



SAFETY DATA SHEET

Revision Date 04/Sep/2018

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product identifier

Product Description:

POLYLITE® TLP 33234-24

Other means of identification

SAP ID(s):

6105 ; 6106; 187027; 191893

Material Code:

33234-24

Chemical Family

Polyester Resin

Recommended use of the chemical and restrictions on use

Recommended Use

Marine-Low Profile Resin

Uses advised against

No information available

Details of the supplier of the safety data sheet

Manufacturer/Supplier:

Polynt Composites USA, Inc.
99 East Cottage Avenue
Carpentersville IL 60110

In Canada

Polynt Composites Canada Inc
29 Regan Road
Brampton, Ontario
L7A 1B2

Emergency Telephone

Chemtrec: 1-800-424-9300 (in U.S. & Canada)
+1-703-741-5970 (international)

E-mail address

MSDS@polynt.com

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Inhalation (Vapors)

Category 4

Skin corrosion/irritation

Category 2

Serious eye damage/eye irritation

Category 2A

Carcinogenicity

Sub-category 1B

Reproductive toxicity

Category 2

Specific target organ toxicity (single exposure)

Category 3

Specific target organ toxicity (repeated exposure)

Category 1

Chronic aquatic toxicity

Category 3

Flammable liquids

Category 3

Label elements

Emergency Overview

Danger

Hazard statements

Harmful if inhaled

Causes skin irritation

Causes serious eye irritation

May cause cancer

Suspected of damaging fertility or the unborn child

May cause respiratory irritation

Causes damage to hearing through prolonged or repeated exposure if inhaled
 Harmful to aquatic life with long lasting effects
 Flammable liquid and vapor



Appearance Pink Opaque

Physical State Liquid

Odor Pungent

Precautionary Statements - Prevention

Obtain special instructions before use
 Do not handle until all safety precautions have been read and understood
 Use personal protective equipment as required
 Use only outdoors or in a well-ventilated area
 Wash face, hands and any exposed skin thoroughly after handling
 Wear protective gloves/protective clothing/eye protection/face protection
 Do not breathe mist, vapors, spray
 Do not eat, drink or smoke when using this product
 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
 Keep cool
 Avoid release to the environment

Precautionary Statements - Response

IF exposed or concerned: Get medical advice/attention
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 If eye irritation persists: Get medical advice/attention
 If skin irritation occurs: Get medical advice/attention
 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
 Wash contaminated clothing before reuse
 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
 In case of fire: Use CO₂, dry chemical, or foam to extinguish

Precautionary Statements - Storage

Store in a well-ventilated place. Keep container tightly closed

Precautionary Statements - Disposal

Dispose of contents/container to industrial incineration plant
 Dispose of in accordance with federal, state and local regulations

Hazards not otherwise classified (HNOC)

Not applicable

Other Information

None known

Unknown acute toxicity
 Unknown aquatic toxicity

65.6 % of the mixture consists of ingredient(s) of unknown toxicity
 66.6 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Weight-%	Trade Secret
Styrene	100-42-5	33	
Cobalt compounds	Proprietary	< 0.15	*

* The exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

First Aid Measures

Eye Contact	Immediately flush eyes for at least 15 minutes. Get medical attention.
Skin Contact	Wash off with warm water and soap. Remove contaminated clothing and shoes. If skin irritation persists, call a physician. Wash contaminated clothing before reuse.
Inhalation	Remove person to fresh air. If signs/symptoms continue, get medical attention. Keep patient warm and at rest. If not breathing, give artificial respiration. If breathing is labored, administer oxygen. Get medical attention immediately.
Ingestion	Do NOT induce vomiting. Potential for aspiration if swallowed. This material may enter the lungs during vomiting. Never give anything by mouth to an unconscious person. GET IMMEDIATE MEDICAL ATTENTION.

Most important symptoms and effects, both acute and delayed

Most Important Symptoms and Effects	No information available.
--	---------------------------

Indication of any immediate medical attention and special treatment needed

Notes to Physician	Treat symptomatically.
---------------------------	------------------------

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Carbon dioxide (CO₂), Foam, Dry chemical, Water spray

Unsuitable Extinguishing Media

Do not use a solid water stream as it may scatter and spread fire.

Specific hazards arising from the chemical

Hazardous combustion products	Combustion may produce carbon monoxide, carbon dioxide and irritating or toxic vapors and gases
Combustion/explosion hazards	Flammable. Vapors may form explosive mixtures with air. Flash back possible over considerable distance. This material may polymerize (react) when its container is exposed to heat (as during a fire). This polymerization increases pressure inside a closed container and may result in the violent rupture of the container. 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 of ignition as the container may explode and may cause injury or death.

Protective Equipment and Precautions for Firefighters

Wear self-contained breathing apparatus (SCBA) and full fire-fighting protective clothing. Thoroughly decontaminate all protective equipment after use. Evacuate all persons from the fire area to a safe location. Move non-burning material, as feasible, to a safe location as soon as possible. Fire fighters should be protected from potential explosion hazard while extinguishing the blaze. DO NOT extinguish a fire resulting from the flow of this flammable liquid until the flow of liquid is effectively shut off. This precaution will help prevent the accumulation of an explosive vapor-air mixture after the initial fire is extinguished. Use water spray to cool fire-exposed containers.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions Remove all sources of ignition. Evacuate personnel to safe areas. Avoid contact with skin and eyes. Use personal protective equipment as required. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

Other Information All equipment used when handling the product must be grounded.

Environmental precautions

Environmental precautions Prevent further leakage or spillage if safe to do so. Do not allow material to contaminate ground water system. Prevent product from entering drains. Soak up with inert absorbent material and dispose of as hazardous waste. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

Methods and material for containment and cleaning up

Methods for Containment Prevent spilled material from 1) contaminating soil, 2) entering sanitary sewers, storm sewers, and drainage systems, and 3) entering bodies of water or ditches that lead to waterways. Prevent spreading over a wide area (e.g. by containment or oil barriers).

Methods for Clean-up Soak up with inert absorbent material. Remove from surface water (e.g. by skimming or siphoning). Dispose of contaminated material as waste according to item 13.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling Do not breathe vapor or mist. Avoid contact with skin, eyes or clothing. Take off contaminated clothing and wash before reuse. Ensure adequate ventilation. Ground and bond containers when transferring material. 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 of 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 reconditioner or properly disposed. Do not use compressed air for filling, discharging or handling. Wash hands before breaks and immediately after handling the product.

Conditions for safe storage, including any incompatibilities

Storage Keep away from heat and sources of ignition. No smoking. Protect from direct sunlight. Keep containers tightly closed in a cool, well-ventilated place. To ensure maximum stability and maintain optimum resin properties, resins should be stored in closed containers at temperatures below 77°F (25°C).

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure limits

Components with workplace control parameters.

Styrene (CAS #: 100-42-5)

ACGIH TLV

20 ppm TWA

40 ppm STEL

OSHA PEL

A4 Not Classifiable as a Human Carcinogen

100 ppm TWA

200 ppm Ceiling

Industry PEL

While the federal workplace exposure limit for styrene is 100

Canada - Alberta OELs	ppm, OSHA accepted the styrene industry's proposal to voluntarily meet a PEL of 50 ppm on an 8 hour TWA and a Short Term Exposure Limit (STEL) of 100 ppm, 15 minute exposure. 40 ppm STEL 170 mg/m ³ STEL 20 ppm TWA 85 mg/m ³ TWA
Canada - Ontario OELs	35 ppm TWA 100 ppm STEL
Canada - British Columbia OELs	50 ppm TWA 75 ppm STEL
NIOSH IDLH	700 ppm
Mexico OEL	100 ppm STEL 425 mg/m ³ STEL 50 ppm TWA 215 mg/m ³ TWA (skin)

Legend

ACGIH (American Conference of Governmental Industrial Hygienists)

TLV® (Threshold Limit Value)

TWA (time-weighted average)

STEL - Short Term Exposure Limit

OSHA - Occupational Safety and Health Administration

PEL - Permissible Exposure Limit

OEL - Occupational Exposure Limit

NIOSH - National Institute for Occupational Safety and Health

IDLH - Immediately Dangerous to Life or Health

SKIN: Skin Absorption

Appropriate engineering controls**Engineering Controls**

Use general ventilation to maintain airborne concentrations to levels that are below regulatory and recommended occupational exposure limits. Local ventilation may be required during certain operations. Use explosion-proof electrical equipment.

Individual protection measures, such as personal protective equipment**Eye/face Protection**

Safety glasses with side-shields. If splashes are likely to occur. Tight sealing safety goggles. Ensure that eyewash stations and safety showers are close to the workstation location.

Skin Protection

Wear protective nitrile rubber or Viton™ gloves. Gloves made of nitrile rubber or polyvinyl chloride (PVC) may be used for splash protection and brief or intermittent contact with styrenated polyester resin. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion. Impervious clothing. Rubber or plastic boots.

Respiratory Protection

None required if hazards have been assessed and airborne concentrations are maintained below the exposure limits listed in Section 8. Wear an approved air-purifying respirator with organic vapor cartridges and particulate filters where airborne concentrations may exceed exposure limits in Section 8 and/or there is exposure to dust or mists due to sanding, grinding, cutting, or spraying. Use an approved positive-pressure air-supplied respirator with emergency escape provisions if there is any potential for an uncontrolled release, airborne concentrations are not known, or any other circumstances where air-purifying respirators may not provide adequate protection.

General Hygiene Considerations

Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance
Odor

Pink Opaque
Pungent

Odor threshold	0.2 ppm (Styrene)
Physical State	Liquid
pH	Not applicable
Flash point	32 °C / 89 °F
Flash Point Method:	Seta closed cup
Autoignition Temperature	490°C / 914°F (Styrene)
Boiling point / boiling range	146°C / 295°F (Styrene)
Melting point / freezing point	No information available
Flammability Limit in Air	
Lower	1.1% (Styrene)
Upper	6.1% (Styrene)
Specific Gravity	1.08 - 1.12 @ 25°C
Solubility	Insoluble (Water)
Evaporation rate	0.49 (BuAc = 1) (Styrene)
Vapor Pressure	5 mmHg @ 20°C (Styrene) 6.7 hPa (Styrene)
Vapor density	3.6 (Air = 1) (Styrene)
Explosive properties	No information available
Oxidizing Properties	No information available
Percent Volatile	32.75 - 36.25 % by weight
VOC Content	369 g/l (calculated) product as supplied
Viscosity	400 - 500 cps @ 25°C
Partition coefficient	No information available
Decomposition temperature	No information available

10. STABILITY AND REACTIVITY

Reactivity

No dangerous reaction known under conditions of normal use.

Chemical Stability

Stable under normal conditions. Stable under recommended storage conditions.

Possibility of Hazardous Reactions

Hazardous polymerization

Polymerization can occur. Hazardous polymerization will occur if contaminated with peroxides, metal salts and polymerization catalysts. Hazardous polymerization may occur upon depletion of inhibitor - may cause heat and pressure build-up in closed containers. Product will undergo hazardous polymerization at temperatures above 150 F (65 C).

Conditions to Avoid

Heat, flames and sparks. Contamination by those materials referred to under Incompatible materials. Unstable upon depletion of inhibitor. Elevated temperature.

Incompatible materials

Strong acids. Strong oxidizing agents. Metal salts. Polymerization catalysts.

Hazardous decomposition products

Hydrocarbons. Carbon monoxide. Carbon dioxide (CO₂). Thermal decomposition can lead to release of irritating and toxic gases and vapors.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Primary Routes of Entry

Eye contact, Ingestion, Inhalation, Skin Contact, Skin absorption

Acute toxicity

Styrene

 Oral LD50

 = 1000 mg/kg (Rat)

 Inhalation LC50

 = 11.8 mg/l (4 H) (Rat)

Information on toxicological effects

Symptoms Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Eyes Irritating to eyes.

Skin Harmful by skin absorption. Contact causes skin irritation. Prolonged skin contact may defat the skin and produce dermatitis.

Inhalation Harmful by inhalation. May cause irritation of respiratory tract. Inhalation of high vapor concentrations can cause central nervous system depression and narcosis.

Ingestion Harmful if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Aspiration hazard if swallowed - can enter lungs and cause damage. Ingestion is not an anticipated route of exposure for this material in industrial use.

Sensitization Not sensitizing.

Repeated dose toxicity In humans, styrene may cause a transient decrease in color discrimination and effects on hearing. Repeated or prolonged exposure may cause skin irritation and dermatitis, due to defatting properties of the product. May cause damage to the liver, eyes, brain, respiratory system, central nervous system through prolonged or repeated exposure if inhaled. May cause damage to the kidneys, liver, eyes, brain, respiratory system, central nervous system through prolonged or repeated exposure if inhaled.

Mutagenic effects Styrene has given mixed positive and negative results in a number of mutagenicity tests. Styrene was not mutagenic without metabolic activation but gave negative and positive mutagenic results with metabolic activation.

Carcinogenicity**Styrene**

ACGIH
IARC
NTP

A4 - Not Classifiable as a Human Carcinogen
Group 2A - Probably Carcinogenic to Humans
Reasonably anticipated to be human carcinogen

Cobalt compounds

IARC

Group 2B - Possibly Carcinogenic to Humans

Legend

IARC - International Agency for Research on Cancer
NTP - National Toxicology Program

Reproductive Toxicity No information available.

Neurological effects No information available.

STOT - single exposure No information available.

STOT - repeated exposure No information available.

Target organ effects Liver, Central nervous system (CNS), Respiratory system, Kidney.

Aspiration hazard No information available.

Unknown acute toxicity 65.6 % of the mixture consists of ingredient(s) of unknown toxicity.

The following values are calculated based on chapter 3.1 of the GHS document .

ATEmix (oral) 2968 mg/kg
ATEmix (dermal) 2002 mg/kg
ATEmix (inhalation-vapor) 11.6 mg/L

12. ECOLOGICAL INFORMATION

Ecotoxicity

Styrene

Partition coefficient	2.95
Bioconcentration factor (BCF)	13.5 fish
Algae	EC50 = 1.4 mg/L (Pseudokirchneriella subcapitata) (72h) EC50 0.46 - 4.3 mg/L (Pseudokirchneriella subcapitata) (72h)
Fish	LC50 3.24 - 4.99 mg/L (Pimephales promelas) (96 h) flow-through LC50 19.03 - 33.53 mg/L (Lepomis macrochirus) (96 h) static LC50 6.75 - 14.5 mg/L (Pimephales promelas) (96 h) static LC50 58.75 - 95.32 mg/L (Poecilia reticulata) (96 h) static
Crustacea	3.3 - 7.4: 48 h Daphnia magna mg/L EC50

Cobalt compounds

Algae	EC50 = 0.639 mg/L
-------	-------------------

Unknown aquatic toxicity

66.6 % of the mixture consists of components(s) of unknown hazards to the aquatic environment.

Persistence/Degradability

No information available.

Bioaccumulation

No information available.

Other adverse effects

No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal Considerations	Hazardous waste. Can be incinerated, when in compliance with local regulations.
Contaminated packaging	Empty containers should be taken for local recycling, recovery or waste disposal.
US EPA Waste Number	D001 (IGNITABLE): When discarded in its purchased form, this material would be regulated under 40 CFR 261.21 as EPA Hazardous Waste Number D001 based on the characteristic of ignitability.

14. TRANSPORT INFORMATION

DOT

UN/ID no.	UN1866
Proper shipping name	RESIN SOLUTION
Hazard Class	3
Packing Group	III
NAERG:	127

TDG

UN/ID no.	UN1866
Proper shipping name	RESIN SOLUTION
Hazard Class	CLASS 3
Packing Group	PG III
NAERG:	127

MEX

UN/ID no.	UN1866
-----------	--------

Proper shipping name RESIN SOLUTION
Hazard Class CLASS 3
Packing Group PG III
NAERG: 127

IATA

UN/ID no. UN1866
Proper shipping name RESIN SOLUTION
Hazard Class 3
Packing Group III
Packing Instructions 355; 366
NAERG: 127

IMDG/IMO

UN/ID no. UN1866
Proper shipping name RESIN SOLUTION
Hazard Class CLASS 3
Packing Group PG III
EmS-No F-E, S-E
NAERG: 127

15. REGULATORY INFORMATION

International Inventories

TSCA Inventory Status: All components of this material are listed on the US Toxic Substances Control Act (TSCA) inventory.

Canadian Inventory Status: All components of this material are listed on the Canadian Domestic Substances List (DSL)

Australian Inventory Status: This product contains only chemicals which are currently listed on the Australian Inventory of Chemical Substances

Korean Inventory Status: This product contains only chemicals which are currently listed on the Korean Chemical Substances List

Philippine Inventory: All components of this material are listed on or are exempt from the Philippine Inventory of Chemicals and Chemical Substances

Japan ENCS: This product contains one or more chemicals currently not on the Japanese Inventory of Existing and New Chemical Substances

Chinese IECS: This product contains only chemicals that are currently listed on the Chinese Inventory of Existing Chemical Substances

New Zealand Inventory: This product contains only chemicals which are currently listed on the New Zealand Inventory of Chemicals

Taiwan Existing Chemical Substances Inventory: Not determined

US Federal Regulations**TSCA 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.

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

Chemical Name	CAS No.	Weight-%	SARA 313 Status
Styrene	100-42-5	33	Listed
Cobalt compounds		< 0.15	Listed

EPCRA: Emergency Planning and Community Right-to-Know Act

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (Clean Water Act)

This product contains the following listed substances:

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Styrene 100-42-5	1000 lb			Listed

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product contains the following HAPs:

Chemical Name	CAS No.	Weight-%	HAPS data
Styrene	100-42-5	33	
Cobalt compounds		< 0.15	Listed

CERCLA

This product contains the following reportable quantities:

Chemical Name	40 CFR 302.4 RQ	40 CFR 355 EHS TPQs
Styrene	1000 lb 454 kg	

Chemical Weapons Convention (CWC)

This product contains a Schedule 3 Toxic chemical precursor.

California Proposition 65

WARNING: Cancer and Reproductive Harm - www.P65Warnings.ca.gov.

Canada

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

16. OTHER INFORMATION

NFPA Rating**Health 2****Flammability 3****Instability 1****Prepared By**

Polynt Regulatory Department

Revision Date

04/Sep/2018

Revision Note

None

This data sheet contains changes from the previous version in section(s):
15, 16

Former date

28 December 2017

This information is provided in good faith and is correct to the best of Polynt's knowledge as of the date hereof and is designed to assist our customers; however, Polynt makes no representation as to its completeness or accuracy. Our products are intended for sale to industrial and commercial customers. We require customers to inspect and test our products before use and to satisfy themselves as to suitability for their specific applications. Any use which Polynt customers or third parties make of this information, or any reliance on, or decisions made based upon it, are the responsibility of such customer or third party. Polynt disclaims responsibility for damages, or liability, of any kind resulting from the use of this information. THERE ARE NO WARRANTIES OR REPRESENTATIONS, EXPRESS OR IMPLIED, INCLUDING THOSE OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO THIS INFORMATION OR TO THE PRODUCT IT DESCRIBES. IN NO EVENT SHALL POLYNT BE LIABLE FOR SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES.

End of Safety Data Sheet