



GHS SAFETY DATA SHEET (SDS)

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

PRODUCT: Part #700 – RAL9018 Papyrus White Gel Coat

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 2

Combustible Dust :

Skin irritation : Category 2

Eye irritation : Category 2A

Skin sensitization : Category 1

Carcinogenicity : Category 1A

Reproductive toxicity : Category 2

Specific target organ
systemic toxicity – single
exposure : Category 3 (Respiratory system)

Specific target organ
toxicity – repeated exposure
(Inhalation) : Category 1 (Auditory system)

GHS Label Element

Hazard pictograms :



Signal word : Danger

Hazard statements : Highly flammable liquid and vapor.
May form combustible dust concentrations in air.
May be fatal if swallowed and enters airways.
Causes skin irritation.
May cause an allergic skin reaction.
Causes serious eye irritation.

May cause respiratory irritation.
May cause cancer.
Suspected of damaging fertility.
Causes damage to organs (Auditory system) through prolonged or repeated exposure if inhaled.

Precautionary statement

Prevention

: Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
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/protective clothing/eye protection/face protection.
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 SWALLOWED: Immediately call a POISON CENTER/doctor.
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.
IF exposed or concerned: Get medical advice/attention.
Do NOT induce vomiting.
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

Substances

Substance/Mixture : Mixture

Chemical nature : Static Accumulator

Chemical nature : Defatter

Hazardous components

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 Asp. Tox. 1; H304	27.9702
TALC	14807-96-6	This material is not considered hazardous under the OSHA Hazard Communication Standard (HazCom 2012)	20.0062
METHYLMETHACRYLATE	80-62-6	Flam. Liq. 2; H225 Skin Irrit. 2; H315 Skin Sens. 1B; H317 STOT SE 3; H335	8.6824
TITANIUM DIOXIDE (TiO ₂)	13463-67-7	This material is not considered hazardous under the OSHA Hazard Communication Standard (HazCom 2012).	3.8189
QUARTZ / SAND	14808-60-70	Carc. 1A; H350 STOT RE 1; H372	0.2001
COBALT 2-ETHHEXANOATE	136-52-7	Eye Irrit. 2A; H319 Skin Sens. 1A; H317 Repr. 2; H361f	0.1331

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 recover 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 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 May be fatal if swallowed and enters airways Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. May cause cancer. Suspected of damaging fertility. 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	: Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas. Do not allow run-off from fire fighting to enter drains or water courses. Organic dusts at sufficient concentration can form explosive mixtures in air.
Hazardous combustion products	: Carbon dioxide (CO ₂) Carbon monoxide Hydrocarbons Burning produces noxious and toxic fumes.
Specific extinguishing methods	: Product is compatible with standard fire-fighting agents.
Further information	: 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 and DISPOSAL 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 vapors accumulating to form explosive concentrations. Vapors 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/vapors/mists with a water spray jet.

SECTION 7 – STORAGE AND HANDLING

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 vapors/dust.
Do not smoke.
Persons susceptible to skin sensitization problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.
Dispose of rinse water in accordance with local and national regulations.
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.
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 AND PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basic
STYRENE	100-42-5	TWA	50 ppm 215 mg/m3	NIOSH REL
		ST	100 ppm 425 mg/m3	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/m3	OSHA P0
		STEL	100 ppm 425 mg/m3	OSHA P0
		C	500 ppm	CAL PEL

		PEL	50 ppm 215 mg/m3	CAL PEL
		STEL	100 ppm 425 mg/m3	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/m3 Respirable dust Fraction	OSHA P0
		TWA	2 mg/m3 Respirable	NIOSH REL
		PEL	2 mg/m3 Respirable dust	CAL PEL
		TWA	0.1 fibers per cubic centimeter	ACGIH
		TWA	2 mg/m3 Respirable fraction	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	CAL PEL
TITANIUM DIOXIDE (TiO2)	13463-67-7	TWA	15 mg/m3 Total dust	OSHA Z-1
		TWA	10 mg/m3 Total dust	OSHA P0
		PEL	10 mg/m3 Total dust (Titanium)	CAL PEL
		PEL	5 mg/m3 Respirable dust Fraction (Titanium)	CAL PEL
		TWA	10 mg/m3 (Titanium dioxide)	ACGIH
QUARTZ / SAND	14808-60-7	TWA	10 mg/m3 / %SiO2+2 Respirable	OSHA Z-3
		TWA	250 mppcf / %SiO2+5 Respirable	OSHA Z-
		TWA	.01 mg/m3 Respirable dust Fraction	OSHA P0
		TWA	0.025 mg/m3 Respirable Fraction (Silica)	ACGIH
		TWA	0.05 mg/m3 Respirable dust (Silica)	NIOSH REL
		TWA	0.05 mg/m Respirable dust	OSHA Z-1

Hazardous components without workplace control parameters

Components	CAS-No.
COBALT 2-ETHYLHEXANOATE	136-52-7

Biological occupational exposure limits

Components	CAS-No.	Control Parameters	Biological specimen	Sampling time	Permissible concentration	Basis
STYRENE	100-42-5	Mandelic acid plus phenylglyoxalic acid	Urine	End of shift (As soon as possible after exposure ceases)	400 mg/g Creatinine	ZUS_A CGIHB
		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 vapor 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
Odor	: No data available
Odor 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) Calculated Phase Transition Liquid/Gas
Flash point	: 20.3 °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
Upper explosion limit	: Upper flammability limit 12.5%(V) Method: Calculated Explosive Limit
Lower explosion limit	: Lower flammability limit 1.1 %(V) Method: Calculated Explosive Limit
Vapor pressure	: 37.2 hPa (20 °C) Calculated Vapor Pressure
Relative vapor 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 reaction	: Hazardous polymerization may occur. Vapors 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	: Heat, flames and sparks. Exposure to air. Exposure to sunlight. Exposure to moisture
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	: Carbon monoxide Carbon dioxide (CO ₂) Hydrocarbons Acetone

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 : LC50 (Rat): 11.8 mg/l, 2770 ppm
Exposure time: 4 h
Test atmosphere: vapor

No observed adverse effect level (Humans): 100 ppm
Exposure time: 7 h
Test atmosphere: vapor

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: vapor

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

TITANIUM DIOXIDE (TiO₂):

Acute oral toxicity : LD50 (Rat): > 24,000 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 6.82 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Assessment: Not classified as acutely toxic by inhalation under GHS.

Acute dermal toxicity : LD50 (Rabbit): >10,000 mg/kg

COBALT 2-ETHYLHEXANOATE:

Acute oral toxicity : LD50 (Rat, female): ca. 3, 129 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 10 mg/l
Exposure time: 1 h
Test atmosphere: dust/mist
Assessment: Not classified as acutely toxic by inhalation under GHS.

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

Skin corrosion/irritation

Causes skin irritation

Product:

Remarks: May cause skin irritation and/or dermatitis. Individuals with direct skin contact with methyl methacrylate have experienced temporary loss of feeling and mild nerve damage in the fingers.

Result: Repeated exposure may cause skin dryness or cracking.

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.

TITANIUM DIOXIDE (TiO₂):
Result: Slight, transient irritation

QUARTZ / SAND:
Result: Slight, transient irritation

COBALT 2-ETHYLHEXANOATE:
Result: No skin irritation

Serious eye damage/eye irritation

Causes serious eye irritation.

Product:

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

Components:

STYRENE:
Result: Irritating to eyes.
Remarks: Vapor 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

TITANIUM DIOXIDE (TiO₂):
Result: Slight, transient irritation

QUARTZ / SAND:
Result: Slight, transient irritation

COBALT 2-ETHYLHEXANOATE:
Species: Rabbit
Result: Irritating to eyes.
Method: OECD Test Guideline 405

Respiratory or skin sensitization

Skin sensitization: May cause allergic skin reaction.

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 (vapor)
Species: Humans
Assessment: Does not cause respiratory sensitization.
Result: negative

TALC:
Test Type: Maximization Test
Species: Guinea pig
Assessment: Did not cause sensitization on laboratory animals.
Method: OECD Test Guideline 406
Result: Did not cause sensitization on laboratory animals.

METHYLMETHACRYLATE:
Test Type: Local lymph node assay

Species: Mouse
Assessment: The product is a skin sensitizer, sub-category 1B.
Method: OECD Test Guideline 429

COBALT 2-ETHYLHEXANOATE:
Test Type: Local lymph node assay
Species: Mouse
Assessment: The product is a skin sensitizer, sub-category 1A.
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
Results: 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

COBALT 2-ETHYLHEXANOATE:
Genotoxicity in vitro : Test Type: Ames test
Result: negative

Genotoxicity in vivo : Test Type: In vivo micronucleus test
Result: negative

Carcinogenicity

May cause cancer.

Product:

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

Components:

QUARTZ / SAND:

Carcinogenicity - : Human carcinogen.
Assessment

Reproductive toxicity

Suspected of damaging fertility.

Components:

COBALT 2-ETHYLHEXANOATE:
Reproductive toxicity : Some evidence of adverse effects on sexual function and fertility,
Assessment based on animal experiments

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 (vapor)

Target Organs: Auditory system

Assessment: Causes damage to organs through prolonged or repeated exposure.

QUARTZ / SAND:

Exposure routes: inhalation (dust/mist/fume)

Target Organs: Respiratory system, Kidney

Assessment: Causes damage to organs through prolonged or repeated exposure.

Repeated dose toxicity

Components:

STYRENE:

Species: Human

85 mg/m3

Application Route: inhalation (vapor)

Species: Human

615 mg/kg

Application Route: Skin contact

Aspiration toxicity

May be fatal if swallowed and enters airways.

Product:

The substance or mixture is known to cause human aspiration toxicity hazards or has to be regarded as if it causes a human aspiration toxicity hazard.

Components:

STYRENE:

May be fatal if swallowed and enters airways.

Further information

Product:

Remarks: Solvents may degrease the skin.

Components:

QUARTZ / SAND

Remarks: Lung

Carcinogenicity:

IARC

Group 1: Carcinogenic to humans

QUARTZ / SAND 14808-60-7

Group 2B: Possibly carcinogenic to humans

STYRENE 100-42-5
TITANIUM DIOXIDE (TiO₂) 13463-67-7

ACGIH

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

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

Known to be human carcinogen

QUARTZ / SAND 14808-60-7

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 (Eisenia fetida (earthworms)): 34 mg/kg
Exposure time: 14 d
Method: OECD Test Guideline 207

METHYLMETHACRYLATE:

Toxicity to fish

: LC50 (Pimephales promelas (fathead minnow)): 130 mg/l
Exposure time: 96 h
Method: static test

: LC50 (Oncorhynchus mykiss (rainbow trout)): > 79 mg/l
Exposure time: 96 h
Test Type: flow-through test

Toxicity to daphnia and other aquatic invertebrates

: EC50 (Daphnia magna (Water flea)): 69 mg/l
Exposure time: 48 h
Test Type: flow-through test

Toxicity to algae

: EC50 (Pseudokirchneriella subcapitata (algae)): > 110 mg/l
Exposure time: 72 h
Test Type: static test

Toxicity to fish (Chronic toxicity)

: LC50 (Danio rerio (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 (Daphnia magna (Water flea)): 37 mg/l
Exposure time: 21 d
Test Type: flow-through test
Method: OECD Test Guideline 211

TITANIUM DIOXIDE (TiO₂):

Toxicity to daphnia and other aquatic invertebrates

: EC50 (Daphnia magna (Water flea)): > 1,000 mg/l
Exposure time: 48 h
Test Type: static test

COBALT 2-ETHYLHEXANOATE:
M-Factor (Short-term (acute)
aquatic hazard

1

Ecotoxicology Assessment Short-
Term (acute) aquatic hazard

: Acute aquatic toxicity Category 1

Long-term (chronic) aquatic hazard

: Chronic aquatic toxicity Category 3

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

COBALT 2-ETHYLHEXANOATE:

Biodegradability

: Result: Readily biodegradable.
Biodegradation: 60 %
Exposure time: 10 d
Method: OECD Test Guideline 301B

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

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.

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

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

SECTION 14 - TRANSPORTATION

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	II	
----	------	----------------	---	----	--

CFR_RAIL_C

UN	1866	Resin solution	3	II	
----	------	----------------	---	----	--

U.S. DOT - INLAND WATERWAYS

UN	1866	Resin solution	3	II	
----	------	----------------	---	----	--

TDG_ROAD_C

UN	1866	RESIN SOLUTION	3	II	
----	------	----------------	---	----	--

TDG_RAIL_C

UN	1866	RESIN SOLUTION	3	II	
----	------	----------------	---	----	--

TDG_INWT_C

UN	1866	RESIN SOLUTION	3	II	
----	------	----------------	---	----	--

INTERNATIONAL MARITIME DANGEROUS GOODS

UN	1866	RESIN SOLUTION	3	II	
----	------	----------------	---	----	--

INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO

UN	1866	Resin solution	3	II

INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER

UN	1866	Resin solution	3	II

MX_DG

UN	1866	RESIN SOLUTION	3	II

***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	3575

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 Carcinogenicity
Reproductive toxicity
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	28.50 %
METHYLMETHACRYLATE	80-62-6	9.90 %
BISMUTH VANADIUM OXIDE	14059-33-7	3.00 %

California Prop. 65

WARNING: This product can expose you to chemicals including styrene, Talc (Mg₃H₂(SiO₃)₄), Titanium oxide (TiO₂), Quartz (SiO₂), Carbon black, ethylbenzene, benzene, formaldehyde..., 1,4-dioxane, acetaldehyde; ethanal, ethylene oxide; oxirane, m-tolylidene diisocyanate, 1,3-butadiene; buta-1,3-diene, which is/are known to the State of California to cause cancer, and benzene, ethylene oxide; oxirane, toluene, 1,3-butadiene; buta-1,3-diene, chloromethane; methyl

chloride, 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	: This product contains one or several components that are not on the Canadian DSL and have annual quantity limits.
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	: On the inventory, or in compliance with the inventory
TCSI	: Not in compliance with the inventory
TSCA	: On TSCA Inventory

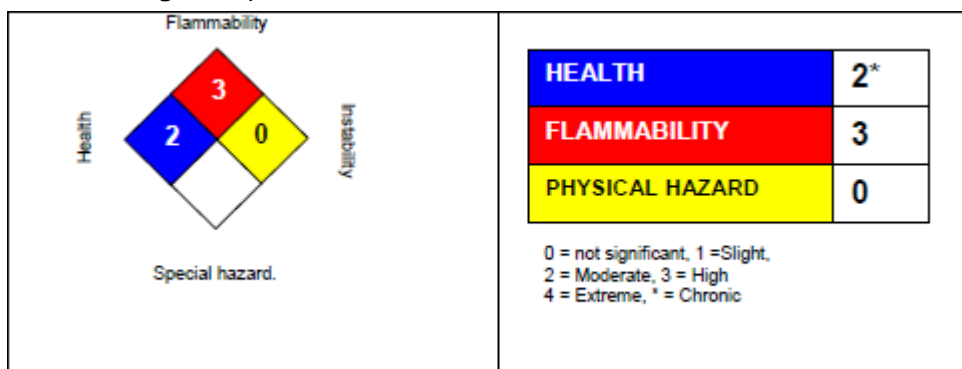
Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (USA)

SECTION 16 – OTHER INFORMATION

Further information

Revision Date: **August 30, 2019**



NFPA Flammable and Combustible Liquids Classification

Flammable Liquid Class IB

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.