SAFETY DATA SHEET

TO COMPLY WITH OSHA HAZARD COMMUNICATION STANDARD 29 CFR.1910.1200 & THE GLOBALLY HARMONIZED SYSTEM OF CLASSIFICATION AND LABELLING OF CHEMICALS

1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product Identifier

Substance Name: TotalBoat Polyester Laminating Resin
Product Code(s): TB-FIB540Q, TB-FIB541G

1.2 Details of the Supplier of the Safety Data Sheet

Distributor:

TOTALBOAT LLC
17 Peckham Drive
Bristol, RI 02809
(800) 497-0010

1.3 Emergency Telephone Number

Emergency Number: INFOTRAC: 800-535-5053

2. HAZARDS IDENTIFICATION

2.1 Classification of the Substance or Mixture

Health Hazard: 2*
Flammability Hazard: 3
Physical Hazard: 1
Hazard Codes: *=Chronic Hazard---0=Minimal Hazard, 1=Slight Hazard, 2=Moderate Hazard, 3=Serious **Hazard**, 4=Severe Hazard

2.2 Label Elements

Most important hazards:
Flammable liquid and vapor.
May be harmful if swallowed
May be harmful if inhaled
Causes skin irritation
Causes eye irritation
Suspected of causing genetic defects
Suspected of causing cancer
Suspected of damaging fertility or the unborn child
May cause respiratory irritation and damage to the central and peripheral nervous system and respiratory tract through prolonged or repeated exposure.
Toxic to aquatic life.

Adverse effects to the human health: It can cause central and peripheral nervous system effects, can cause chemical pneumonitis if inhaled and gastrointestinal disturbances

Environmental effects: Dangerous to aquatic life
Physical and chemical hazards: Flammable product. Containers may explode when heated. When heated, may release toxic and irritating fumes

GHS-US Labeling:

Signal Word (GHS-US): WARNING

Hazard Statement:

H226-Flammable liquid vapor
H315-Causes skin irritation
H319-Causes serious eye irritation
H341-Suspected of causing genetic defects
H351-Suspected of causing cancer
H361-Suspected of damaging fertility or the unborn child
H370-Causes damage to the central and peripheral nervous system
H335-May cause respiratory irritation
H336-May cause drowsiness or dizziness
H373-May cause damage to the central and peripheral nervous system and respiratory tract through prolonged or repeated exposure
H304-May be fatal if swallowed and enters airways

Precautionary Statements (GHS-US)

P210-Keep away from heat/sparks/open flames/hot surfaces. NO smoking
P233-Keep container tightly closed
P240-Ground/bond container and receiving equipment
P241-Use explosion-proof electrical/ventilating/lighting/equipment
P242-Use only non-sparking tools
P243-Take precautionary measures against static discharge
P280-Wear protective gloves/protective clothing/eye protection/face protection
P264-Wash with water thoroughly after handling
P201-Obtain special instructions before use
P202-Do not handle until all safety precautions have been read and understood
P260-Do not breathe dust/fumes/gas/mist/vapors/spray
P270-Do not eat, drink or smoke when using this product
P261-Avoid breathing dust/fumes/gas/mist/vapors/spray
P270-Use only outdoors or in a well-ventilated area

Symbol: Xi, Xn, T, T+

Risk Phrases:

R10-Flammable
R38-Irritating to skin
R36-Irritating to eyes
R68-Possible risk of irreversible effects
R40-Limited evidence of a carcinogenic effect
R60 & T R61-May impair fertility. May cause harm to the unborn child
T+, R39-Danger of very serious irreversible effects
R37, R67-Irritating to respiratory system. Vapors may cause drowsiness and dizziness
R48-Danger of serious damage to health by prolonged exposure
R65-Harmful: May cause lung damage if swallowed

Safety Phrases:

S3-Keep in a cool place
S9-Keep container in a well-ventilated place
S13-Keep away from food, drink and animal food
S16-Keep away from sources of ignition-NO smoking
S24-Avoid contact with skin
S25-Avoid contact with eyes
S29-Do not empty into drains
S36-Wear suitable protective clothing
S37-Wear suitable gloves
S45-In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible)
S56-Dispose of this material and its container to hazardous or special waste collection point

2.3 Other Hazards

Other hazards not contributing to the classification: Styrene Monomer

2.4 Unknown Acute Toxicity (GHS-US)

No Data Available

3. COMPOSITION / INFORMATION ON INGREDIENTS

3.1. Substances

Component	CAS Number	Concentration (%)
Unsaturated Polyester	**NA(mixture)**	**54-65**
Styrene Monomer	**100-42-5**	**35-46**

4. FIRST AID MEASURES

4.1. First Aid Measures

Inhalation: No risks concerning inhalation at room temperature. Remove the victim to fresh air. Monitor respiratory function. If there is breathing difficulty, provide oxygen. If necessary, give artificial respiration. Seek medical attention.

Ingestion: Rinse the victim's mouth out with water. Provide plenty of water for the victim to drink if he/she is conscious. Seek medical attention.

Skin Contact: Remove contaminated clothing and shoes. Wash affected area with water and soap. Wash contaminated clothing and shoes before reuse. Seek medical attention.

Eye Contact: Wash eyes immediately with running water, keeping the eyelids open. Remove contact lenses if present and easily removable. Seek medical attention.

Most important symptoms and effects: Redness and pain in the skin. Redness, pain, and watery eyes. Cough, sore throat, difficulty breathing, nausea, abdominal pain and diarrhea. Fatigue, muscle weakness, feeling of drunkenness, dizziness, drowsiness, headaches and incoordination. Difficulty concentrating and remembering. It can affect balance, the ability to learn and time of reflection.

Notes for physician: Avoid contact with the product while helping the victim. Keep victim heated and at rest. Symptomatic treatment should include, above all, supportive measures such as correction or electrolyte, metabolic and respiratory abnormalities.

5. FIRE FIGHTING MEASURES

5.1. Extinguishing Media

Flammable product. compatible with any means of extinction as dry chemical, alcohol resistant foam and water mist.

5.2. Special Hazards Arising from the Substance or Mixture

When in fire, may produce irritating and toxic gases like carbon monoxide and dioxide

5.3. Advice for Firefighters

Self-contained breathing apparatus (SCBA) operated in positive pressure mode and complete protective clothing.

5.4. Special Hazards from the Combustion of the Chemical

In combustion, can form toxic and irritant gases such as carbon monoxide and carbon dioxide. Releases gases and/or fumes when heated and they might be respiratory sensitizers.

6. ACCIDENTAL RELEASE MEASURES

6.1. Removal of Ignition Sources

Flammable product. Eliminate preventively all the ignition sources around the area. Do not smoke.

6.2. Provision of Enough Ventilation

Use in a well-ventilated area or with exhaustion system adequate to eliminate mists and vapors

6.3. Prevention of Inhalation and Skin, Mucous Membranes and Eyes Contact

Do not touch damage containers or spilled material unless wearing appropriate protective clothing. Avoid inhalation, eye and skin contact. Use appropriate personal protective equipment as indicated in Section 8

6.4. Environmental Precautions

Do not let this chemical enter the environment (soil, waterways and groundwater).

6.5. Methods and Material for Containment and Cleaning Up

Use water fog or vapor suppressing foam to reduce the spread of fumes use physical barriers or containment of spills. Collect spilled material and place into containers. Absorb the remaining product with sand, earth, vermiculite or other inert material. Place absorbed material in appropriate containers and remove to safe place.

7. HANDLING AND STORAGE

7.1. Precautions for Safe Handling

Avoid inhalation and contact with eyes, skin, and clothing. Wash hands thoroughly after handling and before eating or drinking. Remove and wash contaminated clothing before reuse. Use with adequate ventilation. Ground and bond containers when transferring the material to prevent static electricity sparks which could ignite the vapor. Use spark-proof tools and explosion-proof equipment. Consult your supplier of promoters and catalysts for additional instructions on proper mixing and usage. Empty containers may retain product residue (liquid and/or vapor). Do not pressurize, cut, weld, braze, solder, drill, grind, or expose these containers to heat, flame, sparks, static electricity, or other sources or ignition as the container may explode and may cause injury or death. Empty drums should be completely drained and properly bunged. Empty drums should be promptly returned to a drum re-conditioner or properly disposed.

7.2. Conditions for Safe Storage, Including Any Incompatibilities

Keep away from ignition sources: flames, pilot lights, electrical sparks, and sparking tools. NO SMOKING. Do not store in direct sunlight. Store separate from oxidizing material, peroxides, and metal salts. Keep container closed when not in use. To ensure maximum stability and maintain optimum resin properties, resins should be stored in closed containers at temperatures below 75°F (25°C). copper or copper containing alloys should be avoided as containers.

7.3. Hygiene Advice

Do not eat, drink or smoke when using this product. wash hands before eating, drinking, smoking or going to the toilet. Take off all contaminated clothing and wash before reuse.

7.4. Packing Materials

Metals should not be used.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1. Control Parameters

Component	CAS Number	%	Exposure Limits	Source
Styrene Monomer	100-42-5	35-46	20ppm TLV-TWA 50ppm 8hr PEL 85mg/m³ TLV 50mg/m³ 8hr PEL 75mg/m³ 15min PEL	ACGIH OSHA ACGIH WCB WCB

Biological indicators: BEI: Mandelic acid + Fenilglioxilic acid in urine-400 mg/g creatinine

Appropriate engineering controls: Provide mechanical ventilation or direct exhaustion to the external media. It is recommended safety shower and eye bath available near working area. The engineering controls measures are the most effective to reduce exposure to the product.

8.2. Exposure Controls

Eye/Face protection: Wear 1) safety glasses with side shields and a face-shield or 2) goggles and a face-shield. Facilities storing or utilizing this material should be equipped with an eyewash station and safety shower

Respiratory protection: A NIOSH/MSHA approved air purifying respirator with organic vapor cartridge or canister may be necessary under certain circumstances where airborne concentrations are expected to exceed exposure limits. A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if 1) there is any potential for an uncontrolled release, 2) exposure levels are not known, or 3) during other circumstances where air purifying respirators may not provide adequate protection.

Thermal Hazard: Complete air-ventilated suit, with air supply, or any thermo-resistant clothing available.

Environmental exposure controls: Do not dump directly into the environment or into the sewer system. The dilution water from tire fighting can cause pollution.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on Basic Physical and Chemical Properties

Physical state:	Liquid
Color:	Blue
Odor:	Styrene Odor
Odor Threshold:	NA
pH:	NA
Relative evaporation rate (butylacetate=1):	NA
Melting Point:	NA
Freezing Point:	NA
Boiling point:	293.2°F (145.1°C)
Flash point:	88°F (31°)
Self-ignition Temperature:	914°F (490°C)
Decomposition Temperature:	NA
Flammability (solid, gas):	NA
Vapor pressure:	7mm Hg
Relative vapor density at 20°:	4.5 mm Hg
Relative density:	1.05-1.30 (water=1)
Solubility:	Insoluble
Log Pow:	NA
Log Kow:	NA
Viscosity, kinematic:	NA
Viscosity, dynamic:	NA
Explosive properties:	NA
Oxidizing properties:	NA
Explosive Limits:	Upper-8.8% Lower-.88%

9.2. Other Information

None available

10. STABILITY AND REACTIVITY

10.1. Hazardous Polymerization

May polymerize violently with risk of fire and explosion. Uninhibited styrene, or styrene with low inhibitor concentration, polymerizes slowly at room temperature and on exposure to light and air, and readily at elevated temperatures, greater than 149°F (65°C). Polymerization becomes self-sustaining above 203°F (95°C). Metal salts (e.g. ferric or aluminum chloride), peroxides, oxidizers and strong acids may also cause polymerization.

10.2. Chemical Stability

This product is stable

10.3. Conditions to Avoid

Elevated temperatures, heat, sparks, open flame and other ignition sources.

10.4. Incompatible Materials

Oxygen, oxidizing agents-Increased risk of fire and explosion. Can form explosive peroxides. Strong acids (e.g. sulfuric acid, oleum, chlorosulfonic acid) – Increased temperature and pressure; increased risk of fire and explosion. Alkali metal, graphite compounds, metallic halide salts, peroxides (dibenzoyl peroxide di-tertbutyl peroxide), azoisobutyronitrile-Can initiate polymerization. Byllithium- Explosion can occur. Halogens-Can react with low concentrations of halogens, in the presence of UV light, to form a strong irritant. Can form peroxides in the presence of light and air or on contact with acids. Styrene monomer has been involved in several plant-scale explosions when stored inappropriately or accidentally heated

10.5. Hazardous Decomposition Products

Styrene Oxide

11. TOXICOLOGICAL INFORMATION

11.1. Information on Toxicological Effects

Likely routes of exposure: Inhalation, skin and eye contact

Acute Exposure (LD50): Styrene Monomer 5000 mg/kg (oral/rat)
Acute Exposure (LC50): Styrene Monomer 5640 ppm (rat, 4hrs exposure)

Symptoms related to the physical, chemical and toxicological characteristics:

Acute Eye Toxicity: Studies indicate that exposures to concentrations of styrene above 200 ppm cause irritation of the eyes. Styrene causes transient moderate eye irritation without corneal involvement. Acute Inhalation Toxicity: Studies indicate that exposures to concentrations of styrene above 200 ppm cause irritation of the upper respiratory tract.

Delayed and immediate effects and also chronic effects from short and long term exposure:

Sub-chronic: Overexposure to styrene has been suggested as a cause of the following effects in laboratory animals and may aggravate pre-existing disorders of the following organs in humans; mild, reversible kidney effects, effects on hearing, respiratory tract damage, testis damage and liver damage

Chronic/Carcinogenicity: The International Agency for Research on Cancer (IARC) has classified styrene in Group 1B, possibly carcinogenic to humans. IARC concluded that evidence of carcinogenicity from human health studies, was inadequate and based the classification on animal and other relevant data. IARC considered the combined results of these caner studies to provide “limited evidence” of carcinogenicity. The relevance of these findings is uncertain since data from other long term animal studies and from epidemiology studies of workers exposed to styrene do not provide a basis to conclude that styrene is carcinogenic.

Teratology: Styrene did not cause birth defects in orally-dosed rats, mice, rabbits and hamsters exposed by inhalation. Styrene given by inhalation for six hours a day during organ development has been shown to be toxic to fetal mice at 250 ppm and to fetal hamsters at 1000 ppm. Information from human experience and the results of animal studies suggest no significant risk of birth defects or reproductive toxicity of styrene to humans.

Mutagenicity: Styrene has given mixed positive and negative results in a number of mutagenicity tests. It was not mutagenic in the Ames test without metabolic activation but gave negative and positive mutagenic results with metabolic activation. It has also given negative mutagenic results in the Chinese Hamster Ovary Test, and the Forward Gene Mutation Test and positive results in the Sister Chromatid Exchange and the Chromosomal Aberration Assay.

12. ECOLOGICAL INFORMATION

12.1. Toxicity

Component	CAS No.	%	Test	Concentration	Result	Species
Styrene	100-42-5	35-46	LC50	23 mg/l	48 hrs	Daphnia Magna

12.2. Persistence and Degradability

This material contains components that show little or no evidence of biodegradability. Great Caution should be taken to prevent release to the environment. See section 13 for further information.

12.3. Bio-Accumulative Potential

NA

12.4. Mobility in Soil

NA

12.5. Other Adverse Effects

NA

13. DISPOSAL CONSIDERATIONS

13.1. Waste Treatment Methods

Preferred method of disposal: Includes incineration under controlled conditions in accordance with all local and national laws and regulations. The generation of waste should be avoided or minimized wherever possible. Untreated material is not suitable for disposal. Waste, even small quantities, should never be poured down drains, sewers or water courses. Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Contaminated Packaging: Empty containers can only be disposed of when the remaining product adhering to the container walls has been removed. Hazard warning labels should be removed from the container walls.

14. TRANSPORT INFORMATION

14.1 UN Number

UN-No. (DOT): 1866

14.2 UN Proper Shipping Name

DOT Proper Shipping Name: Resin Solution
DOT Hazard Class: 3-Class 3-Flammable and combustible liquid
49 CFR 173.120

Hazard Labels (DOT):

DOT Special Provisions (49 CFR 172.102): B1, B52, IB3, T2, TP1
Packing Group (DOT): III
DOT Packaging Exceptions: 150
DOT Packaging Non Bulk: 173
DOT Packaging Bulk: 242

14.3 Additional Information

Other Information: No supplementary information available
State during transport (ADR-RID): As liquid

Overland Transport

Proper Shipping Name: Resin Solution
Packing Group: III
Class: 3-Flammable Liquids
UN Number: UN1866

Transport by Sea

Proper Shipping Name: Resin Solution

Packing Group:	III
Class:	3-Flammable Liquids
UN Number:	UN1866
Marine Pollutant:	No
EmS:	F-E, S-E, Stowage Category “A”

Air Transport

Proper Shipping Name:	Resin Solution
Packing Group:	III
Class:	3-Flammable Liquids
UN Number:	UN1866

15. REGULATORY INFORMATION

15.1. US Federal Regulations

29 CFR 1910.1200:	Hazardous
40 CFR 116-117:	Hazardous
40 CFR 355, Appendices A and B:	Not subject to Emergency Planning and Notification
40 CFR 372:	Listed
40 CFR 302:	Listed, Reportable Quantity-1000lbs (454kg)

EU-Regulations

No Restrictions

Occupational Safety and Health Act (OSHA)

This material is classified as a hazardous chemical under the criteria of the US Occupational Safety and Health Administration (OSHA) Hazard Communication Standard, 29 CFR 1910.1200.

SARA Title III: Section 304-CERCLA

Styrene Monomer (CAS# 100-42-5): Reportable Quantity= 1000 lb

SARA Title III: Section 311/312- Hazard Communication Standard (HCS)

This material is classified as an IMMEDIATE HEALTH HAZARD, DELAYED HEALTH HAZARD, FLAMMABILITY HAZARD, and REACTIVITY HAZARD under the US Superfund Amendment and Reauthorization Act Section 311/312)

SARA Title III: Section 313 Toxic Chemical List (TCL)

Styrene Monomer (CAS# 100-42-5)

TSCA Section 8(b)-Inventory Status

All components of this material are listed on the Toxic Substances Control Act (TSCA) inventory

TSCA Section 12(b)-Export Notification

This material does not contain any components that are subject to the US Toxic Substances Control Act **(TSCA) Section 12(b) Export Notification requirements**

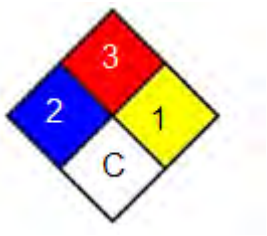
16. OTHER INFORMATION

Full text of H-phrases:

Acute Tox. 3 (Dermal)	**Acute toxicity (dermal), Category 3**
Acute Tox. 4 (Oral)	**Acute toxicity (oral), Category 4**
Eye Irrit. 2A	**Serious eye damage/eye irritation, Category 2A**
Flam. Liq. 2	**Flammable liquids, Category 2**
Flam. Liq. 3	**Flammable liquids, Category 3**
STOT SE 3	**Specific target organ toxicity-Single exposure, Category 3, Narcosis**
H225	**Highly flammable liquid and vapor**
H226	**Flammable liquid and vapor**
H302	**Harmful if swallowed**
H311	**Toxic in contact with skin**
H319	**Causes serious eye irritation**
H336	**May cause drowsiness of dizziness**

HMIS III Rating

Health:	**2-Moderate Hazard**
Flammability:	**3-Serious Hazard**
Physical:	**1-Slight Hazard**
Personal Protection:	**C**



Pop65 WARNING: This product can expose you to chemicals including styrene which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov

Preparation Date: 11-11-2021

Information in this SDS is from available published sources and is believed to be accurate. The user must determine suitability of this information for their application.