



Safety Data Sheet

MSDS Number: **1502.9.1** | Rev Date: 08/24/20

1 Identification of the substance/mixture and of the company/undertaking

Arjay Technologies
2020 Wild Acres Road
Largo, FL 33771
(727) 538-0600
www.arjaytech.com

EMERGENCY TELEPHONE NUMBER:
CHEMTEL: 1-800-255-3924 DOM
1-800-248-0585 INTL

Product Name: Vinyl Ester Bonding Compound
Product Codes: **7121**
Product Use: For use in the manufacture of glass reinforced plastic products.

2 Hazards Identification

WARNING



Flammable liquid and vapor: Category 3

Prevention: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep container tightly closed.

Response: In case of fire use dry chemical, carbon dioxide, foam or water

spray.



Harmful if inhaled: Category 4

Causes skin irritation: Category 2

Causes serious eye irritation: Category 2A

Prevention: Use only outdoors or in a well-ventilated area. Avoid breathing dust/fume/gas/mist/vapors/spray. Wash areas of contact thoroughly after handling. Wear protective gloves and eye protection/face protection.

Response:

If inhaled: Remove person to fresh air and keep comfortable for breathing.

If symptoms persist, seek medical advice/attention.

If on skin: Wash with plenty of water. If skin irritation occurs, seek medical advice/attention. Take off contaminated clothing and wash it before reuse.

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, seek medical advice/attention.

Spills or Leaks:

Eliminate all ignition sources.

Small spill: Soak up with absorbent material.

Large spill: Dike area and scoop into drums. Prevent material from entering drains, sewers or waterways.

Potential Health Effects

Routes of Entry: Inhalation, Ingestion, Skin contact, Skin absorption, Eye contact

Acute (Short Term) Exposure:

Inhalation: Overexposure to vapors may cause headaches, fatigue, nausea, sensation of drunkenness, central nervous system depression and pulmonary endema.

Ingestion: Swallowing small amounts is not likely to cause harmful effects. Swallowing large amounts may be harmful. The material may get into the lungs during swallowing or vomiting. Styrene is harmful or fatal if liquid is aspirated into the lungs.

Skin: Can cause skin irritation resulting in redness, burning, drying and cracking of the skin. Harmful if absorbed through the skin.

Eye contact: Direct contact can cause eye irritation. Symptoms include stinging, tearing, redness and swelling.

Chronic (Long Term) Exposure:

Overexposure to this material (particularly the styrene component) may cause the following effects in humans and may aggravate pre-existing disorders of these organs: central nervous system effects, effects on hearing, mild effects on color vision and respiratory tract damage.

Carcinogenicity:

This material contains styrene which is listed as a possible human carcinogen by the International Agency for Research on Cancer (IARC). Cobalt and certain cobalt compounds are listed as carcinogenic by the International Agency for Research on Cancer (IARC).

3 Composition/Information on Ingredients

Hazardous Component	CAS Number	Weight %
Styrene	100-42-5	27 - 31
Talc	14807-96-6	5 - 10
Fumed silica	112945-52-5	3 - 7
Fibrous glass	65997-17-3	3 - 7

4 First Aid Measures

Eye Contact: Move individual away from exposure and into fresh air. Immediately flush eyes gently with clean water for at least 15 minutes. Seek immediate medical attention.

Skin Contact: Remove contaminated clothing. Wash skin with soap and water and flush with large amounts of water. Seek medical attention if irritation develops or persists.

Ingestion: Seek medical attention. Do not induce vomiting. If individual is drowsy or unconscious, do not give anything by mouth. Place individual on left side with head down. If possible, do not leave person unattended.

Inhalation: Move individual away from exposure and into fresh air. If breathing is difficult, administer oxygen by trained personnel. Keep person warm and quiet. If symptoms persist, seek medical attention.

5 Fire Fighting Measures

General Hazards: FLAMMABLE LIQUID Material's flash point is less than 100° F (38° C).

Extinguishing Media: Dry chemical, carbon dioxide (CO₂), foam, water spray.

Hazardous Combustion Products: carbon dioxide, carbon monoxide and irritating or toxic vapors and gases

Precautions for Fire Fighting: Evacuate all persons from the fire area to an explosion protected location. If possible, move non-burning material to a safe location. Fire fighters should be protected from potential explosion hazard while extinguishing the fire. Cool containing vessels with water spray in order to prevent pressure build-up, auto ignition or explosion.

6 Accidental Release Measures

For Spills: Eliminate all ignition sources (flares, flames including pilot lights, electrical sparks). Ventilate the area. Wear proper protective equipment (See Section 8). Use non-sparking (non-metallic) tools to clean up spill. Collect with non-combustible absorbent material (sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local and national regulations (See Section 13).

7 Handling and Storage

Handling: Containers of this product may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in this data sheet must be observed. Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat, flame, sparks, static electricity, or other sources of ignition as the container may explode and may cause injury or death. Electrically ground all containers, personnel and equipment before transfer or use of material. Smoking, eating and drinking should be prohibited in the area where material is being handled.

Storage: Store in an area designated for storage of flammable liquids as described in NFPA 30. Store in original container protected from direct sunlight in a cool, dry and well-ventilated area separate from oxidizing materials. Containers that have been opened must be carefully resealed. Do not store in unlabeled containers.

8 Exposure Controls / Personal Protection

Exposure Guidelines:

	<u>Occupational Exposure Limits</u>	
Styrene (100-42-5)		
ACGIH	Time Weighted Average	20 ppm
ACGIH	Short Term Exposure Limit	40 ppm
NIOSH	Recommended Exposure Limit (REL)	50 ppm
NIOSH	Short Term Exposure Limit	100 ppm
OSHA Z2	Time Weighted Average	100 ppm
OSHA Z2	Ceiling Limit Value	200 ppm
OSHA Z2	Maximum Concentration	600 ppm

Exposure Controls: Provide sufficient explosion proof mechanical ventilation (general or local, if necessary) to maintain exposure below the guidelines indicated above.

Eye Protection: Chemical splash goggles in compliance with OSHA regulations are recommended. Facilities storing or utilizing this material should be equipped with an eyewash station and safety shower.

Skin Protection: Protective neoprene or natural rubber gloves and proper clothing should be worn to prevent skin contact. If contact with the material is unavoidable, wear impervious clothing and boots to avoid skin contact.

Respiratory Protection: A NIOSH approved air purifying respirator with organic vapor cartridge or canister may be necessary under certain circumstances where concentrations exceed exposure limits. A respiratory protection program that meets OSHA's requirements must be in place in this event.

9 Physical and Chemical Properties

9.1. Information on basic physical and chemical properties	
General Physical Form:	Solid
Specific Physical Form:	Paste
Odor, Color, Appearance:	Organic odor, neutral / tan, paste
Odor threshold	0.2 ppm (Styrene)
pH	Not Applicable
Melting point	-30.4° C / -22.7° F (Styrene)
Boiling Point	145 °C
Flash Point	88 °F
Evaporation rate	No Data Available
Flammability (solid, gas)	Not Classified
Flammable Limits(LEL)	(LEL) 1.1 %
Flammable Limits(UEL)	(UEL) No Data Available
Vapor Pressure	4.5 mmHg
Vapor Density	3.6 g/ml
Density	1.16 - 1.20 gm/ml (9.7 - 10.0 lb/gal)
Specific Gravity	1.16 - 1.20 [Ref Std:WATER=1]
Solubility in Water	Nil
Solubility- non-water	No Data Available
Partition coefficient: n-octanol/ water	No Data Available
Auto ignition temperature	No Data Available
Decomposition temperature	No Data Available
Viscosity	980,000 - 2,500,000 centipoise
Hazardous Air Pollutants	25 - 30% weight [Test Method:Calculated]

10 Stability and Reactivity

Chemical Stability: Stable at normal temperatures and storage conditions.

Incompatibility: Avoid contact with acids, aluminum chloride, halogens, iron chloride, metal salts, peroxides, strong alkalis and strong oxidizing agents.

Hazardous Decomposition Products: Carbon dioxide and carbon monoxide; hydrocarbons

Hazardous Reactions: Product can undergo hazardous polymerization. Avoid exposure to excessive heat, peroxides and polymerization catalysts.

11 Toxicological Information

Routes of Exposure: Skin contact, eye contact, ingestion and inhalation

Symptoms: Exposure to this product through breathing, swallowing or passage through the skin may include irritation to the nose, throat or airways, stomach or intestinal upset, liver damage, confusion, lack of coordination and central nervous system effects such as dizziness, drowsiness, fatigue, nausea, headache or unconsciousness.

Component Data:

Acute oral toxicity

Styrene LD 50 Rat 2,650 mg/kg

Acute inhalation toxicity

Styrene LC 50 Rat 2,800 ppm, 4 hr

Acute dermal toxicity

Styrene No data available

12 Ecological Information

Biodegradability: No data is available on the product. The component material, styrene, is readily biodegradable.

Bioaccumulation: No data is available on the product.

Ecotoxicity Effects: No data is available on the product. The component material, styrene, has the following aquatic ecotoxicity:

Fresh water Acute LC 50 4.02 mg/l 96 hour exposures

Salt water Acute LC 50 9.1 mg/l 96 hour exposure

13 Disposal Considerations

Waste Disposal Method: This material, if discarded, would be regulated as a hazardous waste under RCRA. Treatment and/or disposal must be completed at a RCRA permitted Treatment, Storage and Disposal (TSD) facility.

RCRA Hazard Class: This material when discarded would be regulated under 40 CFR 261.21 as EPA Hazardous Waste Number D001 based on the characteristic of ignitability.

14 Transport Information

The data provided in this section is for information only and may not be specific to your package size or mode of transport. The appropriate regulations will need to be applied to properly classify a specific shipment.

DOT / IATA / IMDG (Non Bulk):

Proper Shipping Name: RESIN SOLUTION
Hazard Class: 3
ID Number: UN 1866
Packing Group: III

15 Regulatory Information

Reportable Quantity – Components; US EPA CERCLA Hazardous Substances (40 CFR 302):

Styrene 100-42-5 1,000 lbs.

SARA Title III, Section 302: Extremely Hazardous Substances – None

SARA Title III, Section 313: Toxic Chemical List -

Styrene 100-42-5 27-31%

State and Local Regulations – California Proposition 65: This product contains the following chemicals known to the State of California to cause cancer:

Styrene Oxide, Aniline

Styrene, in the presence of air and high temperature or the prolonged exposure to a styrene / air mixture to sunlight can react to form styrene oxide.

16 Other Information

Hazardous Material Identification System:

Health - 2 (Moderate) Flammability - 3 (Serious)
Reactivity- 0 (Stable)