



# SAFETY DATA SHEET

Revision Date 28/Dec/2017

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

### Product identifier

Product Description:

**POLYLITE® 32773-00**

### Other means of identification

SAP ID(s):

5667 ; 5668

Material Code:

32773-00

Chemical Family

Polyester Resin

### Recommended use of the chemical and restrictions on use

Recommended Use

Surface Casting 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** Clear Pink

**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 CO<sub>2</sub>, 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

May be harmful in contact with skin

Unknown acute toxicity	65.0 % of the mixture consists of ingredient(s) of unknown toxicity
Unknown aquatic toxicity	65.1 % of the mixture consists of components(s) of unknown hazards to the aquatic environment

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Weight-%	Trade Secret
Styrene	100-42-5	34.6	
Cobalt compounds	Proprietary	< 0.2	*

\* The exact percentage (concentration) of composition has been withheld as a trade secret. If CAS number is "proprietary", the specific chemical identity and percentage of composition has been withheld as a trade secret.

#### 4. FIRST AID MEASURES

##### First Aid Measures

<b>Eye Contact</b>	Immediately flush eyes for at least 15 minutes. Get medical attention.
<b>Skin Contact</b>	Wash off with warm water and soap. Remove contaminated clothing and shoes. If skin irritation persists, call a physician. Wash contaminated clothing before reuse.
<b>Inhalation</b>	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.
<b>Ingestion</b>	Do NOT induce vomiting. Potential for aspiration if swallowed. This material may enter the lungs during vomiting. Immediately give the victim one or two glasses of water or milk to drink. Never give anything by mouth to an unconscious person. GET IMMEDIATE MEDICAL ATTENTION.

##### Most important symptoms and effects, both acute and delayed

<b>Most Important Symptoms and Effects</b>	No information available.
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##### Indication of any immediate medical attention and special treatment needed

<b>Notes to Physician</b>	Treat symptomatically.
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#### 5. FIRE-FIGHTING MEASURES

##### Suitable Extinguishing Media

Carbon dioxide (CO<sub>2</sub>), 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

<b>Hazardous combustion products</b>	Combustion may produce carbon monoxide, carbon dioxide and irritating or toxic vapors and gases
<b>Combustion/explosion hazards</b>	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. Empty drums should be completely drained and properly bunged. Empty drums should be promptly returned to a drum reconditioner or properly disposed.

##### 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. 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.

### 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. Wash hands before breaks and immediately after handling the product. 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.

### 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

#### **Styrene (CAS #: 100-42-5)**

ACGIH TLV

20 ppm TWA

40 ppm STEL

A4 Not Classifiable as a Human Carcinogen

OSHA PEL

100 ppm TWA

Industry PEL	200 ppm Ceiling While the federal workplace exposure limit for styrene is 100 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.
Canada - Alberta OELs	40 ppm STEL 170 mg/m <sup>3</sup> STEL 20 ppm TWA 85 mg/m <sup>3</sup> 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 <sup>3</sup> STEL 50 ppm TWA 215 mg/m <sup>3</sup> 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

<b>Appearance</b>	Clear Pink
<b>Odor</b>	Pungent
<b>Odor threshold</b>	0.2 ppm (Styrene)
<b>Physical State</b>	Liquid
<b>pH</b>	No information available
<b>Flash point</b>	32 °C / 89 °F
<b>Flash Point Method:</b>	Seta closed cup
<b>Autoignition Temperature</b>	490°C / 914°F (Styrene)
<b>Boiling point / boiling range</b>	146°C / 295°F (Styrene)
<b>Melting point / freezing point</b>	No information available
<b>Flammability Limit in Air</b>	
<b>Lower</b>	1.1% (Styrene)
<b>Upper</b>	6.1% (Styrene)
<b>Specific Gravity</b>	1.12 - 1.15 @ 25°C
<b>Solubility</b>	Insoluble (Water)
<b>Evaporation rate</b>	0.49 (BuAc = 1) (Styrene)
<b>Vapor Pressure</b>	5 mmHg @ 20°C (Styrene) 6.7 hPa (Styrene)
<b>Vapor density</b>	3.6 (Air = 1) (Styrene)
<b>Explosive properties</b>	No information available
<b>Oxidizing Properties</b>	No information available
<b>Percent Volatile</b>	33 - 37 % by weight
<b>VOC Content</b>	393 g/l (calculated) product as supplied
<b>Viscosity</b>	500 - 650 cps @ 25°C
<b>Partition coefficient</b>	No information available
<b>Decomposition temperature</b>	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. 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.

### Incompatible materials

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

### Hazardous decomposition products

Hydrocarbons. Carbon monoxide. Carbon dioxide (CO<sub>2</sub>). 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** = 5000 mg/kg (Rat)

**Dermal LD50** > 2000 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 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 2B - Possibly 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*  
*ACGIH (American Conference of Governmental Industrial Hygienists)*

**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, Kidney, Central nervous system (CNS), Respiratory system.

**Aspiration hazard** No information available.

**Unknown acute toxicity** 65.0 % 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)	5056 mg/kg
ATEmix (dermal)	2023 mg/kg
ATEmix (inhalation-vapor)	11.9 mg/L

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

#### **Styrene**

Partition coefficient	2.95
Bioconcentration factor (BCF)	74
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	EC50 3.3 - 7.4 mg/L 48 h

#### **Cobalt compounds**

Algae	EC50 = 0.639 mg/L
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### **Unknown aquatic toxicity**

65.1 % of the mixture consists of component(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**

<b>Disposal Considerations</b>	Hazardous waste. Can be incinerated, when in compliance with local regulations.
<b>Contaminated packaging</b>	Empty containers should be taken for local recycling, recovery or waste disposal.
<b>US EPA Waste Number</b>	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**

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

### **TDG**

<b>UN/ID no.</b>	UN1866
<b>Proper shipping name</b>	RESIN SOLUTION
<b>Hazard Class</b>	CLASS 3
<b>Packing Group</b>	PG III
<b>NAERG:</b>	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  
**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:** This product contains only chemicals that are currently listed on the Philippine Inventory of Chemicals and Chemical Substances

**Japan ENCS:** This product contains only chemicals that are currently listed 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

**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	34.6	Listed
Cobalt compounds		< 0.2	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	34.6	
Cobalt compounds		< 0.2	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 does not contain any listed substances.

#### **State Regulations**

##### **California Proposition 65**

WARNING: This material contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm. The California Safe Drinking Water and Toxic Enforcement Act of 1986 requires that clear and reasonable warning be given prior to exposing any person to this chemical.

##### **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**

28/Dec/2017

**Revision Note**

None

**Former date**

New

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**