronic) health hazard	
Styrene (100-42-5)		
Listed on the United States TSCA (Toxic Substances Contro	ol Act) inventory	
Subject to reporting requirements of United States SARA	Section 313	
SARA Section 313 - Emission Reporting	0.1 %	
Zinc sulfide (1314-98-3)		
Listed on the United States TSCA (Toxic Substances Contro	ol Act) inventory	
Limestone (1317-65-3)		
Listed on the United States TSCA (Toxic Substances Control Act) inventory		
Silica, amorphous (7631-86-9)		
Listed on the United States TSCA (Toxic Substances Control Act) inventory		
Solvent naphtha, petroleum, light aromatic (64742-95-6)		
Listed on the United States TSCA (Toxic Substances Control Act) inventory		
Hexanoic acid, 2-ethyl-, cobalt(2+) salt (2:1) (136-52-7)		
Listed on the United States TSCA (Toxic Substances Control Act) inventory		
4-Methoxyphenol (150-76-5)		
Listed on the United States TSCA (Toxic Substances Control Act) inventory		
EPA TSCA Regulatory Flag T - T - indicates a subs	tance that is the subject of a Section 4 test rule under TSCA.	

15.2 US State Regulations

Styrene (100-42-5)	
U.S California - Proposition 65 - Carcinogens List	WARNING: This product contains chemicals known to the State of
	California to cause cancer.

01/31/2017 EN (English US) 8/10

Safety Data Sheet

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

Styrene (100-42-5)

- U.S. Massachusetts Right To Know List
- U.S. New Jersey Right to Know Hazardous Substance List
- U.S. Pennsylvania RTK (Right to Know) Environmental Hazard List
- U.S. Pennsylvania RTK (Right to Know) List

Limestone (1317-65-3)

- U.S. Massachusetts Right To Know List
- U.S. New Jersey Right to Know Hazardous Substance List
- U.S. Pennsylvania RTK (Right to Know) List

Silica, amorphous (7631-86-9)

- U.S. Massachusetts Right To Know List
- U.S. New Jersey Right to Know Hazardous Substance List
- U.S. Pennsylvania RTK (Right to Know) List

Perlite (93763-70-3)

- U.S. Massachusetts Right To Know List
- U.S. New Jersey Right to Know Hazardous Substance List
- U.S. Pennsylvania RTK (Right to Know) List

4-Methoxyphenol (150-76-5)

- U.S. Massachusetts Right To Know List
- U.S. New Jersey Right to Know Hazardous Substance List
- U.S. Pennsylvania RTK (Right to Know) List

SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Revision Date : 01/31/2017

Other Information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard

Communication Standard 29 CFR 1910.1200.

GHS Full Text Phrases:

Acute Tox. 4 (Inhalation:vapor)	Acute toxicity (inhalation:vapor) Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Aquatic Acute 1	Hazardous to the aquatic environment - Acute Hazard Category 1
Aquatic Acute 2	Hazardous to the aquatic environment - Acute Hazard Category 2
Aquatic Acute 3	Hazardous to the aquatic environment - Acute Hazard Category 3
Aquatic Chronic 2	Hazardous to the aquatic environment - Chronic Hazard Category 2
Aquatic Chronic 3	Hazardous to the aquatic environment - Chronic Hazard Category 3
Asp. Tox. 1	Aspiration hazard Category 1
Carc. 1B	Carcinogenicity Category 1B
Comb. Dust	Combustible Dust
Eye Irrit. 2A	Serious eye damage/eye irritation Category 2A
Flam. Liq. 1	Flammable liquids Category 1
Flam. Liq. 3	Flammable liquids Category 3
Muta. 1B	Germ cell mutagenicity Category 1B
Repr. 2	Reproductive toxicity Category 2
Skin Irrit. 2	Skin corrosion/irritation Category 2
Skin Sens. 1	Skin sensitization Category 1
STOT RE 1	Specific target organ toxicity (repeated exposure) Category 1
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H224	Extremely flammable liquid and vapor
H226	Flammable liquid and vapor
H302	Harmful if swallowed
H304	May be fatal if swallowed and enters airways
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H332	Harmful if inhaled

01/31/2017 EN (English US) 9/10

Safety Data Sheet

 $\dot{\text{According to Federal Register}}$ Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

H335	May cause respiratory irritation
H336	May cause drowsiness or dizziness
H340	May cause genetic defects
H350	May cause cancer
H361	Suspected of damaging fertility or the unborn child
H372	Causes damage to organs through prolonged or repeated exposure
H400	Very toxic to aquatic life
H401	Toxic to aquatic life
H402	Harmful to aquatic life
H411	Toxic to aquatic life with long lasting effects
H412	Harmful to aquatic life with long lasting effects

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

SDS US (GHS HazCom)

01/31/2017 EN (English US) 10/10