

## SECTION 1: IDENTIFICATION

- 1.1 GHS Product identifier:** PPT-5535  
**Other means of identification:**  
Non-applicable
- 1.2 Recommended use of the chemical and restrictions on use:**  
Relevant uses: Resins for making composites. For industrial user only.  
Uses advised against: All uses not specified in this section or in section 7.3
- 1.3 Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party:**  
Reacciones Quimicas SA de CV  
Carretera a Saltillo Km 7, Parque Industrial el Obispo  
66359 Santa Catarina - Nuevo Leon - Mexico  
Phone.: +528181510200 - Fax: +528181510224  
reacciones@reacciones.com  
<http://www.reacciones.com>
- 1.4 Emergency phone number:** SETIQ (800) 002-1400 CHEMTREC 800-681-9531 (24 h, 7 days)

## SECTION 2: HAZARD(S) IDENTIFICATION

- 2.1 Classification of the substance or mixture:**  
**29 CFR 1910.1200:**  
Classification of this product has been carried out in accordance with paragraph (d) of § 1910.1200.  
Carc. 2: Carcinogenicity, Category 2, H351  
Eye Irrit. 2A: Eye irritation, Category 2A, H319  
Flam. Liq. 3: Flammable liquids, Category 3, H226  
Repr. 1B: Reproductive toxicity, Category 1B, H360  
Skin Irrit. 2: Skin irritation, Category 2, H315  
Skin Sens. 1A: Sensitisation, skin, Category 1A, H317  
STOT RE 1: Specific target organ toxicity by inhalation, repeated exposure, Category 1, H372

**2.2 Label elements:**

**29 CFR 1910.1200:**

Danger



**Hazard statements:**

Carc. 2: H351 - Suspected of causing cancer.  
Eye Irrit. 2A: H319 - Causes serious eye irritation.  
Flam. Liq. 3: H226 - Flammable liquid and vapour.  
Repr. 1B: H360 - May damage fertility or the unborn child.  
Skin Irrit. 2: H315 - Causes skin irritation.  
Skin Sens. 1A: H317 - May cause an allergic skin reaction.  
STOT RE 1: H372 - Causes damage to organs through prolonged or repeated exposure (Inhalation).

**Precautionary statements:**

P101: If medical advice is needed, have product container or label at hand.  
P102: Keep out of reach of children.  
P201: Obtain special instructions before use.  
P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P280: Wear protective gloves/protective clothing/eye protection/face protection.  
P302+P352: IF ON SKIN: Wash with plenty of soap and water.  
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P308+P313: IF exposed or concerned: Get medical advice/attention.  
P370+P378: In case of fire: Use ABC powder extinguisher to put it out.  
P501: Dispose of the contents/containers according to the local, state and federal regulations.

**Substances that contribute to the classification**

STYRENE; Cobalt bis(2-ethylhexanoate)

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**SECTION 2: HAZARD(S) IDENTIFICATION (continued)**
**2.3 Hazards not otherwise classified (HNOC):**

Non-applicable



**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**
**3.1 Substances:**

Non-applicable

**3.2 Mixtures:**
**Chemical description:** Unsaturated polyester resin

**Components:**

Remaining components are non-hazardous and/or present at amounts below reportable limits. The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret in accordance with paragraph (i) of §1910.1200. Therefore, in accordance with Appendix D to § 1910.1200, the product contains:

| Identification | Chemical name/Classification   | Concentration  |
|----------------|--|--|
| CAS: 100-42-5  | <b>styrene</b><br>Acute Tox. 4: H332; Asp. Tox. 1: H304; Carc. 2: H351; Eye Irrit. 2A: H319; Flam. Liq. 3: H226; Repr. 2: H361;<br>Skin Irrit. 2: H315; STOT RE 1: H372 - Danger |  <b>35 - &lt;40 %</b> |
| CAS: 136-52-7  | <b>Cobalt bis(2-ethylhexanoate)</b><br>Carc. 2: H351; Eye Irrit. 2A: H319; Repr. 1B: H360; Skin Sens. 1A: H317 - Danger  |  <b>&lt;0.5 %</b>     |

To obtain more information on the hazards of the substances consult sections 11, 12 and 16.

**SECTION 4: FIRST-AID MEASURES**
**4.1 Description of necessary measures:**

The symptoms resulting from intoxication can appear after exposure, therefore, in case of doubt, seek medical attention for direct exposure to the chemical product or persistent discomfort, showing the SDS of this product.

**By inhalation:**

Remove the person affected from the area of exposure, provide with fresh air and keep at rest. In serious cases such as cardiorespiratory failure, artificial resuscitation techniques will be necessary (mouth to mouth resuscitation, cardiac massage, oxygen supply, etc.) requiring immediate medical assistance.

**By skin contact:**

Remove contaminated clothing and footwear, rinse skin or shower the person affected if appropriate with plenty of cold water and neutral soap. In serious cases see a doctor. If the product causes burns or freezing, clothing should not be removed as this could worsen the injury caused if it is stuck to the skin. If blisters form on the skin, these should never be burst as this will increase the risk of infection.

**By eye contact:**

Rinse eyes thoroughly with lukewarm water for at least 15 minutes. Do not allow the person affected to rub or close their eyes. If the injured person uses contact lenses, these should be removed unless they are stuck to the eyes, as this could cause further damage. In all cases, after cleaning, a doctor should be consulted as quickly as possible with the SDS of the product.

**By ingestion/aspiration:**

Do not induce vomiting, but if it does happen keep the head down to avoid aspiration. Keep the person affected at rest. Rinse out the mouth and throat, as they may have been affected during ingestion.

**4.2 Most important symptoms/effects, acute and delayed:**

Acute and delayed effects are indicated in sections 2 and 11.

**4.3 Indication of immediate medical attention and special treatment needed, if necessary:**

Non-applicable

**SECTION 5: FIRE-FIGHTING MEASURES**
**5.1 Suitable (and unsuitable) extinguishing media:**
**Suitable extinguishing media:**

If possible use polyvalent powder fire extinguishers (ABC powder), alternatively use foam or carbon dioxide extinguishers (CO<sub>2</sub>).

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## SECTION 5: FIRE-FIGHTING MEASURES (continued)

### Unsuitable extinguishing media:

IT IS RECOMMENDED NOT to use full jet water as an extinguishing agent.

### 5.2 Specific hazards arising from the chemical:

As a result of combustion or thermal decomposition reactive sub-products are created that can become highly toxic and, consequently, can present a serious health risk.

### 5.3 Special protective equipment and precautions for fire-fighters:

Depending on the magnitude of the fire it may be necessary to use full protective clothing and individual respiratory equipment. Minimum emergency facilities and equipment should be available (fire blankets, portable first aid kit,...)

### Additional provisions:

As in any fire, prevent human exposure to fire, smoke, fumes or products of combustion. Only properly trained personnel should be involved in firefighting. Evacuate nonessential personnel from the fire area. Destroy any source of ignition. In case of fire, refrigerate the storage containers and tanks for products susceptible to inflammation. Avoid spillage of the products used to extinguish the fire into an aqueous medium.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### 6.1 Personal precautions, protective equipment and emergency procedures:

Isolate leaks provided that there is no additional risk for the people performing this task. Evacuate the area and keep out those without protection. Personal protection equipment must be used against potential contact with the spilt product (See section 8). Above all prevent the formation of any vapour-air flammable mixtures, through either ventilation or the use of an inertization agent. Destroy any source of ignition. Eliminate electrostatic charges by interconnecting all the conductive surfaces on which static electricity could form, and also ensuring that all surfaces are connected to the ground.

### 6.2 Environmental precautions:

The characteristic of Ignitability per RCRA could apply to the unused product if it becomes a waste material. The EPA hazardous waste number D001 could apply. It is the responsibility of the waste generator to evaluate whether his wastes are hazardous by characteristics or listing.

### 6.3 Methods and materials for containment and cleaning up:

It is recommended:

Absorb the spillage using sand or inert absorbent and move it to a safe place. Do not absorb in sawdust or other combustible absorbents. For any concern related to disposal consult section 13.

### 6.4 Reference to other sections:

See sections 8 and 13.

## SECTION 7: HANDLING AND STORAGE

### 7.1 Precautions for safe handling:

#### A.- Precautions for safe manipulation

Comply with the current standards 29 CFR 1910 Occupational Safety and Health Standards. Keep containers hermetically sealed. Control spills and residues, destroying them with safe methods (section 6). Avoid leakages from the container. Maintain order and cleanliness where dangerous products are used.

#### B.- Technical recommendations for the prevention of fires and explosions

Because the product is a flammable liquid, storage should meet the requirement of 29 CFR 1910.106, Flammable and Combustible Liquids Code. Transfer in well ventilated areas, preferably through localized extraction. Fully control sources of ignition (mobile phones, sparks,...) and ventilate during cleaning operations. Avoid the existence of dangerous atmospheres inside containers, applying inertization systems where possible. Transfer at a slow speed to avoid the creation of electrostatic charges. Against the possibility of electrostatic charges: ensure a perfect equipotential connection, always use groundings, do not wear work clothes made of acrylic fibres, preferably wearing cotton clothing and conductive footwear. Comply with the essential security requirements for equipment and systems and with the minimum requirements for protecting the security and health of workers. Consult section 10 for conditions and materials that should be avoided.

#### C.- Technical recommendations to prevent ergonomic and toxicological risks

PREGNANT WOMEN SHOULD NOT BE EXPOSED TO THIS PRODUCT. Transfer in fixed places that comply with the necessary security conditions (emergency showers and eyewash stations in close proximity), using personal protection equipment, especially on the hands and face (See section 8). Limit manual transfers to containers of small amounts. Do not eat or drink during the process, washing hands afterwards with suitable cleaning products.

#### D.- Technical recommendations to prevent environmental risks

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**SECTION 7: HANDLING AND STORAGE (continued)**

It is recommended to have absorbent material available at close proximity to the product (See subsection 6.3)

**7.2 Conditions for safe storage, including any incompatibilities:**

A.- Technical measures for storage

Minimum Temp.: 59 °F

Maximum Temp.: 86 °F

B.- General conditions for storage

Avoid sources of heat, radiation, static electricity and contact with food. For additional information see subsection 10.5

**7.3 Specific end use(s):**

Except for the instructions already specified it is not necessary to provide any special recommendation regarding the uses of this product.

**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**
**8.1 Control parameters:**

Substances whose occupational exposure limits have to be monitored in the workplace:

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000):

| Identification   | Occupational exposure limits |                          |                        |
|--|------------------------------|--------------------------|------------------------|
|  | 8-hour TWA PEL               | Ceiling Values - TWA PEL |                        |
| styrene<br>CAS: 100-42-5                                 | 100 ppm                      | 200 ppm                  |                        |
| N,N-dimethylaniline<br>CAS: 121-69-7                     | 5 ppm                        |                          | 25 mg/m <sup>3</sup>   |
| Stoddard solvent, < 0.1 % EC 200-753-7<br>CAS: 8052-41-3 | 500 ppm                      |                          | 2900 mg/m <sup>3</sup> |

US. ACGIH Threshold Limit Values:

| Identification   | Occupational exposure limits |          |  |
|--|------------------------------|----------|--|
|  | TLV-TWA                      | TLV-STEL |  |
| styrene<br>CAS: 100-42-5                                 | 20 ppm                       | 40 ppm   |  |
| N,N-dimethylaniline<br>CAS: 121-69-7                     | 5 ppm                        | 10 ppm   |  |
| Stoddard solvent, < 0.1 % EC 200-753-7<br>CAS: 8052-41-3 |                              |          | 290 mg/m <sup>3</sup><br>580 mg/m <sup>3</sup> |

CALIFORNIA- TABLE AC-1 PERMISSIBLE EXPOSURE LIMITS FOR CHEMICAL CONTAMINANTS:

| Identification   | Occupational exposure limits |         |  |
|--|------------------------------|---------|--|
|  | PEL                          | STEL    |  |
| styrene<br>CAS: 100-42-5                                 | 50 ppm                       | 100 ppm | 215 mg/m <sup>3</sup><br>425 mg/m <sup>3</sup> |
| N,N-dimethylaniline<br>CAS: 121-69-7                     | 5 ppm                        | 50 ppm  | 25 mg/m <sup>3</sup>                           |
| Stoddard solvent, < 0.1 % EC 200-753-7<br>CAS: 8052-41-3 | 100 ppm                      |         | 525 mg/m <sup>3</sup>                          |

**8.2 Appropriate engineering controls:**


A.- Individual protection measures, such as personal protective equipment

Always provide effective general and, when necessary, local exhaust ventilation to maintain the ambient workplace atmosphere below the exposure limits.. For more information on Personal Protection Equipment (storage, use, cleaning, maintenance, class of protection,...) consult the information leaflet provided by the manufacturer. For additional information see subsection 7.1. All information contained herein is a recommendation, the information on clothing performance must be combined with professional judgment, and a clear understanding of the clothing application, to provide the best protection to the worker. All chemical protective clothing use must be based on a hazard assessment to determine the risks for exposure to chemicals and other hazards. Conduct hazard assessments in accordance with 29 CFR 1910.132.


B.- Respiratory protection

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**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)**


| Pictogram   | PPE                               | Remarks  |
|---|-----------------------------------|--|
| <br>Mandatory respiratory tract protection | Filter mask for gases and vapours | Replace when there is a taste or smell of the contaminant inside the face mask. If the contaminant comes with warnings it is recommended to use isolation equipment. Use respirator in accordance with manufacturer's use limitations and OSHA standard 1910.134 (29CFR) |

**C.- Specific protection for the hands**



| Pictogram  | PPE                                       | Remarks  |
|--|---|--|
| <br>Mandatory hand protection | NON-disposable chemical protective gloves | The Breakthrough Time indicated by the manufacturer must exceed the period during which the product is being used. Do not use protective creams after the product has come into contact with skin. Use gloves in accordance with manufacturer's use limitations and OSHA standard 1910.138 (29CFR) |

As the product is a mixture of several substances, the resistance of the glove material can not be calculated in advance with total reliability and has therefore to be checked prior to the application.



**D.- Ocular and facial protection**

| Pictogram  | PPE         | Remarks   |
|--|-------------|---|
| <br>Mandatory face protection | Face shield | Clean daily and disinfect periodically according to the manufacturer's instructions. Use if there is a risk of splashing. Use this PPE in accordance with manufacturer's use limitations and OSHA standard 1910.133 (29CFR) |

**E.- Bodily protection**

| Pictogram   | PPE   | Remarks   |
|---|---|---|
| <br>Mandatory complete body protection | Disposable clothing for protection against chemical risks, with antistatic and fireproof properties | For professional use only. Clean periodically according to the manufacturer's instructions. |
| <br>Mandatory foot protection          | Safety footwear for protection against chemical risk, with antistatic and heat resistant properties | Replace boots at any sign of deterioration.   |

**F.- Additional emergency measures**

| Emergency measure   | Standards                                       | Emergency measure  | Standards                                      |
|---|---|--|--|
| <br>Emergency shower | ANSI Z358-1<br>ISO 3864-1:2011, ISO 3864-4:2011 | <br>Eyewash stations | DIN 12 899<br>ISO 3864-1:2011, ISO 3864-4:2011 |

**Environmental exposure controls:**

In accordance with the community legislation for the protection of the environment it is recommended to avoid environmental spillage of both the product and its container. For additional information see subsection 7.1.D

**National volatile organic compound emission standards (40 CFR Part 59):**

|                                |                                       |
|--------------------------------|---------------------------------------|
| V.O.C. (Subpart C - Consumer): | 37.29 % weight                        |
| V.O.C. (Coatings) at 68 °F:    | 398.77 kg/m <sup>3</sup> (398.77 g/L) |

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**
**9.1 Information on basic physical and chemical properties:**

For complete information see the product datasheet.


**Appearance:**

Physical state at 68 °F: Liquid

\*Not relevant due to the nature of the product, not providing information property of its hazards.

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**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (continued)**

|  |   |
|--|---|
| Appearance:                                  | Viscous   |
| Color:                                       |  Amber |
| Odor:  | Solvent   |
| Odour threshold:                             | Non-applicable *  |
| <b>Volatility:</b>                           |   |
| Boiling point at atmospheric pressure:       | 261 - 412 °F  |
| Vapour pressure at 68 °F:                    | 622 Pa  |
| Vapour pressure at 122 °F:                   | 3293.87 Pa (3.29 kPa)   |
| Evaporation rate at 68 °F:                   | Non-applicable *  |
| <b>Product description:</b>                  |   |
| Density at 68 °F:                            | 1069.4 kg/m <sup>3</sup>  |
| Relative density at 68 °F:                   | 1.069   |
| Dynamic viscosity at 68 °F:                  | Non-applicable *  |
| Kinematic viscosity at 68 °F:                | Non-applicable *  |
| Kinematic viscosity at 104 °F:               | >20.5 cSt   |
| Concentration:                               | Non-applicable *  |
| pH:  | Non-applicable *  |
| Vapour density at 68 °F:                     | Non-applicable *  |
| Partition coefficient n-octanol/water 68 °F: | Non-applicable *  |
| Solubility in water at 68 °F:                |   |
| Solubility properties:                       | Non-applicable *  |
| Decomposition temperature:                   | Non-applicable *  |
| Melting point/freezing point:                | Non-applicable *  |
| Explosive properties:                        | Non-applicable *  |
| Oxidising properties:                        | Non-applicable *  |
| <b>Flammability:</b>                         |   |
| Flash Point:                                 | 90 °F   |
| Heat of combustion:                          | Non-applicable *  |
| Flammability (solid, gas):                   | Non-applicable *  |
| Autoignition temperature:                    | 545 °F  |
| Lower flammability limit:                    | Not available   |
| Upper flammability limit:                    | Not available   |
| <b>Explosive:</b>                            |   |
| Lower explosive limit:                       | Non-applicable *  |
| Upper explosive limit:                       | Non-applicable *  |
| <b>9.2 Other information:</b>                |   |
| Surface tension at 68 °F:                    | Non-applicable *  |
| Refraction index:                            | Non-applicable *  |

\*Not relevant due to the nature of the product, not providing information property of its hazards.

**SECTION 10: STABILITY AND REACTIVITY**
**10.1 Reactivity:**

No hazardous reactions are expected because the product is stable under recommended storage conditions. See section 7.

**10.2 Chemical stability:**

Chemically stable under the conditions of storage, handling and use.

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**SECTION 10: STABILITY AND REACTIVITY (continued)**
**10.3 Possibility of hazardous reactions:**

Under the specified conditions, hazardous reactions that lead to excessive temperatures or pressure are not expected.

**10.4 Conditions to avoid:**

Applicable for handling and storage at room temperature:

| Shock and friction | Contact with air | Increase in temperature | Sunlight            | Humidity       |
|--------------------|------------------|-------------------------|---------------------|----------------|
| Not applicable     | Not applicable   | Risk of combustion      | Avoid direct impact | Not applicable |

**10.5 Incompatible materials:**

| Acids              | Water          | Oxidising materials | Combustible materials | Others                        |
|--------------------|----------------|---------------------|-----------------------|-------------------------------|
| Avoid strong acids | Not applicable | Avoid direct impact | Not applicable        | Avoid alkalis or strong bases |

**10.6 Hazardous decomposition products:**

See subsection 10.3, 10.4 and 10.5 to find out the specific decomposition products. Depending on the decomposition conditions, complex mixtures of chemical substances can be released: carbon dioxide (CO<sub>2</sub>), carbon monoxide and other organic compounds.

**SECTION 11: TOXICOLOGICAL INFORMATION**
**11.1 Information on toxicological effects:**

The experimental information related to the toxicological properties of the product itself is not available

**Dangerous health implications:**

In case of exposure that is repetitive, prolonged or at concentrations higher than recommended by the occupational exposure limits, it may result in adverse effects on health depending on the means of exposure:

**A- Ingestion (acute effect):**

- Acute toxicity : Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for consumption. For more information see section 3.
- Corrosivity/Irritability: The consumption of a considerable dose can cause irritation in the throat, abdominal pain, nausea and vomiting.

**B- Inhalation (acute effect):**

- Acute toxicity : Based on available data, the classification criteria are not met, however, it contains substances classified as dangerous for inhalation. For more information see section 3.
- Corrosivity/Irritability: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.

**C- Contact with the skin and the eyes (acute effect):**

- Contact with the skin: Produces skin inflammation.
- Contact with the eyes: Produces eye damage after contact.

**D- CMR effects (carcinogenicity, mutagenicity and toxicity to reproduction):**

- Carcinogenicity: Exposure to this product can cause cancer. For more specific information on the possible health effects see section 2.  
IARC: styrene (2A); N,N-dimethylaniline (3); Cobalt bis(2-ethylhexanoate) (2B); Stoddard solvent, < 0.1 % EC 200-753-7 (3)
- Mutagenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
- Reproductive toxicity: May damage fertility or the unborn child

**E- Sensitizing effects:**

- Respiratory: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous with sensitising effects. For more information see section 3.
- Cutaneous: Prolonged contact with the skin can result in episodes of allergic contact dermatitis.

**F- Specific target organ toxicity (STOT) - single exposure:**

Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.

**G- Specific target organ toxicity (STOT)-repeated exposure:**

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**SECTION 11: TOXICOLOGICAL INFORMATION (continued)**

- Specific target organ toxicity (STOT)-repeated exposure: Serious health effects in the case of prolonged inhalation, including death, serious functional disorders or morphological changes of toxicological importance.
- Skin: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.

H- Aspiration hazard:

Based on available data, the classification criteria are not met, however it does contain substances classified as dangerous for this effect. For more information see section 3.

**Other information:**

Non-applicable

**Specific toxicology information on the substances:**

| Identification                                | Acute toxicity  |                 | Genus |
|---|-----------------|-----------------|-------|
|   | LD50 oral       | LD50 dermal     |       |
| styrene<br>CAS: 100-42-5                      | LD50 oral       | >5000 mg/kg     | Rat   |
|   | LD50 dermal     | >5000 mg/kg     |       |
|   | LC50 inhalation | 11.8 mg/L (4 h) |       |
| Cobalt bis(2-ethylhexanoate)<br>CAS: 136-52-7 | LD50 oral       | >5000 mg/kg     |       |
|   | LD50 dermal     | >5000 mg/kg     |       |
|   | LC50 inhalation | >5 mg/L         |       |

**Acute Toxicity Estimate (ATE mix):**

| ATE mix    |                                       | Ingredient(s) of unknown toxicity |
|------------|---------------------------------------|-----------------------------------|
| Oral       | >5000 mg/kg (Calculation method)      | Non-applicable                    |
| Dermal     | >5000 mg/kg (Calculation method)      | Non-applicable                    |
| Inhalation | 31.72 mg/L (4 h) (Calculation method) | 0 %                               |

**SECTION 12: ECOLOGICAL INFORMATION**

The experimental information related to the eco-toxicological properties of the product itself is not available

**12.1 Ecotoxicity (aquatic and terrestrial, where available):**

| Identification           | Acute toxicity |                  | Species                | Genus      |
|--------------------------|----------------|------------------|------------------------|------------|
|                          | LCS50          | EC50             |                        |            |
| styrene<br>CAS: 100-42-5 | LCS50          | 64.7 mg/L (96 h) | Carassius auratus      | Fish       |
|                          | EC50           | 4.7 mg/L (48 h)  | Daphnia magna          | Crustacean |
|                          | EC50           | 67 mg/L (192 h)  | Microcystis aeruginosa | Algae      |

**12.2 Persistence and degradability:**

| Identification           | Degradability |             | Biodegradability |          |
|--------------------------|---------------|-------------|------------------|----------|
|                          | BOD5          | COD         | Concentration    | Period   |
| styrene<br>CAS: 100-42-5 | BOD5          | 1.96 g O2/g | Concentration    | 100 mg/L |
|                          | COD           | 2.8 g O2/g  | Period           | 14 days  |
|                          | BOD5/COD      | 0.7         | % Biodegradable  | 100 %    |

**12.3 Bioaccumulative potential:**

| Identification           | Bioaccumulation potential |         |
|--------------------------|---------------------------|---------|
|                          | BCF                       | Pow Log |
| styrene<br>CAS: 100-42-5 | BCF                       | 14      |
|                          | Pow Log                   | 2.95    |
|                          | Potential                 | Low     |

**12.4 Mobility in soil:**

| Identification           | Absorption/desorption |                     | Volatility |                |
|--------------------------|-----------------------|---------------------|------------|----------------|
|                          | Koc                   | Surface tension     | Henry      | Dry soil       |
| styrene<br>CAS: 100-42-5 | Koc                   | Non-applicable      | Henry      | Non-applicable |
|                          | Conclusion            | Non-applicable      | Dry soil   | Non-applicable |
|                          | Surface tension       | 3.21E-2 N/m (77 °F) | Moist soil | Non-applicable |

**12.5 Results of PBT and vPvB assessment:**

Non-applicable

**12.6 Other adverse effects:**

Not described

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**SECTION 13: DISPOSAL CONSIDERATIONS**
**13.1 Disposal methods:**
**Waste management (disposal and evaluation):**

Consult the authorized waste service manager on the assessment and disposal operations. In case the container has been in direct contact with the product, it will be processed the same way as the actual product. Otherwise, it will be processed as non-dangerous residue. We do not recommended disposal down the drain. See epigraph 6.2.

**Regulations related to waste management:**

Legislation related to waste management:

40 CFR Part 261- IDENTIFICATION AND LISTING OF HAZARDOUS WASTE

**SECTION 14: TRANSPORT INFORMATION**
**Transport of dangerous goods by land:**

With regard to 49 CFR on the Transport of Dangerous Goods:



- |  |                           |
|--|---------------------------|
| <b>14.1 UN number:</b>   | UN1866                    |
| <b>14.2 UN proper shipping name:</b>   | RESIN SOLUTION, flammable |
| <b>14.3 Transport hazard class(es):</b>  | 3                         |
| Labels:  | 3                         |
| <b>14.4 Packing group, if applicable:</b>  | III                       |
| <b>14.5 Marine pollutant:</b>  | No                        |
| <b>14.6 Special precautions which a user needs to be aware of, or needs to comply with, in connection with transport or conveyance either within or outside their premises</b> |                           |
| Physico-Chemical properties:   | see section 9             |
| Limited quantities:  | 5 L                       |
| <b>14.7 Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code):</b>  | Non-applicable            |

**Transport of dangerous goods by sea:**

With regard to IMDG 39-18:



- |  |                           |
|--|---------------------------|
| <b>14.1 UN number:</b>   | UN1866                    |
| <b>14.2 UN proper shipping name:</b>   | RESIN SOLUTION, flammable |
| <b>14.3 Transport hazard class(es):</b>  | 3                         |
| Labels:  | 3                         |
| <b>14.4 Packing group, if applicable:</b>  | III                       |
| <b>14.5 Marine pollutant:</b>  | No                        |
| <b>14.6 Special precautions which a user needs to be aware of, or needs to comply with, in connection with transport or conveyance either within or outside their premises</b> |                           |
| Special regulations:   | 955, 223                  |
| EmS Codes:   | F-E, S-E                  |
| Physico-Chemical properties:   | see section 9             |
| Limited quantities:  | 5 L                       |
| Segregation group:   | Non-applicable            |
| <b>14.7 Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code):</b>  | Non-applicable            |

**Transport of dangerous goods by air:**

With regard to IATA/ICAO 2021:

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## SECTION 14: TRANSPORT INFORMATION (continued)



- 14.1 UN number:** UN1866
- 14.2 UN proper shipping name:** RESIN SOLUTION, flammable
- 14.3 Transport hazard class(es):** 3  
Labels: 3
- 14.4 Packing group, if applicable:** III
- 14.5 Marine pollutant:** No
- 14.6 Special precautions which a user needs to be aware of, or needs to comply with, in connection with transport or conveyance either within or outside their premises**  
Physico-Chemical properties: see section 9
- 14.7 Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code):** Non-applicable

## SECTION 15: REGULATORY INFORMATION

### 15.1 Safety, health and environmental regulations specific for the product in question:

SARA Title III - Toxic Chemical Release Inventory Reporting (Section 313): styrene ; Cobalt bis(2-ethylhexanoate)  
California Proposition 65 (the Safe Drinking Water and Toxic Enforcement Act of 1986): styrene  
The Toxic Substances Control Act (TSCA) : styrene ; Cobalt bis(2-ethylhexanoate)  
Massachusetts RTK - Substance List: styrene ; Cobalt bis(2-ethylhexanoate)  
New Jersey Worker and Community Right-to-Know Act: styrene ; Cobalt bis(2-ethylhexanoate)  
New York RTK - Substance list: styrene ; Cobalt bis(2-ethylhexanoate)  
Pennsylvania Worker and Community Right-to-Know Law: styrene ; Cobalt bis(2-ethylhexanoate)  
CANADA-Domestic Substances List (DSL): styrene ; Cobalt bis(2-ethylhexanoate)  
CANADA-Non-Domestic Substances List (NDSL): Non-applicable  
NTP (National Toxicology Program): styrene ; Cobalt bis(2-ethylhexanoate)  
Minnesota - Hazardous substances ERTK: styrene ; Cobalt bis(2-ethylhexanoate)  
Rhode Island - Hazardous substances RTK: styrene  
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1096): Non-applicable  
Hazardous Air Pollutants (Clean Air Act): styrene ; Cobalt bis(2-ethylhexanoate)  
Hazardous substances release notification under CERCLA sections 102-103 (40 CFR Part 302): styrene (1000 pounds)

#### Specific provisions in terms of protecting people or the environment:

It is recommended to use the information included in this safety data sheet as data used in a risk evaluation of the local circumstances in order to establish the necessary risk prevention measures for the manipulation, use, storage and disposal of this product.

#### Other legislation:

Take into consideration other applicable federal, state, and local laws and local regulations.

## SECTION 16: OTHER INFORMATION

### Legislation related to safety data sheets:

This safety data sheet has been designed in accordance with Appendix d to §1910.1200 - Safety data sheets

### Texts of the legislative phrases mentioned in section 2:

H315: Causes skin irritation.  
H351: Suspected of causing cancer.  
H360: May damage fertility or the unborn child.  
H372: Causes damage to organs through prolonged or repeated exposure (Inhalation).  
H317: May cause an allergic skin reaction.  
H226: Flammable liquid and vapour.  
H319: Causes serious eye irritation.

### Texts of the legislative phrases mentioned in section 3:

The phrases indicated do not refer to the product itself; they are present merely for informative purposes and refer to the individual components which appear in section 3

### 29 CFR 1910.1200:

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## SECTION 16: OTHER INFORMATION (continued)

Acute Tox. 4: H332 - Harmful if inhaled.  
Asp. Tox. 1: H304 - May be fatal if swallowed and enters airways.  
Carc. 2: H351 - Suspected of causing cancer.  
Eye Irrit. 2A: H319 - Causes serious eye irritation.  
Flam. Liq. 3: H226 - Flammable liquid and vapour.  
Repr. 1B: H360 - May damage fertility or the unborn child.  
Repr. 2: H361 - Suspected of damaging fertility or the unborn child.  
Skin Irrit. 2: H315 - Causes skin irritation.  
Skin Sens. 1A: H317 - May cause an allergic skin reaction.  
STOT RE 1: H372 - Causes damage to organs through prolonged or repeated exposure (Inhalation).

### Advice related to training:

Minimal training is recommended to prevent industrial risks for staff using this product, in order to facilitate their comprehension and interpretation of this safety data sheet, as well as the label on the product.

### Principal bibliographical sources:

Occupational Safety & Health Administration (OSHA).

### Abbreviations and acronyms:

IMDG: International maritime dangerous goods code  
IATA: International Air Transport Association  
ICAO: International Civil Aviation Organisation  
COD: Chemical Oxygen Demand  
BOD5: 5-day biochemical oxygen demand  
BCF: Bioconcentration factor  
LD50: Lethal Dose 50  
CL50: Lethal Concentration 50  
EC50: Effective concentration 50  
Log-POW: Octanol-water partition coefficient  
Koc: Partition coefficient of organic carbon

Manufacturer Disclaimer: The information contained in this safety data sheet ("SDS") is based on sources, technical knowledge and current legislation. Furthermore, is based on data believed to be accurate; thus, the company does not assume any liability for its accuracy. The information provided herein cannot be considered a guarantee of the properties of this product and the same is simply a description of the security requirements. The use, occupational methodology and/or conditions for users of this product are not within our awareness or control. It is ultimately the responsibility of the user(s) to take the necessary measures to obtain the legal requirements concerning the manipulation, storage, use and disposal of chemical products. The information of this SDS only refers to this product, which should not be used for purposes other than those specified. Finally, the manner in which this product is used and whether there is any infringement of patents is the sole responsibility of the user(s).

END OF SAFETY DATA SHEET