


## SECTION 1: IDENTIFICATION

- 1.1 GHS Product identifier:** PIPD-51728
- 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 — Repeated exposure, Hazard Category 1 (Inhalation), 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/face protection/protective clothing/respiratory protection/protective footwear.  
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)**
**Additional labeling:**

**WARNING**

This product can expose you to chemicals including styrene, which is [are] known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**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> Acute Tox. 4: H332; Asp. Tox. 1: H304; Carc. 2: H351; Eye Irrit. 2A: H319; Flam. Liq. 3: H226; Repr. 2: H361; Skin Irrit. 2: H315; STOT RE 1: H372 - Danger	40 - <45 % 
CAS: 136-52-7	<b>Cobalt bis(2-ethylhexanoate)</b> Carc. 2: H351; Eye Irrit. 2A: H319; Repr. 1B: H360; Skin Sens. 1A: H317 - Danger	<0.5 % 
CAS: 91-66-7	<b>N,N-diethylaniline</b> Acute Tox. 3: H301+H311+H331; Flam. Liq. 4: H227; STOT RE 2: H373 - Danger	<0.5 % 

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:**

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#### SECTION 4: FIRST-AID MEASURES (continued)

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>).

###### 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:

###### For non-emergency personnel:

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 inert medium. Remove 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.

###### For emergency responders:

Wear protective equipment. Keep unprotected persons away. See section 8.

##### 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.- General precautions for safe use

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

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

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 on general occupational hygiene**

**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**

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	100 ppm	
styrene CAS: 100-42-5	Ceiling Values - TWA PEL	200 ppm	
Stoddard solvent, < 0.1 % EC 200-753-7 CAS: 8052-41-3	8-hour TWA PEL	500 ppm	2900 mg/m <sup>3</sup>
	Ceiling Values - TWA PEL		
Xylene CAS: 1330-20-7	8-hour TWA PEL	100 ppm	435 mg/m <sup>3</sup>
	Ceiling Values - TWA PEL		
Ethylbenzene CAS: 100-41-4	8-hour TWA PEL	100 ppm	435 mg/m <sup>3</sup>
	Ceiling Values - TWA PEL		
2-methylpropan-1-ol CAS: 78-83-1	8-hour TWA PEL	100 ppm	300 mg/m <sup>3</sup>
	Ceiling Values - TWA PEL		

US. ACGIH Threshold Limit Values (2022):

Identification	Occupational exposure limits		
	TLV-TWA	20 ppm	
styrene CAS: 100-42-5	TLV-STEL	40 ppm	
Stoddard solvent, < 0.1 % EC 200-753-7 CAS: 8052-41-3	TLV-TWA		290 mg/m <sup>3</sup>
	TLV-STEL		580 mg/m <sup>3</sup>
Xylene CAS: 1330-20-7	TLV-TWA	100 ppm	
	TLV-STEL	150 ppm	
Ethylbenzene CAS: 100-41-4	TLV-TWA	20 ppm	
	TLV-STEL		
2-methylpropan-1-ol CAS: 78-83-1	TLV-TWA	50 ppm	
	TLV-STEL		

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**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)**
**US. ACGIH Threshold Limit Values (2022):**

Identification	Occupational exposure limits		
	Paraffin waxes and Hydrocarbon waxes CAS: 8002-74-2	TLV-TWA	
TLV-STEL			

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

Identification	Occupational exposure limits		
	styrene CAS: 100-42-5	PEL	50 ppm
STEL		100 ppm	425 mg/m <sup>3</sup>
Stoddard solvent, < 0.1 % EC 200-753-7 CAS: 8052-41-3	PEL	100 ppm	525 mg/m <sup>3</sup>
	STEL		
Xylene CAS: 1330-20-7	PEL	100 ppm	435 mg/m <sup>3</sup>
	STEL	150 ppm	655 mg/m <sup>3</sup>
Ethylbenzene CAS: 100-41-4	PEL	5 ppm	22 mg/m <sup>3</sup>
	STEL	30 ppm	130 mg/m <sup>3</sup>
2-methylpropan-1-ol CAS: 78-83-1	PEL	50 ppm	150 mg/m <sup>3</sup>
	STEL		
Paraffin waxes and Hydrocarbon waxes CAS: 8002-74-2	PEL		2 mg/m <sup>3</sup>
	STEL		


**Biological limit values:**
**Biological Exposure Indices (BEIs®) - ACGIH**

Identification	BEIs®	Determinant	Sampling Time
styrene CAS: 100-42-5	400 mg/g (NULL)	Mandelic acid plus phenylglyoxylic acid in urine	End of shift
Xylene CAS: 1330-20-7	1500 mg/g (NULL)	Methylhippuric acids in urine	End of shift
Ethylbenzene CAS: 100-41-4	150 mg/g (NULL)	Sum of mandelic acid and phenylglyoxylic acid in urine	End of shift


**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**

Pictogram	PPE	Remarks
 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
 Mandatory hand protection	Chemical protective gloves (Material: Linear low-density polyethylene (LLDPE), Breakthrough time: > 480 min, Thickness: 0.062 mm)	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.- Eye and face protection**

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

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

Pictogram	PPE	Remarks
 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
 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.
 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
 Emergency shower	ANSI Z358-1 ISO 3864-1:2011, ISO 3864-4:2011	 Eyewash stations	DIN 12 899 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

**40 CFR Part 59 (VOC):**

V.O.C.(weight-percent):	41.25 % weight
V.O.C. at 68 °F:	436.66 kg/m <sup>3</sup> (436.66 g/L)

**California Air Resources Board (CARB) - VOC Regulatory:**

V.O.C.(weight-percent):	41.25 % weight
V.O.C. at 68 °F:	436.66 kg/m <sup>3</sup> (436.66 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
Appearance:	Viscous
Color:	 Brown
Odor:	Solvent
Odour threshold:	Non-applicable *

**Volatility:**

Boiling point at atmospheric pressure:	194 - 505 °F
Vapour pressure at 68 °F:	620 Pa
Vapour pressure at 122 °F:	3285.52 Pa (3.29 kPa)
Evaporation rate at 68 °F:	Non-applicable *

**Product description:**

\*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)**

Density at 68 °F:	1058.5 kg/m <sup>3</sup>
Relative density at 68 °F:	1.058
Dynamic viscosity at 68 °F:	Non-applicable *
Kinematic viscosity at 68 °F:	Non-applicable *
Kinematic viscosity at 104 °F:	>20.5 mm <sup>2</sup> /s
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:	Non-applicable *
Solubility properties:	Non-applicable *
Decomposition temperature:	Non-applicable *
Melting point/freezing point:	Non-applicable *

**Flammability:**

Flash Point:	90 °F
Flammability (solid, gas):	Non-applicable *
Autoignition temperature:	444 °F
Lower flammability limit:	Not available
Upper flammability limit:	Not available

**Particle characteristics:**

Median equivalent diameter:	Non-applicable
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**9.2 Other information:**
**Information with regard to physical hazard classes:**

Explosive properties:	Non-applicable *
Oxidising properties:	Non-applicable *
Corrosive to metals:	Non-applicable *
Heat of combustion:	Non-applicable *
Aerosols-total percentage (by mass) of flammable components:	Non-applicable *

**Other safety characteristics:**

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 indicated conditions of storage, handling and use.

**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:**

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**SECTION 10: STABILITY AND REACTIVITY (continued)**

Acids	Water	Oxidising materials	Combustible materials	Others
Avoid strong acids	Not applicable	Avoid	Not applicable	Avoid alkalis or strong bases

**10.6 Hazardous decomposition products:**

Contains substances highly reactive and can auto-polymerize as a result of internal peroxide accumulation. The peroxides formed in these reactions are extremely shock- and heat-sensitive.

**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, however, it contains 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 hazardous 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 hazardous 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); Cobalt bis(2-ethylhexanoate) (2B); Stoddard solvent, < 0.1 % EC 200-753-7 (3); Xylene (3); Ethylbenzene (2B); Solvent naphtha (petroleum), light arom. (3); Solvent naphtha (petroleum), light arom. , < 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 hazardous 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 hazardous with sensitising effects. For more information see section 3.
- Skin: 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 hazardous for this effect. For more information see section 3.

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

- 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 hazardous 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 hazardous for this effect. For more information see section 3.

**Other information:**

Non-applicable

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**SECTION 11: TOXICOLOGICAL INFORMATION (continued)**
**Specific toxicology information on the substances:**

Identification	Acute toxicity		Genus
	Route	Toxicity	
styrene CAS: 100-42-5	LD50 oral	>5000 mg/kg	
	LD50 dermal	>5000 mg/kg	
	LC50 inhalation	11.8 mg/L (4 h)	Rat
N,N-diethylaniline CAS: 91-66-7	LD50 oral	100 mg/kg (ATEi)	
	LD50 dermal	300 mg/kg (ATEi)	
	LC50 inhalation	3 mg/L (ATEi)	
Cobalt bis(2-ethylhexanoate) 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	66666.67 mg/kg (Calculation method)	0 %
Dermal	200000 mg/kg (Calculation method)	0 %
Inhalation	28.42 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):**
**Acute toxicity:**

Identification	Concentration		Species	Genus
	Concentration	Exposure		
styrene CAS: 100-42-5	LC50	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
N,N-diethylaniline CAS: 91-66-7	LC50	38.5 mg/L (96 h)	Oncorhynchus mykiss	Fish
	EC50	1.3 mg/L (48 h)	Daphnia magna	Crustacean
	EC50	5.6 mg/L (72 h)	Scenedesmus subspicatus	Algae

**Chronic toxicity:**

Identification	Concentration		Species	Genus
	Concentration	Exposure		
styrene CAS: 100-42-5	NOEC	Non-applicable		
	NOEC	1.01 mg/L	Daphnia magna	Crustacean
Cobalt bis(2-ethylhexanoate) CAS: 136-52-7	NOEC	0.21 mg/L	Pimephales promelas	Fish
	NOEC	0.1697 mg/L	Aeolosoma sp.	Crustacean
N,N-diethylaniline CAS: 91-66-7	NOEC	1.252 mg/L	N/A	Fish
	NOEC	0.936 mg/L	Daphnia magna	Crustacean

**12.2 Persistence and degradability:**
**Substance-specific information:**

Identification	Degradability		Biodegradability	
	Parameter	Value	Parameter	Value
styrene 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:**
**Substance-specific information:**

Identification	Bioaccumulation potential	
	Parameter	Value
styrene CAS: 100-42-5	BCF	14
	Pow Log	2.95
	Potential	Low

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**SECTION 12: ECOLOGICAL INFORMATION (continued)**

Identification	Bioaccumulation potential	
	N,N-diethylaniline CAS: 91-66-7	BCF
	Pow Log	3.31
	Potential	High

**12.4 Mobility in soil:**

Identification	Absorption/desorption		Volatility	
	styrene CAS: 100-42-5	Koc	Non-applicable	Henry
Conclusion		Non-applicable	Dry soil	Non-applicable
Surface tension		3.21E-2 N/m (77 °F)	Moist soil	Non-applicable
N,N-diethylaniline CAS: 91-66-7	Koc	1500	Henry	19.25 Pa·m <sup>3</sup> /mol
	Conclusion	Low	Dry soil	No
	Surface tension	3.376E-2 N/m (77 °F)	Moist soil	Yes

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

Non-applicable

**12.6 Other adverse effects:**

Not described

**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. Waste should not be disposed of to drains. 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:



- 14.1 UN number:** UN1866
- 14.2 UN proper shipping name:** RESIN SOLUTION
- 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  
Limited quantities: 5 L
- 14.7 Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code):** Non-applicable

**Transport of dangerous goods by sea:**

With regard to IMDG 40-20:

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SECTION 14: TRANSPORT INFORMATION (continued)



- 14.1 UN number:** UN1866  
**14.2 UN proper shipping name:** RESIN SOLUTION  
**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**  
 Special regulations: 955, 223  
 EmS Codes: F-E, S-E  
 Physico-Chemical properties: see section 9  
 Limited quantities: 5 L  
 Segregation group: Non-applicable  
**14.7 Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code):** Non-applicable

**Transport of dangerous goods by air:**

With regard to IATA/ICAO 2022:



- 14.1 UN number:** UN1866  
**14.2 UN proper shipping name:** RESIN SOLUTION  
**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:**

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## SECTION 15: REGULATORY INFORMATION (continued)

- CALIFORNIA LABOR CODE - The Hazardous Substances List: *styrene (100-42-5)*
- California Proposition 65 (the Safe Drinking Water and Toxic Enforcement Act of 1986) - Birth defects or other reproductive harm: Non-applicable
- California Proposition 65 (the Safe Drinking Water and Toxic Enforcement Act of 1986) - Cancer: *styrene (100-42-5)*
- CANADA-Domestic Substances List (DSL): *styrene (100-42-5)*; *Cobalt bis(2-ethylhexanoate) (136-52-7)*; *N,N-diethylaniline (91-66-7)*
- CANADA-Non-Domestic Substances List (NDSL): Non-applicable
- Hazardous Air Pollutants (Clean Air Act): *styrene (100-42-5)*; *Cobalt bis(2-ethylhexanoate) (136-52-7)*
- Massachusetts RTK - Substance List: *styrene (100-42-5)*; *Cobalt bis(2-ethylhexanoate) (136-52-7)*; *N,N-diethylaniline (91-66-7)*
- Minnesota - Hazardous substances ERTK: *styrene (100-42-5)*; *Cobalt bis(2-ethylhexanoate) (136-52-7)*
- New Jersey Worker and Community Right-to-Know Act: *styrene (100-42-5)*; *Cobalt bis(2-ethylhexanoate) (136-52-7)*; *N,N-diethylaniline (91-66-7)*
- New York RTK - Substance list: *styrene (100-42-5)*; *Cobalt bis(2-ethylhexanoate) (136-52-7)*; *N,N-diethylaniline (91-66-7)*
- NTP (National Toxicology Program): *styrene (100-42-5)*; *Cobalt bis(2-ethylhexanoate) (136-52-7)*
- OSHA Specifically Regulated Substances (29 CFR 1910.1001-1096): Non-applicable
- Pennsylvania Worker and Community Right-to-Know Law: *styrene (100-42-5)*; *Cobalt bis(2-ethylhexanoate) (136-52-7)*; *N,N-diethylaniline (91-66-7)*
- Rhode Island - Hazardous substances RTK: *styrene (100-42-5)*; *Cobalt bis(2-ethylhexanoate) (136-52-7)*; *N,N-diethylaniline (91-66-7)*
- The Toxic Substances Control Act (TSCA) : *styrene (100-42-5)*; *Cobalt bis(2-ethylhexanoate) (136-52-7)*; *N,N-diethylaniline (91-66-7)*
- Toxic chemical release reporting under EPCRA section 313 (40 CFR Part 372): *styrene (100-42-5)*; *Cobalt bis(2-ethylhexanoate) (136-52-7)*

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) - Reportable Quantities: *styrene* (1000 pounds); *Cobalt bis(2-ethylhexanoate)* (1 pounds); *N,N-diethylaniline* (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. 3: H301+H311+H331 - Toxic if swallowed, in contact with skin or if inhaled.  
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.  
Flam. Liq. 4: H227 - Combustible liquid.  
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).  
STOT RE 2: H373 - May cause damage to organs through prolonged or repeated exposure.

### 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  
IARC: International Agency for Research on Cancer

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END OF SAFETY DATA SHEET