

## SAFETY DATA SHEET



## SYNOLITE 2020-P-1

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

## 1.1 Product identifier

Product name : SYNOLITE 2020-P-1  
 Internal code : 002334WW17932  
 Chemical formula : Not applicable.  
 REACH Registration number :  Not available.

## 1.2 Relevant identified uses of the substance or mixture and uses advised against

Recommended use : Resins system used in the production of fibre reinforced plastics or non-reinforced filled products.

## 1.3 Details of the supplier of the safety data sheet

Supplier : DSM Composite Resins AG  
 Stettenerstrasse 28  
 CH-8207 Schaffhausen  
 Switzerland  
 Tel: +41 52 6441212  
 www.dsm.com/drs  
 e-mail address of person responsible for this SDS : DSMRESINS.SDS@dsm.com (Communication in English only please)

## 1.4 Emergency telephone number

Emergency telephone number : Netherlands: +31 38 4569289

## SECTION 2: Hazards identification

## 2.1 Classification of the substance or mixture

Product definition :  Mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Flam. Liq. 3, H226  
 Acute Tox. 4, H332  
 Skin Irrit. 2, H315  
 Eye Irrit. 2, H319  
 STOT SE 3, H335  
 STOT RE 1, H372i

See Section 16 for the full text of the H statements declared above.

Classification according to Directive 1999/45/EC [DPD]

The product is classified as dangerous according to Directive 1999/45/EC and its amendments.

Classification :  10  
 Xn; R20, R48/20  
 Xi; R36/37/38

Physical/chemical hazards : Flammable.

Human health hazards :  Harmful by inhalation. Irritating to eyes, respiratory system and skin. Harmful: danger of serious damage to health by prolonged exposure through inhalation.

Environmental hazards : Based on the available data of this product no hazardous properties are known.

See Section 16 for the full text of the R-phrases declared above.

## 2.2 Label elements

## Hazard pictograms



Signal word :  Danger

Hazard statements :  226 Flammable liquid and vapour.  
 H332 Harmful if inhaled.  
 H315 Causes skin irritation.  
 H319 Causes serious eye irritation.  
 H335 May cause respiratory irritation.  
 H372i Causes damage to organs through prolonged or repeated exposure if inhaled.

Supplemental label elements :  Contains cobalt bis(2-ethylhexanoate). May produce an allergic reaction.

**Precautionary statements**

- Prevention** :  Wear protective gloves: >8 hours (breakthrough time): fluor rubber (Viton)(0.70 mm) ; <1 hours (breakthrough time): Chloroprene , Nitril rubber (0.2 mm). Wear eye or face protection. Keep away from heat, sparks, open flames and hot surfaces. - No smoking. Use explosion-proof electrical, ventilating, lighting and all material-handling equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Keep container tightly closed. Use only outdoors or in a well-ventilated area. Do not breathe vapour. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling.
- Response** :  Get medical attention if you feel unwell. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing. If skin irritation occurs: Get medical 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 attention.
- Storage** :  Keep cool.
- Disposal** :  Not applicable.
- Hazardous ingredients** :  styrene

**2.3 Other hazards**

- Other hazards which do not result in classification** :  Not available.

**SECTION 3: Composition/information on ingredients**

**Substance/mixture** :  Mixture

Product/ingredient name	Identifiers	%	Classification	
			67/548/EEC	Regulation (EC) No. 1272/2008 [CLP]
<input checked="" type="checkbox"/> styrene	REACH #: 01-2119457861-32 EC: 202-851-5 CAS: 100-42-5 Index: 601-026-00-0	35-50	R10  Xn; R20, R48/20, R65 Xi; R36/37/38	Flam. Liq. 3, H226  Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 STOT RE 1, H372i Asp. Tox. 1, H304
cobalt bis(2-ethylhexanoate)	EC: 205-250-6 CAS: 136-52-7	0.1-0.25	R43 N; R50/53  <b>See Section 16 for the full text of the R-phrases declared above.</b>	Skin Sens. 1, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410  <b>See Section 16 for the full text of the H statements declared above.</b>

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

**SECTION 4: First aid measures****4.1 Description of first aid measures**

- Eye contact** :  Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
- Inhalation** :  Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** :  Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.

- Ingestion** : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention following exposure or if feeling unwell. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

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

##### Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : Harmful if inhaled. May cause respiratory irritation.
- Skin contact** : Causes skin irritation.
- Ingestion** : Irritating to mouth, throat and stomach.

##### Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:  
pain or irritation  
watering  
redness
- Inhalation** : Adverse symptoms may include the following:  
respiratory tract irritation  
coughing
- Skin contact** : Adverse symptoms may include the following:  
irritation  
redness
- Ingestion** : No specific data.

#### 4.3 Indication of any immediate medical attention and special treatment needed

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

#### Small fire

- Suitable** : Use dry chemical powder, CO<sub>2</sub> or alcohol-resistant foam. Cover with vermiculite or other non-combustible material.
- Not suitable** : Do not use water jet.

#### Large fire

- Suitable** : Alcohol-resistant foam.
- Not suitable** : Do not use water jet.

### 5.2 Special hazards arising from the substance or mixture

- Hazards from the substance or mixture** : Flammable liquid and vapour. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Runoff to sewer may create fire or explosion hazard.
- Hazardous combustion products** : In case of fire, may produce hazardous decomposition products such as carbon monoxide, carbon dioxide, (dense) black smoke, aldehydes, organic acids.

### 5.3 Advice for firefighters

- Special precautions for fire-fighters** : Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

## SECTION 6: Accidental release measures

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

- For non-emergency personnel** :  No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** :  specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

- 6.2 Environmental precautions** :  Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

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

- Small spill** :  Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor.
- Large spill** :  Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product.

- 6.4 Reference to other sections** : See Section 1 for emergency contact information.  
See Section 8 for information on appropriate personal protective equipment.  
See Section 13 for additional waste treatment information.

## SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

### 7.1 Precautions for safe handling

- Protective measures** :  Put on appropriate personal protective equipment (see Section 8). Do not breathe vapour or mist. Do not ingest. Avoid contact with eyes, skin and clothing. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Advice on general occupational hygiene** :  Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

- 7.2 Conditions for safe storage, including any incompatibilities** :  Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.  
 Keep away from heat and direct sunlight.

### 7.3 Specific end use(s)

- Recommendations** :  Not available.
- Industrial sector specific solutions** :  Not available.

## SECTION 8: Exposure controls/personal protection

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

### 8.1 Control parameters

#### Occupational exposure limits

Product/ingredient name	Exposure limit values
styrene	<b>EH40/2005 WELs (United Kingdom (UK), 8/2007).</b> STEL: 250 ppm 15 minute(s). TWA: 100 ppm 8 hour(s). TWA: 430 mg/m <sup>3</sup> 8 hour(s). STEL: 1080 mg/m <sup>3</sup> 15 minute(s).
cobalt bis(2-ethylhexanoate)	<b>EH40/2005 WELs (United Kingdom (UK), 8/2007). Skin sensitiser.</b> TWA: 0.1 mg/m <sup>3</sup> , (as Co) 8 hour(s).

**Recommended monitoring procedures** :  This product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to European Standard EN 689 for methods for the assessment of exposure by inhalation to chemical agents and national guidance documents for methods for the determination of hazardous substances.

#### Derived effect levels

Product/ingredient name	Type	Exposure	Value	Population
styrene	DNEL	Short term Inhalation	289 mg/m <sup>3</sup>	Workers
	DNEL	Short term Inhalation	306 mg/m <sup>3</sup>	Workers
	DNEL	Long term Inhalation	85 mg/m <sup>3</sup>	Workers
	DNEL	Short term Inhalation	174.25 mg/m <sup>3</sup>	Consumers
	DNEL	Short term Inhalation	182.75 mg/m <sup>3</sup>	Consumers
	DNEL	Long term Inhalation	10.2 mg/m <sup>3</sup>	Consumers

#### Predicted effect concentrations

Product/ingredient name	Type	Compartment Detail	Value	Method Detail
styrene	PNEC	Fresh water	0.028 mg/l	Assessment Factors
	PNEC	Marine	0.0028 mg/l	Assessment Factors
	PNEC	Fresh water sediment	0.614 mg/kg dwt	-
	PNEC	Marine water sediment	0.0614 mg/kg dwt	-
	PNEC	Sewage Treatment Plant	5 mg/l	Assessment Factors
	PNEC	Soil	0.2 mg/kg dwt	-

### 8.2 Exposure controls

**Appropriate engineering controls** :  Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

#### Individual protection measures

**Hygiene measures** :  Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Eye/face protection** : Safety glasses with side shields.

**Hand protection** :  8 hours (breakthrough time): fluor rubber (Viton)(0.70 mm)  
<1 hours (breakthrough time): Chloroprene , Nitril rubber (0.2 mm)

**Skin and body** : Wear suitable protective clothing.

**Respiratory protection** : Wear filter mask, filtertype A.

**Environmental exposure controls** :  Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

**Remarks** :  Replace damaged gloves.

**Advice on personal protection is applicable for high exposure levels. Select proper personal protection based on a risk assessment of the actual exposure situation.**

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Physical state	: Liquid. [Hazy liquid.]
Colour	: Bluish-grey
Odour	: Characteristic.
Odour threshold	: Not available.
pH	: Not available.
Melting point	: <input checked="" type="checkbox"/> Not available.
Initial boiling point and boiling range	: <input checked="" type="checkbox"/> 45 °C
Softening range	: Not available.
Flash point	: 33 °C (estimate)
Evaporation rate	: Not available.
Flammability (solid, gas)	: <input checked="" type="checkbox"/> Not available.
Burning time	: Not applicable.
Burning rate	: Not applicable.
Upper/lower flammability or explosive limits	: Not available.
Vapour pressure	: Not available.
Vapour density	: Not available.
Relative density	: 1.1 (Water = 1)
Density ( g/cm <sup>3</sup> )	: 1.1 g/cm <sup>3</sup> (23°C)
Bulk density	: Not available.
Solubility	: Insoluble in the following materials: cold water.
Solubility in water	: Not available.
Solubility at room temperature	: Not available.
Partition coefficient: n-octanol/water	: <input checked="" type="checkbox"/> Not available.
Auto-ignition temperature	: Not available.
Decomposition temperature	: <input checked="" type="checkbox"/> Not available.
Viscosity	: Dynamic: 330 to 450 mPa·s (330 to 450 cP)
Explosive properties	: <input checked="" type="checkbox"/> Not available.
Oxidising properties	: <input checked="" type="checkbox"/> Not available.

### 9.2 Other information

Remarks :  Not available.

## SECTION 10: Stability and reactivity

10.1 Reactivity	: <input checked="" type="checkbox"/> No specific test data related to reactivity available for this product or its ingredients.
10.2 Chemical stability	: <input checked="" type="checkbox"/> The product is stable.
10.3 Possibility of hazardous reactions	: <input checked="" type="checkbox"/> Under normal conditions of storage and use, hazardous reactions will not occur.
10.4 Conditions to avoid	: <input checked="" type="checkbox"/> Avoid all possible sources of ignition (spark or flame). Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.
10.5 Incompatible materials	: <input checked="" type="checkbox"/> Reactive or incompatible with the following materials: oxidizing materials
10.6 Hazardous decomposition products	: <input checked="" type="checkbox"/> No specific data.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Styrene	LD50 Dermal LD50 Oral LC50 Inhalation Vapour	Rat Rat Rat	>2000 mg/kg 5000 mg/kg 12 g/m <sup>3</sup>	- - 4 hours

**Conclusion/Summary** : Not available.

#### Acute toxicity estimates

Route	ATE value
Inhalation (gases) Inhalation (vapours) Inhalation (dusts and mists)	11124.3 ppm 27.19 mg/l 3.708 mg/l

#### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Styrene	Respiratory - Irritant	Mammal - species unspecified	-	-	-

#### Conclusion/Summary

**Skin** : Not available.

**Eyes** : Not available.

**Respiratory** : Not available.

#### Sensitiser

#### Conclusion/Summary

**Skin** : Not available.

**Respiratory** : Not available.

#### Mutagenicity

**Conclusion/Summary** : Not available.

#### Carcinogenicity

**Conclusion/Summary** : Not available.

#### Reproductive toxicity

**Conclusion/Summary** : Not available.

#### Teratogenicity

**Conclusion/Summary** : Not available.

#### Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
Styrene	Category 3	Not determined	Respiratory tract irritation

#### Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Route of exposure	Target organs
Styrene	Category 1	Inhalation	Ears

#### Aspiration hazard

Product/ingredient name	Result
Styrene	ASPIRATION HAZARD - Category 1

#### Potential acute health effects

**Inhalation** : Harmful if inhaled. May cause respiratory irritation.

**Ingestion** : Irritating to mouth, throat and stomach.

**Skin contact** : Causes skin irritation.

**Eye contact** : Causes serious eye irritation.

#### Symptoms related to the physical, chemical and toxicological characteristics

- Inhalation** :  Adverse symptoms may include the following:  
respiratory tract irritation  
coughing
- Ingestion** :  No specific data.
- Skin contact** :  Adverse symptoms may include the following:  
irritation  
redness
- Eye contact** :  Adverse symptoms may include the following:  
pain or irritation  
watering  
redness
- General** :  Causes damage to organs through prolonged or repeated exposure if inhaled.
- Carcinogenicity** : No known significant effects or critical hazards.
- Mutagenicity** : No known significant effects or critical hazards.
- Teratogenicity** : No known significant effects or critical hazards.
- Developmental effects** : No known significant effects or critical hazards.
- Fertility effects** : No known significant effects or critical hazards.
- Classification**

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
<input checked="" type="checkbox"/> styrene	A4	2B	-	-	-	-
Cobalt bis(2-ethylhexanoate)	-	2B	-	-	-	-
1,4-dihydroxybenzene	A3	3	-	-	-	-

## SECTION 12: Ecological information

### 12.1 Toxicity

Product/ingredient name	Result	Species	Exposure	Effects
<input checked="" type="checkbox"/> styrene	Acute EC50 4.9 mg/l Acute LC50 4.02 mg/l Chronic NOEC 1.01 mg/l	Algae Fish - Fathead minnow Daphnia - Daphnia magna	72 hours 96 hours 21 days	- - -

**Conclusion/Summary** : Not available.

### 12.2 Persistence and degradability

**Conclusion/Summary** : Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
<input checked="" type="checkbox"/> styrene	-	-	Readily
cobalt bis(2-ethylhexanoate)	-	-	Not readily

### 12.3 Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
<input checked="" type="checkbox"/> styrene	2.95	-	low

### 12.4 Mobility in soil

**Soil/water partition coefficient (K<sub>oc</sub>)** :  Not available.

**Mobility** :  Not available.

### 12.5 Results of PBT and vPvB assessment

**PBT** : Not applicable.

**vPvB** : Not applicable.

**12.6 Other adverse effects** : No known significant effects or critical hazards.

## SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

### 13.1 Waste treatment methods

#### Product



**Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.





**Hazardous waste** : The classification of the product may meet the criteria for a hazardous waste.

**Packaging**

**Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

**Special precautions** : This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

## SECTION 14: Transport information

	ADR/RID	ADN/ADNR	IMDG	IATA
14.1 UN number	UN1866	UN1866	UN1866	UN1866
14.2 UN proper shipping name	RESIN SOLUTION	RESIN SOLUTION	RESIN SOLUTION	Resin solution
14.3 Transport hazard class(es)				
14.4 Packing group	III	III	III	III
14.5 Environmental hazards	No.	Yes.	No.	No.
14.6 Special precautions for user	Not available.	Not available.	Not available.	Not available.
Additional information	<p><b>Hazard identification number</b> 30</p> <p><b>Limited quantity</b> 5 L</p> <p><b>Special provisions</b> 640E</p> <p><b>Tunnel code</b> (D/E)</p> <p><b>Remarks</b> This class 3 material can be considered non hazardous in packagings up to 450 L.</p>	-	<p><b>Emergency schedules (EmS)</b> F-E, _S-E_</p>	<p><b>Passenger and Cargo Aircraft</b> Quantity limitation: 60 L Packaging instructions: 355</p> <p><b>Cargo Aircraft Only</b> Quantity limitation: 220 L Packaging instructions: 366</p> <p><b>Limited Quantities - Passenger Aircraft</b> Quantity limitation: 10 L Packaging instructions: Y344</p>

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not available.

## SECTION 15: Regulatory information

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

#### EU Regulation (EC) No. 1907/2006 (REACH)

##### Annex XIV - List of substances subject to authorisation

##### Substances of very high concern

None of the components are listed.

##### Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

Not applicable.

Product/ingredient name	List name	Name on list	Classification	Notes
cobalt bis(2-ethylhexanoate)	UK Occupational Exposure Limits EH40 - WEL	cobalt compounds	Carc.	-

15.2 Chemical Safety Assessment : Not applicable.

## SECTION 16: Other information

### Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
<input checked="" type="checkbox"/> Flam. Liq. 3, H226 <input checked="" type="checkbox"/> Acute Tox. 4, H332 <input checked="" type="checkbox"/> Skin Irrit. 2, H315 <input checked="" type="checkbox"/> Eye Irrit. 2, H319 <input checked="" type="checkbox"/> STOT SE 3, H335 <input checked="" type="checkbox"/> STOT RE 1, H372i	On basis of test data Calculation method Calculation method Calculation method Calculation method Calculation method

**Full text of abbreviated H statements** :  H226 Flammable liquid and vapour.  
 H304 May be fatal if swallowed and enters airways.  
 H315 Causes skin irritation.  
 H317 May cause an allergic skin reaction.  
 H319 Causes serious eye irritation.  
 H332 Harmful if inhaled.  
 H335 May cause respiratory irritation.  
 H372i Causes damage to organs through prolonged or repeated exposure if inhaled.  
 H400 Very toxic to aquatic life.  
 H410 Very toxic to aquatic life with long lasting effects.

**Full text of classifications [CLP/GHS]** :  Acute Tox. 4, H332 ACUTE TOXICITY: INHALATION - Category 4  
 Aquatic Acute 1, H400 AQUATIC TOXICITY (ACUTE) - Category 1  
 Aquatic Chronic 1, H410 AQUATIC TOXICITY (CHRONIC) - Category 1  
 Asp. Tox. 1, H304 ASPIRATION HAZARD - Category 1  
 Eye Irrit. 2, H319 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2  
 Flam. Liq. 3, H226 FLAMMABLE LIQUIDS - Category 3  
 Skin Irrit. 2, H315 SKIN CORROSION/IRRITATION - Category 2  
 Skin Sens. 1, H317 SKIN SENSITIZATION - Category 1  
 STOT RE 1, H372i SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE): INHALATION [ears] - Category 1  
 STOT SE 3, H335 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) [Respiratory tract irritation] - Category 3

**Full text of abbreviated R phrases** :  R10- Flammable.  
 R20- Harmful by inhalation.  
 R48/20- Harmful: danger of serious damage to health by prolonged exposure through inhalation.  
 R65- Harmful: may cause lung damage if swallowed.  
 R36/37/38- Irritating to eyes, respiratory system and skin.  
 R43- May cause sensitisation by skin contact.  
 R50/53- Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**Full text of classifications [DSD/DPD]** : Xn - Harmful  
 Xi - Irritant  
 N - Dangerous for the environment

**Alterations compared to the previous version** : Alterations compared to the previous version are marked with a little (blue) triangle.

**Abbreviations and acronyms** : ATE = Acute Toxicity Estimate  
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]  
DNEL = Derived No Effect Level  
EUH statement = CLP-specific Hazard statement  
PNEC = Predicted No Effect Concentration  
RRN = REACH Registration Number

**Sources of key data** : Literature data and/or investigation reports are available through the manufacturer.

**Internal code** : 002334WW17932

**Training advice** : Handling of this substance or preparation is restricted to skilled personnel only.

**Notice to reader**

The information contained in the Safety Data Sheet is based on our data available on the date of publication. The information is intended to aid the user in controlling the handling risks; it is not to be construed as a warranty or specification of the product quality. The information may not be or may not altogether be applicable to combinations of the product with other substances or to particular applications.

The user is responsible for ensuring that appropriate precautions are taken and for satisfying themselves that the data are suitable and sufficient for the product's intended purpose. In case of any unclarity we advise consulting the supplier or an expert.

**History**

**Date of printing** : 20 May 2011.

**Date of issue** : 20 May 2011

**Version** : 5