



GHS SAFETY DATA SHEET (SDS)

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: PART #685 Maxguard™ XG-LEI-0000 GELCOAT

FIBRE GLAST DEVELOPMENTS CORP.
385 Carr Drive
BROOKVILLE, OH 45309

TELEPHONE: (937) 833-5200
FAX: (937) 833-6555
**FOR CHEMICAL EMERGENCY
CALL (801) 629-0667 24 HRS.**

RECOMMENDED USE: Industrial Chemical

SECTION 2 – HAZARDS IDENTIFICATION

GHS Classification

Flammable liquids	: Category 3
Combustible Dust	:
Skin irritation	: Category 2
Eye irritation	: Category 2A
Skin sensitization	: Category 1
Specific target organ toxicity - single exposure	: Category 3 (Respiratory system)
Specific target organ toxicity - repeated exposure (Inhalation)	: Category 1 (Auditory system)

GHS label elements

Hazard pictograms

:



Signal Word

: Danger

Hazard Statements

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

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.
Contaminated work clothing must not be allowed out of the workplace.
Wear protective gloves/ eye protection/ face protection. Keep dust/air mixtures away from ignition sources.
Hazardous polymerization can occur under certain conditions. Avoid excessive heat, direct sunlight, peroxides, and other
polymerization catalysts. Store in a cool place and maintain proper concentrations of inhibitor and oxygen.

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/ doctor 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 or rash 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

Hazardous polymerization may occur.

SECTION 3 – COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	CAS-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	30.4632

		Asp. Tox. 1; H304	
TALC	14807-96-6	This material is not considered hazardous under the OSHA Hazard Communication Standard (HazCom 2012).	16.00
METHYLMETHACRYLATE	80-62-6	Flam. Liq. 2; H225 Skin Irrit. 2; H315 Skin Sens. 1B; H317 STOT SE 3; H335	3.00
SILICA COLLOIDAL AMORPHOUS	112945-52-5	This material is not considered hazardous under the OSHA Hazard Communication Standard (HazCom 2012).	1.20
FATTY ACIDS, C14-18 AND C16- 18 UNSATD., MALEATED	85711-46-2	Skin Irrit. 2; H315 Skin Sens. 1; H317	0.1999

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 the victim unattended.
- If inhaled : Move to fresh air.
IF INHALED: Call a POISON CENTER/ doctor 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 and effects, both acute and delayed	: 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) Cough Headache effects on memory loss of appetite Shortness of breath confusion pain in the hands and feet Difficulty in breathing Causes skin irritation. May cause an allergic skin reaction. 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 (CO ₂) 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	: Carbon dioxide (CO ₂) Carbon monoxide Hydrocarbons Burning produces noxious and toxic fumes.
Specific extinguishing methods	:
Further information	Product is compatible with standard fire-fighting agents. : 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 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 drains 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. Persons susceptible to skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used. 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.

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	50 ppm 215 mg/m ³	NIOSH REL
		ST	100 ppm 425 mg/m ³	NIOSH REL
		TWA	100 ppm	OSHA Z-2
		CEIL	200 ppm	OSHA Z-2
		Peak	600 ppm	OSHA Z-2
		TWA	50 ppm 215 mg/m ³	OSHA P0
		STEL	100 ppm 425 mg/m ³	OSHA P0
		C	500 ppm	CAL PEL
		PEL	50 ppm 215 mg/m ³	CAL PEL
		STEL	100 ppm 425 mg/m ³	CAL PEL
		TWA	20 ppm	ACGIH
		STEL	40 ppm	ACGIH
TALC	14807-96-6	TWA	20 Million particles per cubic foot Dust	OSHA Z-3
		TWA	2 mg/m ³ respirable dust fraction	OSHA P0

		TWA	2 mg/m3 Respirable	NIOSH REL
		PEL	2 mg/m3 Respirable dust	CAL PEL
		TWA	0.1 fibres per cubic centimeter	ACGIH
		TWA	2 mg/m3 Respirable particulate matter	ACGIH
METHYLMETHACRYLATE	80-62-6	TWA	50 ppm	ACGIH
		STEL	100 ppm	ACGIH
		TWA	100 ppm 410 mg/m3	NIOSH REL
		TWA	100 ppm 410 mg/m3	OSHA Z-1
		TWA	100 ppm 410 mg/m3	OSHA P0
		PEL	50 ppm 205 mg/m3	CAL PEL
		STEL	100 ppm 410 mg/m3	CAL PEL
SILICA COLLOIDAL AMORPHOUS	112945-52-5	TWA	20 Million particles per cubic foot Dust (Silica)	OSHA Z-3
		TWA	80 mg/m3 / %SiO2 Dust (Silica)	OSHA Z-3
		TWA	6 mg/m3 (Silica)	NIOSH REL
		PEL	6 mg/m3	CAL PEL

Biological occupational exposure limits

Components	CAS-No.	Control parameters	Biological specimen	Samplin g time	Permissible concentrati on	Basis
Styrene	100-42-5	Mandelic	Urine	End of	400 mg/g	ZUS_A

		acid plus phenylglyoxylic acid		shift (As soon as possible after exposure ceases)	Creatinine	CGIHB
Remarks:	Nonspecific					
		Styrene	Urine	End of shift (As soon as possible after exposure ceases)	40 µg/l	ZUS_A CGIHB

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
Colour	: beige
Odour	: solvent-like
Odour Threshold	: No data available
pH	: No data available
Melting point/freezing point	: No data available
Boiling point/boiling range	: 212.9 °F / 100.5 °C (1,013.25 hPa) Value for Component
Flash point	: 26.1 °C Method: Seta closed cup
Evaporation rate	: No data available
Flammability (solid, gas)	: May form combustible dust concentrations in air (during processing).
Flammability (liquids)	:
Flammability (liquids)	: Static Accumulating liquid

Upper explosion limit	: Upper flammability limit 12.5 %(V) Value for Component
Lower explosion limit	: Lower flammability limit 1.1 %(V) Value for Component
Vapour pressure	: 37.2 hPa (20 °C) Value for Component
Relative vapour density	: No data available
Relative density	: No data available
Density	: 1.078 g/cm ³ (25 °C)
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	: No data available
Viscosity, kinematic	: > 20.5 mm ² /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 polymerisation 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 presence of an ignition source, is a potential dust explosion hazard.
Conditions to avoid	: Exposure to air. Exposure to sunlight. Exposure to moisture Heat, flames and sparks
Incompatible materials	: Acids aluminum aluminum chloride Amines Bases Copper Copper alloys halogens iron chloride metal salts nitrates reducing agents strong alkalis Strong oxidizing agents UV light. Peroxides
Hazardous decomposition products	Hydrocarbons Acetone Carbon dioxide (CO ₂) Carbon monoxide

SECTION 11 – TOXICOLOGY 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 : LC50 (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 : LD50 (Rat): > 2,000 mg/kg
Method: OECD Test Guideline 402
Assessment: No adverse effect has been observed in acute dermal toxicity tests.

TALC:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg
Method: OECD Test Guideline 423

METHYLMETHACRYLATE:

Acute oral toxicity : LD50 (Rat): 7,800 mg/kg

Acute inhalation toxicity : LC50 (Rat): 29.8 mg/l
Exposure time: 4 h
Test atmosphere:
vapour

Acute dermal toxicity : LD50 (Rabbit): > 5,000
mg/kg

SILICA COLLOIDAL AMORPHOUS:

Acute oral toxicity : LD50 (Rat): > 5,000
mg/kg

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg
Assessment: Not classified as acutely toxic by
dermal absorption under GHS.

FATTY ACIDS, C14-18 AND C16-18 UNSATD., MALEATED:

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg
Method: OECD Test Guideline
401

Skin corrosion/irritation

Causes skin irritation.

Product:

Result: Repeated exposure may cause skin dryness or cracking.

Remarks: Individuals with direct skin contact with methyl methacrylate have experienced temporary loss of feeling and mild nerve damage in the fingers.

Remarks: May cause skin irritation and/or dermatitis.

Components:

Styrene:

Species: Rabbit

Result: Irritating to
skin.

Species: human skin

Result: No skin
irritation

TALC:

Species: reconstructed human epidermis (RhE)

Result: No skin irritation

METHYLMETHACRYLATE:

Result: Irritating to skin.

SILICA COLLOIDAL AMORPHOUS:

Result: No skin irritation

FATTY ACIDS, C14-18 AND C16-18 UNSATD., MALEATED:

Species: reconstructed human epidermis (RhE)

Method: OECD Test Guideline 439

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.

TALC:

Species: Rabbit

Result: Slight, transient irritation

Method: OECD Test Guideline 405

METHYLMETHACRYLATE:

Result: Slight, transient irritation

SILICA COLLOIDAL AMORPHOUS:

Result: No eye irritation

FATTY ACIDS, C14-18 AND C16-18 UNSATD., MALEATED:

Species: Rabbit

Result: No skin irritation

Method: OECD Test Guideline 405

Respiratory or skin sensitisation

Skin sensitisation: May cause an allergic skin reaction.

Respiratory sensitisation: Not classified based on available information.

Components:

Styrene:

Exposure routes: Skin contact

Species: Guinea pig

Assessment: Does not cause skin sensitisation.

Result: negative

Exposure routes: inhalation

(vapour) Species: Humans

Assessment: Does not cause respiratory sensitisation. Result: negative

TALC:

Test Type: Maximisation Test

Species: Guinea pig

Assessment: Did not cause sensitisation on laboratory animals.
Method: OECD Test Guideline 406

METHYLMETHACRYLATE:

Test Type: Local lymph node assay
Species: Mouse
Assessment: The product is a skin sensitiser, sub-category 1B.
Method: OECD Test Guideline 429

FATTY ACIDS, C14-18 AND C16-18 UNSATD., MALEATED:

Test Type: Local lymph node assay
Species: Mouse
Assessment: May cause sensitisation by skin contact.
Method: OECD Test Guideline 429

Germ cell mutagenicity
Not classified based on available information.

Components:

TALC:

Genotoxicity in vitro : Test Type: In vitro gene mutation study in bacteria
Test species: Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Result: negative

: Test Type: In vitro gene mutation study in bacteria
Test species: Saccharomyces cerevisiae
Metabolic activation: with and without metabolic activation
Result: negative

Genotoxicity in vivo : Test Type: dominant lethal test
Test species: Rat (male)
Cell type: Bone marrow
Result: negative

FATTY ACIDS, C14-18 AND C16-18 UNSATD., MALEATED:

Genotoxicity in vitro : Test Type: Ames test
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative

Carcinogenicity

Not classified based on available information.

Product:

γ - Styrene has been tested for carcinogenicity in rats and mice. Styrene caused lung tumors in mice only.
Assessment : 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.

METHYLMETHACRYLATE:

Target Organs: Upper respiratory tract

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/m³

Application Route: inhalation
(vapour)

Species:
Human 615
mg/kg

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 2A: Probably carcinogenic to humans

Styrene 100-42-5
e

Group 2B: Possibly carcinogenic to humans

ETHYL BENZENE 100-41-4

OSHA

No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP

Reasonably anticipated to be a human carcinogen

Styrene

100-42-5

SECTION 12 – ECOLOGICAL INFORMATION

Ecotoxicity Product:

Ecotoxicology Assessment

Short-term (acute)

aquatic
hazard

: Acute aquatic toxicity Category 2; Toxic to aquatic life.

Long-term (chronic)

aquatic
hazard

: Chronic aquatic toxicity Category 3; Harmful to aquatic life with long lasting effects.

Components:

Styrene:

Toxicity to fish

: LC50 (Pimephales promelas (fathead minnow)):
4.02 mg/l
Exposure time: 96 h

Toxicity to daphnia and
other aquatic
invertebrates

: EC50 (Daphnia magna (Water flea)): 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 (Daphnia magna (Water flea)):
1.01 mg/l Exposure time: 21 d

Toxicity to bacteria

: EC50 (activated sludge): ca. 500
mg/l
Exposure time: 0.5 h

Toxicity to soil dwelling organisms	: NOEC (<i>Eisenia fetida</i> (earthworms)): 34 mg/kg Exposure time: 14 d Method: OECD Test Guideline 207
METHYLMETHACRYLATE:	
Toxicity to fish	: LC50 (<i>Pimephales promelas</i> (fathead minnow)): 130 mg/l Exposure time: 96 h Method: static test LC50 (<i>Oncorhynchus mykiss</i> (rainbow trout)): > 79 mg/l Exposure time: 96 h Test Type: flow-through test
Toxicity to daphnia and other aquatic invertebrates	: EC50 (<i>Daphnia magna</i> (Water flea)): 69 mg/l Exposure time: 48 h Test Type: flow-through test
Toxicity to algae	: EC50 (<i>Pseudokirchneriella subcapitata</i> (algae)): > 110 mg/l Exposure time: 72 h Test Type: static test
Toxicity to fish (Chronic toxicity)	: LC50 (<i>Danio rerio</i> (zebra fish)): 33.7 mg/l Exposure time: 35 d Test Type: flow-through test Method: OECD Test Guideline 210
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	: NOEC (<i>Daphnia magna</i> (Water flea)): 37 mg/l Exposure time: 21 d Test Type: flow-through test Method: OECD Test Guideline 211
SILICA COLLOIDAL AMORPHOUS:	
Toxicity to fish	: LC50 (<i>Brachydanio rerio</i> (zebrafish)): > 10,000 mg/l Exposure time: 96 h Method: OECD Test Guideline 203
FATTY ACIDS, C14-18 AND C16-18 UNSATD., MALEATED:	
Toxicity to fish	: LL50 (<i>Leuciscus idus</i> (Golden orfe)): > 150 mg/l Exposure time: 48 h Test Type: static test Test substance: WAF Method: DIN 38412
Toxicity to daphnia and other aquatic invertebrates	: EL50 (<i>Daphnia magna</i> (Water flea)): > 100 mg/l Exposure time: 48 h Test Type: semi-static test Test substance: WAF Method: OECD Test Guideline 202

Toxicity to algae : EL50 (Pseudokirchneriella subcapitata (microalgae)): > 100 mg/l
 End point: Growth inhibition
 Exposure time: 72 h
 Test Type: static test
 Test substance: WAF
 Method: OECD Test Guideline 201

Persistence and degradability Components:

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

TALC:
 Biodegradability : Result: The methods for determining biodegradability are not applicable to inorganic substances.

METHYLMETHACRYLATE:
 Biodegradability : Result: Readily biodegradable.
 Biodegradation: 94.3 %
 Exposure time: 14 d
 Method: OECD Test Guideline 301C

SILICA COLLOIDAL AMORPHOUS:
 Biodegradability : Result: The methods for determining biodegradability are not applicable to inorganic substances.

FATTY ACIDS, C14-18 AND C16-18 UNSATD., MALEATED:
 Biodegradability : Result: Not readily biodegradable. Biodegradation: 40 %
 Exposure time: 28 d
 Method: OECD Test Guideline 301F

No data available **Bioaccumulative potential** Components:

Styrene:
 Bioaccumulation : Bioconcentration factor (BCF): < 100

Partition coefficient: n-octanol/water : log Pow: 2.96 (25 °C)

METHYLMETHACRYLATE:

Partition coefficient: n-octanol/water : log Pow: 1.38

FATTY ACIDS, C14-18 AND C16-18 UNSATD., MALEATED:

Partition coefficient: n-octanol/water : log Pow: < 1 (25 °C)

No data
available

**Mobility in
soil**

Components

Styrene:
Distribution among environmental compartments : Koc: 352

No data
available **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., Harmful to aquatic life with long lasting effects.

Components:

Styrene:
Results of PBT and vPvB assessment : This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).

SECTION 13 – DISPOSAL CONSIDERATIONS

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.

MX_DG

UN	1866	RESIN SOLUTION	3	III

INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER

UN	1866	Resin solution	3	III

INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO

UN	1866	Resin solution	3	III
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INTERNATIONAL MARITIME DANGEROUS GOODS

UN	1866	RESIN SOLUTION	3	III

TDG_INWT_C

UN	1866	RESIN SOLUTION	3	III

TDG_RAIL_C

UN	1866	RESIN SOLUTION	3	III

TDG_ROAD_C

UN	1866	RESIN SOLUTION	3	III

U.S. DOT - INLAND WATERWAYS

UN	1866	Resin solution	3	III

CFR_RAIL_C

UN	1866	Resin solution	3	III

U.S. DOT - ROAD

UN	1866	Resin solution	3	III

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

Marine pollutant		no
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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	100 0	328 2

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards

: Flammable (gases, aerosols, liquids, or solids)
Combustible Dust

Hazard not otherwise classified (physical hazards)
Skin corrosion or irritation
Serious eye damage or eye irritation
Respiratory or skin sensitisation
Specific target organ toxicity (single or repeated exposure)

SARA 302

: This material does not contain any components with a section 302 EHS TPQ.

SARA 313

The following components are subject to reporting levels established by SARA Title III, Section 313:

Styrene	100-42-5	30.46 %
METHYLMETHACRYLAT E	80-62-6	3.00 %
ETHYL BENZENE	100-41-4	0.16 %

California Prop. 65

WARNING: This product can expose you to chemicals including styrene, ethylbenzene, cumene, benzene, formaldehyde, 1,4-dioxane, acetaldehyde, ethylene oxide, 4-methylpentan-2-one, naphthalene, 2-phenylpropene, which is/are known to the State of California to cause cancer, and toluene, benzene, ethylene oxide, 4-methylpentan-2-one, methanol, chloromethane, which is/are known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

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

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

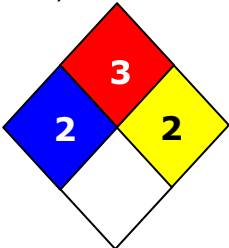
AICS : Not in compliance with the inventory

ENCS	: Not in compliance with the inventory
KECI	: Not in compliance with the inventory
PICCS	: Not in compliance with the inventory
IECSC	: Not in compliance with the inventory
TCSI	: Not in compliance with the inventory
TSCA	: On or in compliance with the active portion of the TSCA inventory

Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (USA)
 - On or in compliance with the active portion of the TSCA inventory

SECTION 16 – OTHER INFORMATION

NFPA:	HMIS III:						
Flammability  Special hazard	<table border="1"> <tr> <td>HEALTH</td><td>2*</td></tr> <tr> <td>FLAMMABILITY</td><td>3</td></tr> <tr> <td>PHYSICAL HAZARD</td><td>2</td></tr> </table> 0 = not significant, 1 = Slight, 2 = Moderate, 3 = High 4 = Extreme, * = Chronic	HEALTH	2*	FLAMMABILITY	3	PHYSICAL HAZARD	2
HEALTH	2*						
FLAMMABILITY	3						
PHYSICAL HAZARD	2						

NFPA Flammable and Combustible Liquids Classification
 Flammable Liquid Class IC

Full text of H-Statements

H225	Highly flammable liquid and vapor.
H226	Flammable liquid and vapor.
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.
H335	May cause respiratory irritation.
H372	Causes damage to organs through prolonged or repeated exposure if inhaled.

Full text of other abbreviations

AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self- Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Revision Date

2/10/2023

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.