GHS SAFETY DATA SHEET (SDS)

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

PRODUCT: Part #77 Polyester Molding Resin

FIBRE GLAST DEVELOPMENTS CORP.

TELEPHONE: (937) 833-5200 FAX: (937) 833-6555

385 CARR DRIVE
BROOKVILLE, OH 45309

FOR CHEMICAL EMERGENCY CALL (801) 629-0667 24 HRS.

Flammable liquids	: Category 3
Combustible Dust	:
Skin irritation	: Category 2
Eye irritation	: Category 2A
Specific target organ Systemic toxicity – repeated Exposure (inhalation)	: Category 3 (Respiratory system)

PRODUCT CODE: 149464 OR 149577

GHS Label element

SECTION 2 – HAZARDS IDENTIFICATION

GHS Classification

Signal Word	: Danger

Hazard Statements : Flammable liquid and vapor.
May form combustible dust concentrations in air.
Causes skin irritation.
Causes serious eye irritation.
May cause respiratory irritation.
Causes damage to organs (Auditory system) through prolonged or repeated exposure if inhaled.

Hazard pictograms :



Precautionary Statements : **Prevention:**
Keep away from heat/sparks/open flames/hot surfaces. – No smoking.
Keep container tightly closed.
Ground/bond container and receiving equipment.
Use explosion-proof electrical/ventilating/lighting/equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Do not breathe dust/fume/gas/mist/vapors/spray.
Wash skin thoroughly after handling.
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/eye protection/face protection. **Response:**
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
IF INHALED: Remove person to fresh air and keep comfortable for Breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Get medical advice/attention if you feel unwell.
If skin irritation occurs: Get medical advice/attention.
If eye irritation persists: Get medical advice/attention.
Take off contaminated clothing and wash before reuse.
In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.
Storage:
Store in a well-ventilated place. Keep container tightly closed.
Store in a well-ventilated place. Keep cool.
Store locked up.
Disposal:
Dispose of contents/container to an approved waste disposal plant.

Other hazards
Static Accumulating liquid.

SECTION 3 – COMPOSITION/INFORMATION ON INGREDIENTS

Substance/Mixture : Mixture

Chemical nature : Static Accumulator

Chemical nature : Defatter

Hazardous Components	CAS-No. / Trade Secret No.	Classification	Concentration %
STYRENE	100-42-5	Flam. Liq. 3; H226 Acute Tox. 4; H332 Skin Irrit. 2; H315 Eye Irrit. 2A; H319 STOT SE 3; H335 STOT RE 1; H372 Asp Tox. 1; H304	42.83

SECTION 4 – FIRST AID MEASURES

General advice : Move out of dangerous area.
Call a POISON CENTRE or doctor/physician if exposed or you feel unwell.
Show this safety data sheet to the doctor in attendance.
Do not leave victim unattended.

If inhaled : Move to fresh air.
IF INHALED: Call a POISON CENTER or doctor/physician if you feel Unwell.
Keep patient warm and at rest.
If unconscious place in recovery position and seek medical advice.

In case of skin contact : Remove contaminated clothing. If irritation develops, get medical attention.
If on skin, rinse well with water.
Wash contaminated clothing before re-use.
If on clothes, remove clothes.

In case of eye contact : Immediately flush eye(s) with plenty of water.
Remove contact lenses.
Protect unharmed eye.

If swallowed : Obtain medical attention.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.

Most important symptoms	: Signs and symptoms of exposure to this material through breathing, Swallowing, and/or passage of the material through the skin may include: stomach or intestinal upset (nausea, vomiting, diarrhea) irritation (nose, throat, airways) confusion Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation. Causes damage to organs through prolonged or repeated exposure if inhaled.
Notes to physician	: No hazards which require special first aid measures.

SECTION 5 – FIRE FIGHTING MEASURES

Suitable extinguishing media	: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Water spray Foam Alcohol-resistant foam Carbon dioxide (CO2) Dry chemical
Unsuitable extinguishing media	: High volume water jet
Specific hazards during firefighting	: Organic dusts at sufficient concentration can form explosive mixtures in air. Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas. Do not allow run-off from firefighting to enter drains or water courses.
Hazardous combustion Products	: Hydrocarbons carbon dioxide and carbon monoxide
Specific extinguishing methods	: Product is compatible with standard firefighting agents.
Further information	: Do not use a solid water stream as it may scatter and spread fire. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. Use a water spray to cool fully closed containers. Polymerization will take place under fire conditions. If polymerization occurs in a closed container, there is a possibility it will rupture violently. Cool storage container with water, if exposed to fire.
Special protective equipment for firefighters	: in the event of a fire, wear self-contained breathing apparatus.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Personal precautions, Protective equipment and Emergency procedures	: Evacuate personnel to safe areas. Remove all sources of ignition. Use personal protective equipment. Ensure adequate ventilation. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas. Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.
Environmental precautions	: Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drain inform respective authorities.
Methods and materials for containment and cleaning up	: Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local/national regulations (see section 13).
Other information	: Comply with all applicable federal, state, and local regulations. Suppress (knock down) gases/vapours/mists with a water spray jet.

SECTION 7 – HANDLING AND STORAGE

Advice on safe handling	: Open drum carefully as content may be under pressure. Avoid formation of aerosol. Provide sufficient air exchange and/or exhaust in work rooms. Do not breathe vapours/dust. Do not smoke. Container hazardous when empty. Take precautionary measures against static discharges. Avoid exposure – obtain special instructions before use. Avoid contact with skin and eyes. Smoking, eating and drinking should be prohibited in the Application area. For personal protection see section 8. Dispose of rinse water in accordance with local and national regulations. Secondary operations, such as grinding and sanding, may produce Dust. Maintain good housekeeping. Do not permit dust layers to accumulate, for example, on floors, ledges, and equipment, in order to avoid any potential for dust explosion hazards. For further guidance on prevention of dust explosions, refer to National Fire Protection Association (NFPA) 654: "Standard for The Prevention of Fire and Dust Explosions, from the Manufacturing, Processing and Handling of Combustible Particulate Solids."
Conditions for safe storage	: Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Observe label precautions. No smoking.

Electrical installations/working materials must comply with the technological safety standards.

SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (form of Exposure)	Control parameters/Permissible concentration	Basis
STYRENE	100-42-5	TWA	20 ppm	ACGIH
		STEL	40 ppm	ACGIH
		REL	50 ppm 215 mg/m^3	NIOSH/GUIDE
		STEL	100 ppm 425 ppm	NIOSH/GUIDE
		TWA	100 ppm	OSHA/Z2
		Ceiling	200 ppm	OSHA/Z2
		Max. CONC	600 PPM	OSHA/Z2

Biological occupational exposure limits

Components	CAS-No.	Control parameters	Biological specimen	Sampling Time	Permissible concentration	Basis
STYRENE	100-42-5	Styrene	Venous blood	Sampling time: End of shift	0.2 mg/l	
Remarks:	Semi-quantitative					
		Mandelic acid plus phenylglyoxylic acid	Creatinine in urine	Sampling time: End of shit	400 mg/g	
Remarks:	Non-specific					

Engineering measures : Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.
Provide appropriate exhaust ventilation at places where dust is formed.

Personal protective equipment

Respiratory protection	: In the case of vapour formation use a respirator with an approved filter. A NIOSH-approved air-purifying respirator with an appropriate cartridge and/or filter may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits (if applicable) or if overexposure has otherwise been determined. Protection provided by air-purifying respirators is limited. Use a positive pressure, air-supplied respirator if there is any potential for uncontrolled release, exposure levels are not known or any other circumstances where an air-purifying respirator may not provide adequate protection.
Hand protection Remarks	: The suitability for a specific workplace should be discussed with the producers of the protective gloves.
Eye protection	: Wear chemical splash goggles when there is the potential for exposure of the eyes to liquid, vapor or mist.
Skin and body protection	: Wear as appropriate: Impervious clothing Safety Shoes Flame-resistant clothing Choose body protection according to the amount and concentration of the dangerous substance at the work place. Discard gloves that show tears, pinholes, or signs of wear. Wear resistant gloves (consult your safety equipment supplier).
Hygiene measures	: Wash hands before breaks and at the end of workday. When using do not eat or drink. When using do not smoke.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Physical state	: liquid
Odour	: pungent
Odour Threshold	: No data available
pH	: No data available
Melting point/freezing point	: No data available
Boiling point/boiling range	: 293 °F / 145 °C
Flash point	: 84 °F / 29 °C Method: Seta closed cup
Evaporation rate	: No data available
Flammability (solid, gas)	: May form combustible dust concentrations in air (during processing)

Flammability (liquids)	: Static Accumulating liquid
Flammability (liquids) Upper explosion limit	: : 6.1 % (V)
Lower explosion limit	: 1.1 % (V)
Vapour pressure	: 8.53248 hPa (25 °C) Calculated Vapor Pressure
Relative vapour density	: No data available
Relative density	: 1.094 (77.00 °F)
Density	: 1.094 g/cm^3 (77.00 °F)
Solubility(ies) Water Solubility	 : insoluble
Solubility in other solvents	: No data available
Partition coefficient: n-octanol/ Water	: No data available
Thermal decomposition	: No data available
Viscosity Viscosity, dynamic Viscosity, kinematic	 : No data available : > 20.5 mm2/s (40 °C)
Oxidizing properties	: No data available

SECTION 10 – STABILITY AND REACTIVITY

Reactivity	: No decomposition if stored and applied as directed.
Chemical stability	: Stable under recommended storage conditions.
Possibility of hazardous reactions	: Hazardous polymerization may occur. Vapours may form explosive mixture with air. This product does not present a dust explosion hazard as delivered. However, fine dust dispersed in air in sufficient concentrations, and in the present of an ignition source, is a potential dust explosion hazard.
Conditions to avoid	: Heat, flames and sparks. Exposure to air. Exposure to sunlight.

Incompatible materials	: Acids Aluminum Aluminum chloride Bases Copper Copper alloys Halogens Iron chloride Metal salts Strong oxidizing agents Peroxides
Hazardous decomposition products	: carbon dioxide and carbon monoxide Hydrocarbons

SECTION 11 – TOXICOLOGICAL INFORMATION

Information on likely routes of Exposure	: Inhalation Skin contact Eye contact Ingestion

Acute toxicity
Not classified based on available information. **Components:**
STYRENE:

Acute oral toxicity	: LD50 Oral (rat): > 2,000 mg/kg
Acute inhalation toxicity	: LC 50 (Rat): 11.8 mg/l, 2770 ppm Exposure time: 4 h Test atmosphere: vapour No observed adverse effect level (Humans): 100 ppm Exposure time: 7 h Test atmosphere: vapour
Acute dermal toxicity	: LDF 50 (Rat): > 2,000 mg/kg Method: OECD Test Guideline 402 Assessment: No adverse effect has been observed in acute dermal toxicity tests.

Skin corrosion/irritation Causes
skin irritation.
Product:
Result: Repeated exposure may cause skin dryness or cracking.

Remarks: May cause skin irritation and/or dermatitis.

Components:
STYRENE:
Species: Rabbit
Result: Irritating to skin

Serious eye damage/eye irritation Causes
serious eye irritation.
Product:

Remarks: Vapours may cause irritation to the eyes, respiratory system and the skin. Causes serious eye irritation.

Components:
STYRENE:
Result: Irritating to eyes
Remarks: Vapour during processing may be irritating to the respiratory tract and to the eyes.

Respiratory or skin sensitization
Skin sensitization: Not classified based on available information.
Respiratory sensitization: Not classified based on available information.
Components:
STYRENE:
Exposure routes: skin contact
Species: Guinea pig
Assessment: Does not cause skin sensitization. Result:
negative

Exposure routes: inhalation (vapour)
Species: Humans
Assessment: Does not cause respiratory sensitization. Result:
negative

Germ cell mutagenicity
Not classified based on available information.

Carcinogenicity
Not classified based on available information.
Product:

Carcinogenicity - Assessment	: Styrene has been tested for carcinogenicity in rats and mice. Styrene caused lung tumors in mice only. These tumors are not considered to be relevant to humans.

Reproductive toxicity
Not classified based on available information.
STOT – single exposure May cause respiratory irritation.
Components:
STYRENE:
Assessment: May cause respiratory irritation.

STOT – repeated exposure
Causes damage to organs (Auditory system) through prolonged or repeated exposure if inhaled.
Components:

STYRENE:
Exposure routes: inhalation (vapour)
Target Organs: Auditory system
Assessment: Causes damage to organs through prolonged or repeated exposure.

Repeated dose toxicity Components:
STYRENE:
Species: Human
85 mg/m^3
Application Route: Skin contact

Aspiration toxicity
Not classified based on available information.
Components:
STYRENE:
May be fatal if swallowed and enters airways.

Further information Product:
Remarks: Solvents may degrease the skin.

Carcinogenicity:

IARC	Group 2B: Possibly carcinogenic to humans
	STYRENE 100-42-5
OSHA	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
NTP	Reasonably anticipated to be a human carcinogen
	STYRENE 100-42-5

SECTION 12 – ECOLOGICAL INFORMATION

Eco-toxicity

Components: STYRENE:

Toxicity to fish	: LC 5- (Pimephales promelas (fathead minnow)): 4.02 mg/l Exposure time: 96 h
Toxicity to daphnia and other Aquatic invertebrates	: EC 50 (Water flea (Daphnia magna)): 4.7 mg/l Exposure time: 48 h
Toxicity to algae	: ErC50 (Pseudokirchneriella subcapitata (green algae)): 4.9 mg/l Exposure time: 72 h
Toxicity to daphnia and other Aquatic invertebrates (Chronic toxicity)	: NOEC (Water flea (Daphnia magna)): 1.01 mg/l Exposure time: 21 d
Toxicity to bacteria	: EC 50 (activated sludge): ca. 500 mg/l Exposure time: 0.5 h
Toxicity to soil dwelling organisms	: NOEC (Eisenia fetida (earthworms)): 34 mg/kg Exposure time: 14 d Method: OECD Test Guideline 207

Persistence and degradability

Components:
STYRENE:

Biodegradability	: Result: Readily biodegradable Biodegradation: > 60 % Exposure time: 10 d

Bio-accumulative potential

Components:
STYRENE:

Bioaccumulation	: Bio-concentration factor (BCF): < 100
Partition coefficient: n-octanol/ Water	: log Pow: 2.96 (25°C)

Mobility in soil Components:
STYRENE:

Distribution among environmental compartments	: Koc: 352

Other adverse effects

Product:

Additional ecological Information	: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Toxic to aquatic life.

Components:
STYRENE:

Results of PBT and vPvB Assessment	: this substance is not considered to be persistent, bio-accumulating and toxic (PBT). This substance is not considered To be very persistent and very bio-accumulating (vPvB).

SECTION 13 – DISPOSAL CONSIDERATION

Disposal Methods

General advice : The product should not be allowed to enter drains, water courses or the soil.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Send to a licensed waste management company.

Dispose of in accordance with all applicable local, state, and Federal regulations.

Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Empty containers should be taken to an approved waste handling site for recycling or disposal.
Do not re-use empty containers.
Do not burn, or use a cutting torch on, the empty drum.

SECTION 14 – TRANSPORT INFORMATION

International transport regulations

REGULATION

ID NUMBER	PROPER SHIPPING NAME	*HAZARD CLASS	SUBSIDIARY HAZARDS	PACKING GROUP	MARINE POLLUTANT / LTD. QTY.
U.S. DOT – ROAD					
UN 1866	Resin solution	3		III	
U.S. DOT – RAIL					
UN 1866	Resin solution	3		III	
U.S. DOT – INLAND WATERWAYS					
UN 1866	Resin solution	3		III	
TRANSPORT CANADA – ROAD					
UN 1866	RESIN SOLUTION	3		III	
TRANSPORT CANADA – RAIL					
UN 1866	RESIN SOLUTION	3		III	
TRANSPORT CANADA – INLAND WATERWAYS					
UN 1866	RESIN SOLUTION	3		III	
INTERNATIONAL MARITIME DANGEROUS GOODS					
UN 1866	RESIN SOLUTION	3		III	
INTERNATIONAL AIR TRANSPORT ASSOCIATION – CARGO					
UN 1866	Resin Solution	3		III	
INTERNATIONAL AIR TRANSPORT ASSOCIATION – PASSENGER					
UN 1866	Resin Solution	3		III	

MEXICAN REGULATION FOR THE LAND TRANSPORT OF HAZARDOUS MATERIALS AND WASTES

UN 1866	RESINA, SOLUCIONES DE	3	III

***ORM = ORM-D, CBL = COMBUSTIBLE LIQUID**

Marine pollutant		no

Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

SECTION 15 – REGULATORY INFORMATION

EPCRA – Emergency Planning and Community Right-to-Know Act CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
STYRENE	100-42-5	1000	2334.762987

SARA 311/312 Hazards : Reactivity Hazard
Acute Health Hazard
Fire Hazard
Chronic Health Hazard

SARA 313 Component(s) STYRENE 100-42-5 42.83 %

California Prop 65 WARNING! This product contains a chemical known to the State of California to cause cancer.
BENZENE 71-43-2

CATECHOL 120-80-9

WARING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.
METHANOL 67-56-1

BENZENE 71-43-2

TOLUENE 108-88-3

The components of this product are reported in the following inventories:

TSCA : On TSCA Inventory

DSL : All components of this product are on the Canadian DSL.

AUSTR : On the inventory, or in compliance with the inventory.

NZIOC : Not in compliance with the inventory

ENCS : On the inventory, or in compliance with the inventory.

KECL : On the inventory, or in compliance with the inventory.

PICCS : Not in compliance with the inventory

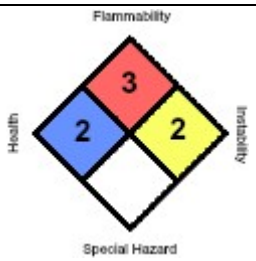
IECSC : On the inventory, or in compliance with the inventory.

Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI

SECTION 16 – OTHER INFORMATION

Revision Date:
August 30, 2019

NFPA:	HMIS III:
	 0=not significant, 1=Slight, 2=Moderate, 3=High 4=Extreme, *=Chronic

NFPA Flammable and Combustible Liquids Classification
Flammable Liquid Class IC

Full text of H-Statements referred to under sections 2 and 3.

H226	Flammable liquid and vapor.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.

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

ACGIH: American Conference of Industrial Hygienists
BEI: Biological Exposure Index
CAS: Chemical Abstracts Service (Division of the American Chemical Society)
CMR: Carcinogenic, Mutagenic or Toxic for Reproduction FG:
Food grade
GHS: Globally Harmonized System of Classification and Labeling of Chemicals. H-statement:
Hazard Statement
IATA: International Air Transport Association
IATA-DGR: Dangerous Goods Regulation by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organization
ICAO-TI (ICAO): Technical Instructions by the "International Civil Aviation Organization"
IMDG: International Maritime Code for Dangerous Goods
ISO: International Organization for Standardization logPow:
octanol-water partition coefficient
LCxx: Lethal Concentration, for xx percent of test population
LDxx: Lethal Dose, for xx percent of test population
ICxx: Inhibitory Concentration for xx of a substance
Ecxx: Effective Concentration of xx
N.O.S.: Not otherwise specified
OECD: Organization for Economic Co-operation and Development

OEL: Occupational Exposure Limit
P-Statement: Precautionary Statement
PBT: Persistent, Bio-accumulative and Tox
PPE: Personal Protective Equipment
STEL: Short-term exposure limit
STOT: Specific Target Organ Toxicity
TLV: Threshold Limit Value
TWA: Time-weighted average vPvB: Very Persistent and Very Bio-accumulative WEL: Workplace Exposure Level

CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act
DOT: Department of Transportation
FIFRA: Federal Insecticide, Fungicide, and Rodenticide Act
HMIRC: Hazardous Materials Information Review Commission
HMIS: Hazardous Materials Identification System
NFPA: National Fire Protection Association
NIOSH: National Institute for Occupational Safety and Health
OSHA: Occupational Safety and Health Administration
PMRA: Health Canada Pest Management Regulatory Agency
RTK: Right to Know
WHMIS: Workplace Hazardous Materials Information System