# MATERIAL SAFETY DATA SHEET

INTERPLASTIC CORPORATION
1225 Willow Lake Boulevard
St. Paul, MN 55110-5145
(651) 481-6860

CHEMTREC 24-Hour Emergency Telephone (800) 424-9300

ATTN: PLANT MGR/SAFETY DIR

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This MSDS complies with 29 CFR 1910.1200 (Hazard Communication).

## SECTION I - PRODUCT IDENTIFICATION

Product Name: CORVE8300 VINYL ESTER RESIN
General or Generic ID: VINYL ESTER RESIN
Hazard Classification: Flammable Liquid

## SECTION II - HAZARDOUS COMPONENTS

| INGREDIENT | CAS NO. | PERCENT | OSHA-PEL | ACGIH-TL | NOTE |
|---|---|---|---|---|---|
| VINYL ESTER RESIN | See Index | 53- 56 | None-Estb. | None-Est | |
| Styrene | 100-42-5 | 45.00 | 50 ppm TWA | 50 ppm (1&2) | |

(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.
(2) HMIS Rating for Styrene: Health=2; Fire=3; Physical Hazard=2

## 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 Deg C) |
| Specific Gravity | | 1.110 - 1.130 @ 77 Deg F (25 Deg C) |
| Vapor Density | Air = 1 | 3.6 |
| 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: Foam, carbon dioxide, dry chemical, or water fog.

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

Special Firefighting Procedures: Wear self-contained breathing apparatus with a full facepiece operated in pressure demand or other positive pressure mode when fighting fires.

Vapors are heavier than air and may travel along the ground or may be moved by ventilation and ignited by ignition sources at locations distant from material handling point.

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

## 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.

Inhalation - 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.

## SECTION V - HEALTH DATA (continued)

### TARGET 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 Inhaled: 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: | Possible |
| Stability: | Stable |
| Incompatibility: | Avoid contact with strong alkalies, 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 100 Deg F (38 Deg C), and contamination with oxidizing agents. |
| Hazardous Decomposition Products: | Carbon monoxide, carbon dioxide, low molecular weight hydrocarbons, and organic acids. |

## SECTION VII - SPILL OR LEAK PROCEDURES

Eliminate all ignition sources (flares, flames (including pilot lights), and 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, shovel or pump to tank or drums. Remaining liquid may be absorbed in sand, clay, earth, or other absorbent material and shoveled into containers.

## SECTION VIII - PROTECTIVE EQUIPMENT TO BE USED

| | |
|---|---|
| Respiratory Protection: | If PEL of the product or any component is exceeded, an NIOSH/MSHA approved respirator is advised in absence of proper engineering control (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 afford proper protection to the hands, such barrier creams maybe used in some environments as long as proper skin protection is afforded. |
| 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: | Work clothing that covers arms and legs. |

## SECTION IX - SPECIAL PRECAUTIONS

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

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

The International Agency for Research on Cancer (IARC) has classified styrene as a possible carcinogen to humans (Group 2B) based on "limited evidence" in humans, "limited evidence" in animals and "other relevant data". The National Toxicology Program 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. Styrene is not expected to cause cancer in humans at concentrations below the recommended exposure standard or when appropriate industrial hygiene procedures are followed. Moreover, studies in humans exposed for long periods of time to styrene have not demonstrated any carcinogenic effects.

At the conclusion of a major notice and comment rulemaking revising its air contaminants regulations, OSHA concluded that the "current evidence on styrene’s carcinogenicity does not support its classification in the final rule as a carcinogen." In the same rulemaking, the National Institute for for Occupational Safety and Health (NIOSH) commented that there "seems to be little basis from experimental animal investigations or epidemiologic studies to conclude at this time that styrene is carcinogenic." The National Toxicology Program does not include styrene on its list of chemicals expected to be carcinogenic.

## 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.

## SECTION XII - TRANSPORTATION INFORMATION

| Regulatory Information | UN Number | Proper Shipping Name | Class | Packaging Group | Label | Additional Information |
|---|---|---|---|---|---|---|
| US DOT | UN-1866 | Resin Solution | 3 | III | Flammable Liquid | RQ for Styrene=1000 pounds* |

* For shipments in a single container exceeding the RQ for styrene the letters RQ must appear in the proper shipping name.

## BASE RESIN CAS INDEX

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

| | | | |
|---|---|---|---|
| 113060-15-4 | 141224-31-9 | 29403-69-8 | 67712-08-7 |
| 135108-89-3 | 145417-47-6 | 30110-00-0 | 67845-68-5 |
| 1352626-53-9 | 14807-96-6 | 30946-90-8 | 67859-89-6 |
| 1352626-54-0 | 149717-53-3 | 31260-98-7 | 67939-08-6 |
| 1352626-55-1 | 155122-62-6 | 31472-46-5 | 67939-09-7 |
| 1352626-56-2 | 167747-48-0 | 32505-78-5 | 67939-40-6 |
| 1352626-57-3 | 21645-51-2 | 32677-47-7 | 68002-44-8 |
| 1352650-31-7 | 25037-66-5 | 32762-75-7 | 68140-84-1 |
| 1352650-32-8 | 25101-03-5 | 36346-15-3 | 68140-88-5 |
| 1356821-61-8 | 25215-72-9 | 36425-15-7 | 68171-28-8 |
| 1356821-62-9 | 25464-21-5 | 36425-16-8 | 68238-98-2 |
| 1356821-63-0 | 25609-89-6 | 37339-47-2 | 68299-40-1 |
| 1356821-64-1 | 25749-46-6 | 37347-86-7 | 68492-68-2 |
| 1356821-65-2 | 25749-49-9 | 37625-93-7 | 68511-26-2 |
| 1356821-66-3 | 25987-82-0 | 37999-57-8 | 68585-94-4 |
| 1356844-12-6 | 26098-37-3 | 42133-45-9 | 69013-22-5 |
| 1356844-15-9 | 26123-45-5 | 477767-44-5 | |
| 1364010-85-4 | 26265-08-7 | 49624-93-3 | |
| 1373121-77-7 | 26301-26-8 | 51394-65-1 | |
| 1373121-78-8 | 26588-55-6 | 58182-50-6 | |
| 1373121-79-9 | 28572-30-7 | 62569-28-2 | |
| 1373121-80-2 | 28679-80-3 | 64386-66-9 | |
| 1373140-61-4 | 287723-38-0 | 64386-67-0 | |
| 1374301-59-3 | 29011-83-4 | 67380-21-6 | |
| 1374821-41-6 | 29350-58-1 | 67599-39-7 | |