

MATERIAL SAFETY DATA SHEET

Fibergrate**Composite Structures**

Sealant - Part A

1/2 Pint

Page 1/4

SECTION I - CHEMICAL PRODUCT & COMPANY IDENTIFICATION

24-HOUR EMERGENCY PHONE NUMBER: 800-424-9300

Product: CORVE8301 Vinyl Ester Resin

UN/NA Number: UN1866

MSDS File ID: MSDSLETO

General or Generic ID: Unsaturated Polyester Resin

Hazard Classification: Flammable Liquid

Shipping Name: Resin Solution (Styrene Monomer)

PG III, Marine Pollutant

HMIS Rating: (H=2, F=3, R=1)

WHMIS Classification: D2A, D2B, B2

Reprint Date: 02/13/08

Issue Date: 12/30/01

Effective Date: 08/15/01

Review Date: 01/23/02

Revision Date: 02/13/08

Interplastic Corporation

1225 Willow Lake Blvd.

Vadnais Heights, MN 55110-5145

This MSDS complies with 29 CFR 1910.1200 (The Hazard Communication Standard)

SECTION II - HAZARDOUS COMPONENTS

Ingredient	Cas No.	Percent	OSHA-PEL	ACGIH-TLV	NOTE
Unsaturated Polyester Base Resin	See Index	55.0	None-Estb.	None-Est.	
Styrene	100-42-5	45.0	50 ppm TWA 50 ppm	(1)	

(1) OSHA has formally endorsed a styrene industry proposal for a voluntary 50 ppm PEL for workplace exposure to styrene. This proposal was agreed upon by representatives of the UPR industry. The OSHA STEL is 100 ppm. The ACGIH recently changed the TLV for styrene from 50 ppm to 20 ppm, and the STEL from 100 ppm to 40 ppm.

SECTION III - PHYSICAL DATA

Property	Measurement
Initial Boiling Point	For Styrene 293.40 Deg F (145.22 Deg C) @ 760.00 mm Hg
Vapor Pressure	For Styrene 4.3 mm Hg 68 Deg F (20.00 Deg C)
Vapor Density	Air = 1 3.6
Specific Gravity	1.110 - 1.130 @ 77.00 Deg F (25.00 Deg C)
Percent Non-volatiles	55.0%
Evaporation Rate	Slower than Ether

SECTION IV - FIRE AND EXPLOSION DATA

Flash Point 88 Deg F (31.1 Deg C) for Volatile Component

Flammable (Lowest Value of Styrene) Lower - 1.1%
(Upper Value of Styrene) Upper - 6.1%

Extinguishing Media: Regular foam, carbon dioxide, dry chemical or water fog.

Hazardous Decomposition Products: May form toxic materials: carbon dioxide and carbon monoxide, various hydrocarbons.

Special Firefighting Procedures: Water or foam may cause frothing which can be violent and possibly endanger the life of the firefighter, especially if sprayed into containers of hot, burning liquid. Wear self-contained breathing apparatus with a full facepiece operated in pressure demand or other positive pressure mode when fighting fires.

Unusual Fire & Explosion Hazards: Vapors are heavier than air and may travel along the ground or may be moved by ventilation and ignited by pilot lights, other flames, sparks, heaters, smoking, electric motors, static discharge, or other ignition sources at locations distant from material handling point.

Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively.

MATERIAL SAFETY DATA SHEET

Fibergrate**Composite Structures**

Product: CORVE8301 Vinyl Ester Resin

Product Code: UN1866

Page 2/4

Revision Date: 02/13/08

MSD: MSDSLETO

SECTION V- HEALTH DATA

Permissible Exposure Level: Not established for product. See Section II.

Potential Health Effects:

EYES: Can cause severe irritation, redness, tearing, blurred vision.
SKIN: Prolonged or repeated contact can cause moderate irritation, defatting, dermatitis.
BREATHING: Excessive inhalation of vapors can cause nasal irritation, dizziness, weakness, fatigue, nausea, headache, possible unconsciousness, and even asphyxiation.
SWALLOWING: Can cause gastrointestinal irritation, nausea, vomiting, diarrhea. Aspiration of material into the lungs can cause chemical pneumonitis.

Potential Organ Effects:

Overexposure to this material (or its components) has been suggested as a cause of the following effects in laboratory animals, and may aggravate pre-existing disorders of these organs in humans: mild, reversible kidney effects, effects on hearing, respiratory tract (nose, throat and airways), testis, liver. Overexposure to this material (or its components) has been suggested as a cause of the following effects in humans, and may aggravate pre-existing disorders of these organs: central nervous system effects, mild effects on color vision, effects on hearing, and respiratory tract damage (nose, throat and airways).

First Aid:

If on Skin: Thoroughly wash exposed area with soap and water. Remove contaminated clothing. Launder contaminated clothing before re-use.
If in Eyes: Flush with large amount of water, lifting upper and lower lids occasionally. Get medical attention.
If Swallowed: Do not induce vomiting. Keep person warm, quiet and get medical attention. Aspiration of material into the lungs due to vomiting can cause chemical pneumonitis which can be fatal.
If Breathed: If affected, remove individual to fresh air. If breathing is difficult, administer oxygen. If breathing has stopped, give artificial respiration. Keep person warm, quiet, and get medical attention.

Primary Route(s) of Entry: Inhalation, skin absorption, skin contact, eye contact.

SECTION VI - REACTIVITY DATA

HAZARDOUS POLYMERIZATION: Can occur.

STABILITY: Stable.

INCOMPATIBILITY: Avoid contact with strong alkalis, strong mineral acids and oxidizing agents.

CONDITIONS TO AVOID: Exposure to excessive heat or open flame; storage in open containers; prolonged storage (6 months), storage above 38 Deg C (100 Deg F). Contamination with oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon Monoxide, Carbon Dioxide, Low Molecular Weight Hydrocarbons, Organic Acids.

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

Small Spill: Absorb liquid on paper, vermiculite, floor absorbent, or other absorbent material and transfer to hood.

Large Spill: Eliminate all ignition sources (flares, flames, including pilot lights, electrical sparks). Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Stop spill at source, dike area of spill to prevent spreading, pump liquid to salvage tank. Remaining liquid may be taken up on sand, clay, earth, floor absorbent or other absorbent material and shoveled into containers.

MATERIAL SAFETY DATA SHEET

Product: CORVE8301 Vinyl Ester Resin

Product Code: UN1866

Page 3/4

Revision Date: 02/13/08

MSD: MSDSLETO

WASTE DISPOSAL METHOD:

Small Spill: Allow volatile portion to evaporate in hood. Allow sufficient time for vapors to completely clear hood duct work. Dispose of remaining material in accordance with applicable regulations.

Large Spill: Destroy by liquid incineration in accordance with applicable regulations.

Contaminated absorbent should be disposed of in accordance with local, state and federal regulations.

SECTION VIII- PROTECTIVE EQUIPMENT TO BE USED

RESPIRATORY PROTECTION: If TLV of the product or any component is exceeded, a NIOSH/MSHA jointly approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH/MSHA respirators under specified conditions. (See your safety equipment supplier.) Engineering or administrative controls should be implemented to reduce exposure.

VENTILATION: Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below TLV(s).

PROTECTIVE GLOVES: Wear chemical resistant gloves that affords proper protection to the hands, such as: neoprene, rubber, latex, etc.

EYE PROTECTION: Chemical splash goggles in compliance with OSHA regulations are advised; however, OSHA regulations also permit other type safety glasses (consult your safety equipment supplier).

OTHER PROTECTIVE EQUIPMENT: Normal work clothing covering arms and legs.

SECTION IX - SPECIAL PRECAUTIONS OR OTHER COMMENTS

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapors, liquid, and/or solid), all hazard precautions given in this data sheet must be observed.

Overexposure to styrene has apparently been found to cause the following effects in laboratory animals: liver abnormalities, kidney damage, and lung damage.

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with Interplastic or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances.

SECTION X - SUPPLEMENT

Styrene has been identified as a possible human carcinogen by the International Agency for Research on Cancer (IARC). The IARC determination is based on "limited evidence" in animals and other "relevant data." IARC concedes there is "inadequate evidence" on humans for its findings.

The Styrene Information and Research Center (SIRC) recently sponsored studies to evaluate potential health effects in laboratory rats and mice exposed by inhalation to styrene for six hours per day for five days per week of their lifetime. The rat study, completed in 1996, showed no increased incidence of tumors related to styrene exposure at levels up to 1000 parts per million (ppm). The results of the mouse study are in the process of being analyzed, and so far only the lungs have been evaluated. The number of lung tumors observed at exposure levels was increased as compared to the number of tumors seen in unexposed mice. These lung tumor results from the mouse study have been added to the MSDS for styrene.

The lung effects in the new mouse study are in contrast to findings in other studies in both rodents and humans, including the recent SIRC-sponsored study in rats. No link between styrene exposure and an increased incidence of cancer has been found collectively in eight studies of workers in the reinforced plastics and composites industries prior to 1992, or in two subsequent studies of composites/reinforced plastics workers. All together, over 90,000 people have been studied. Exposure levels in these industries are above the levels routinely measured in styrene and polystyrene production.

MATERIAL SAFETY DATA SHEET

Fibergrate**Composite Structures**

Product: CORVE8301 Vinyl Ester Resin

Product Code: UN1866

Page 4/4

Revision Date: 02/13/08

MSD: MSDSLETO

Also in the recent animal studies, irritation and degenerative effects on the olfactory cells in the nose (responsible for the sense of smell) were observed in mice exposed repeatedly by inhalation to 20 ppm and above, and in rats exposed to 50 ppm and above. Atrophy (degeneration) of the olfactory nerve was observed at levels at or above 40 ppm in mice and at or above 500 ppm in rats. SIRC is conducting follow-up research to further understand these findings and their possible importance to humans. Liver damage has been reported in mice at exposure levels of 100 ppm or above; comparable liver damage has not been reported in rats or humans exposed to styrene. It appears that mice are more sensitive to styrene than are other species. Information about potential damage to olfactory cells, irritation in the respiratory tract, and potential liver damage has been added to the MSDS for styrene.

We recommend that the precautions in this MSDS be followed.

REGULATORY INFORMATION:

Toxic Substance Control Act (TSCA) Compliant - Manufacturer's Verification

SECTION XI - SUPPLIER NOTIFICATION

This product contains toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 and of 40 CFR 372. Please refer to Section II - Hazardous Components for the specific product and concentration.

Base Resin CAS Index

The base resins indicated under Section II are identified by one or more of the following CAS numbers:

108-05-4	28572-30-7	61224-63-3
113060-15-4	28679-80-3	62569-28-2
135108-89-3	29011-83-4	64386-66-9
141224-31-9	29350-58-1	64386-67-0
149717-53-3	29403-69-8	67380-21-6
155122-62-6	30110-00-0	67599-39-7
25037-66-5	30946-90-8	67712-08-7
25101-03-5	31260-98-7	67845-68-5
25215-72-9	31472-46-5	67939-08-6
25464-21-5	32505-78-5	67939-40-6
25609-89-6	32677-47-7	68002-44-8
25749-46-6	32762-75-7	68140-84-1
25749-49-9	36346-15-3	68140-88-5
25987-82-0	36425-15-7	68171-28-8
26098-37-3	36425-16-8	68238-98-2
26123-45-5	37339-47-2	68299-40-1
26265-08-7	37347-86-7	68492-68-2
26301-26-8	37999-57-8	68511-26-2
26588-55-6	42133-45-9	68585-94-4
26795-76-6	52453-94-8	68647-07-4
27342-37-6	54228-09-0	72259-64-4
27837-75-8	56083-98-8	81192-92-9
27863-48-6	56083-99-9	9003-20-7
28472-89-1	57863-48-6	9065-68-3
28516-30-5	58182-50-6	