

# **SAFETY DATA SHEET**

Revision Date 15/Jun/2018

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

1.1. Product Identifier Product Description:

# **AQUA Roofing Resin**

Family

Unsaturated Polyester Resin

1.2. Relevant identified uses of the substance or mixture and uses advised againstRecommended Use(Low Styrene Emission) Polyester ResinUses advised againstNo information available

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

Supplier Principal building products ltd, barbot hall industrial estate, mangham road, Rotherham. S61 4RJ

Telephone: 01709728150

E-mail address: sales@pbpltd.co.uk

Number

# 2. HAZARDS IDENTIFICATION

## 2.1. - Classification of the substance or mixture

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

Acute toxicity - Inhalation (Vapours) Acute toxicity - Inhalation (Dusts/Mists) Skin corrosion/irritation Serious eye damage/eye irritation Skin Sensitisation Reproductive Toxicity Specific target organ toxicity (single exposure) Specific target organ toxicity (repeated exposure) Chronic aquatic toxicity Flammable liquid Category 4 Category 2 Category 2 Category 1A Category 3 Category 3 Category 3 Category 3 Category 3

## 2.2. Label Elements

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



Contains Styrene, Cobalt bis(2-thylhexanoate)

## **Hazard Statements**

- H332 Harmful if inhaled
- H315 Causes skin irritation
- H319 Causes serious eye irritation
- H317 May cause an allergic skin reaction
- H335 May cause respiratory irritation
- H361d Suspected of damaging the unborn child
- H372 Causes damage to hearing through prolonged or repeated exposure if inhaled
- H412 Harmful to aquatic life with long lasting effects

H226 - Flammable liquid and vapour

52.9 % of the mixture consists of ingredient(s) of unknown toxicity 54.4 % of the mixture consists of components(s) of unknown hazards to the aquatic environment

## Precautionary Statements - EU (§28, 1272/2008)

P202 - Do not handle until all safety precautions have been read and understood
P314 - Get medical advice/attention if you feel unwell
P370 + P378 - In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish P210 - Keep away from heat, sparks, open flames, hot surfaces. - No smoking
P260 - Do not breathe mist/vapours/spray
P280 - Wear protective gloves and eye/face protection

## 2.3. Other hazards

No information available.

# **3. COMPOSITION/INFORMATION ON INGREDIENTS**

Chemical Name	EC No	CAS No	Weight-%	EU - GHS Substance Classification	REACH Reg. No
Styrene	202-851-5	100-42-5	43 - 47	STOT SE 3 (H335) STOT RE 2 (H373) Asp. Tox. 1 (H304) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Repr. 2 H361d Acute Tox. 4 (H332) Flam Liq. 3 (H226)	01-2119457861-32
Cobalt bis(2- ethylhexanoate)	205-250-6	136-52-7	< 0.15	Skin Sens. 1A (H317) Repr. Cat. 2 (H361fd) Aquatic Acute 1 (H400) Aquatic Chronic 3(H412) Eye Irritant Cat 2 (H319)	01-2119524678-29

For the full text of the H-Statements mentioned in this Section, see Section 16

# 4. FIRST AID MEASURES

## 4.1. Description of first aid measures

#### Eye Contact

Immediately flush eyes for at least 15 minutes. Get medical attention.

## Skin Contact

Wash off with warm water and soap. Remove contaminated clothing and shoes. If skin irritation persists, call a doctor. Wash contaminated clothing before reuse.

## Ingestion

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Get immediate medical advice/attention.

## Inhalation

In case of unconsciousness bring patient into stable side position for transport. Remove to fresh air. If breathing is laboured, administer oxygen. If not breathing, give artificial respiration. Get medical attention immediately.

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

Irritating to eyes, respiratory system and skin. Harmful by inhalation, in contact with skin and if swallowed. May cause allergic skin reaction. Repeated exposure to styrene may cause hearing effects.

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

Notes to Physician

Treat symptomatically.

# **5. FIRE-FIGHTING MEASURES**

## 5.1. Extinguishing media

Suitable Extinguishing Media Carbon dioxide (CO2), Foam, Dry chemical, Water spray

#### **Extinguishing media which must not be used for safety reasons** Do not use a solid water stream as it may scatter and spread fire.

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

Special exposure hazards arising from the substance or preparation itself, combustion products, resulting gases Flammable. Vapours may form explosive mixtures with air. Vapours may travel to areas away from work site before

igniting/flashing back to vapour source. Combustion may produce carbon monoxide, carbon dioxide, irritating or toxic vapors and gases. Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Move containers from fire area if you can do it without risk. Cool containers with flooding quantities of water until well after fire is out. Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

## 5.3. Advice for firefighters

## Special protective equipment for fire-fighters

Wear self-contained breathing apparatus and protective suit.

## 6. ACCIDENTAL RELEASE MEASURES

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

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

## 6.2. Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not allow material to contaminate ground water system. Prevent product from entering drains.

## 6.3. Methods and material for containment and cleaning up

A vapour suppressing foam may be used to reduce vapours. Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container. Use clean non-sparking tools to collect absorbed material.

## 6.4. Reference to other sections

See Section 12 for more information

# 7. HANDLING AND STORAGE

## 7.1. Precautions for Safe Handling

## Handling

Do not breathe vapour or mist. Avoid contact with skin, eyes or clothing. Take off contaminated clothing and wash it before reuse. Ensure adequate ventilation. Ground and bond containers when transferring material. Use spark-proof tools and explosion-proof equipment. Consult your supplier of promoters and catalysts for additional instructions on proper mixing and usage. Empty containers may retain product residue (liquid and/or vapor). Do not pressurize, cut, weld, braze, solder, drill, grind, or expose these containers to heat, flame, sparks, static electricity, or other sources of ignition as the container may explode and may cause injury or death. Empty drums should be completely drained and properly bunged. Empty drums should be promptly returned to a drum reconditioner or properly disposed. Do not use compressed air for filling, discharging or handling.

#### **General Hygiene Considerations**

Handle in accordance with good industrial hygiene and safety practice.

#### 7.2. Conditions for safe storage, including any incompatibilities

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

## 7.3. Specific end use(s)

**Other Guidelines** 

No information available.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### **8.1. Control parameters** Occupational Exposure Limits Components with workplace control parameters. Styrene

Austria	80 ppm STEL 340 mg/m <sup>3</sup> STEL 20 ppm TWA
Belgium	85 mg/m <sup>3</sup> TWA 25 ppm TWA 108 mg/m <sup>3</sup> TWA (skin) 80 ppm STEL 346 mg/m <sup>3</sup> STEL
Bulgaria	85.0 mg/m <sup>3</sup> TWA 215.0
Croatia	mg/m <sup>3</sup> STEL 250 ppm STEL KGVI 1080 mg/m <sup>3</sup> STEL KGVI 100 ppm TWA GVI 430 mg/m <sup>3</sup>
Czech Republic	TWA GVI 400 mg/m <sup>3</sup> Ceiling 100 mg/m <sup>3</sup> TWA (skin)
Denmark	25 ppm Ceiling 105 mg/m <sup>3</sup> Ceiling (skin)
Estonia	20 ppm TWA 90 mg/m <sup>3</sup> TWA 50 ppm STEL 200 mg/m <sup>3</sup> STEL (skin)
Finland	20 ppm TWA

	86 mg/m <sup>3</sup> TWA
	100 ppm STEL
_	430 mg/m <sup>3</sup> STEL
France	23.3 ppm TWA
	100 mg/m <sup>3</sup> TWA
	46.6 ppm STEL
-	200 mg/m <sup>3</sup> STEL
Germany	20 ppm TWA
<b>C</b>	86 mg/m <sup>3</sup> TWA
Greece	100 ppm TWA
	425 mg/m <sup>3</sup> TWA
	250 ppm STEL
Hungary	1050 mg/m <sup>3</sup> STEL 50 mg/m <sup>3</sup> TWA AK
Hungary	50 mg/m <sup>3</sup> STEL CK
Ireland	20 ppm TWA
lictana	85 mg/m <sup>3</sup> TWA
	40 ppm STEL
	170 mg/m <sup>3</sup> STEL
Italy	20 ppm TWA
	85 mg/m <sup>3</sup> TWA
	40 ppm STEL
	170 mg/m <sup>3</sup> STEL
Latvia	10 mg/m <sup>3</sup> TWA
	30 mg/m <sup>3</sup> STEL
Lithuania	20 ppm TWA (IPRD)
	90 mg/m <sup>3</sup> TWA (IPRD) 10
	ppm TWA (IPRD)
	50 ppm STEL (TPRD) 200
	mg/m <sup>3</sup> STEL (TPRD)(skin)
	25 ppm TWA
Norway	105 mg/m <sup>3</sup> TWA
	25 ppm STEL
	105 mg/m <sup>3</sup> STEL 200 mg/m <sup>3</sup> STEL
Poland	50 mg/m <sup>3</sup> TWA
Fotaliu	20 ppm
Portugal OELs Data	40 ppm STEL
l'ontégat orres bata	12 ppm TWA
Romania	50 mg/m <sup>3</sup> TWA
	35 ppm STEL
	150 mg/m <sup>3</sup> STEL
	10 mg/m³ TWA (vapor)
Russia	30 mg/m³ STEL (vapor)
	20 ppm TWA
Slovakia	86 mg/m³ TWA
	200 mg/m <sup>3</sup> Ceiling
	20 ppm TWA
Slovenia	86 mg/m <sup>3</sup> TWA
	80 ppm STEL
	344 mg/m <sup>3</sup> STEL
Spain	20 ppm TWA 86 mg/m³ TWA
Sham	40 ppm STEL
	172 mg/m <sup>3</sup> STEL
	10 ppm LLV
Sweden	43 mg/m <sup>3</sup> LLV
	20 ppm STV
	86 mg/m <sup>3</sup> STV
	(skin)
	40 ppm STEL
Switzerland	170 mg/m <sup>3</sup> STEL

	20 ppm TWA
	85 mg/m <sup>3</sup> TWA
United Kingdom	100 ppm TWA
8	430 mg/m <sup>3</sup> TWA
	250 ppm STEL
	1080 mg/m <sup>3</sup> STEL
ACGIH - TLV	20 ppm TWA
	40 ppm STEL
	40 ppill 51EE
Cobalt bis(2-ethylhexanoate)	
Austria	(skin)
Czech Republic	0.1 mg/m <sup>3</sup> Ceiling
-	0.05 mg/m <sup>3</sup> TWA
Greece	0.1 mg/m <sup>3</sup> TWA
Ireland	0.1 mg/m <sup>3</sup> TWA
	0.3 mg/m <sup>3</sup> STEL
Norway	0.02 mg/m <sup>3</sup> TWA
	0.06 mg/m <sup>3</sup> STEL
Switzerland	(skin)
	0.05 mg/m <sup>3</sup> TWA
United Kingdom	0.1 mg/m <sup>3</sup> TWA
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#### Legend

ACGIH (American Conference of Governmental Industrial Hygienists) TLV® (Threshold Limit Value) TWA (time-weighted average) STEL (Short Term Exposure Limit) MAK - Maximum Occupational Exposure Limits SKIN: Skin Absorption

#### **Biological occupational exposure limits**

#### Chemical Name Bulgaria

#### Styrene

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BEI: 600 mg/g Creatinine, DETERMINANT: Mandelic acid and Phenylglyoxylic acid - together in urine, SAMPLING TIME: at the end of exposure or end of shift, in remote exposure - after several shifts **Finland** 

BEI: 1.2 mmol/L, DETERMINANT: MAPGA in urine, SAMPLING TIME: prior to shift, NOTE: MAPGA equals sum of urinary Mandelic and Phenylglyoxylic acids

France

BEI: 0.55 mg/L, DETERMINANT: Styrene in venous blood, SAMPLING TIME: end of shift, NOTE: Semi-quantitative (ambiguous interpretation)

BEI: 0.02 mg/L, DETERMINANT: Styrene in venous blood, SAMPLING TIME: prior to shift, NOTE: Semi-quantitative (ambiguous interpretation)

BEI: 800 mg/g creatinine, DETERMINANT: Mandelic acid in urine, SAMPLING TIME: end of shift, NOTE: Non-specific (observed after the exposure to other substances)

BEI: 300 mg/g creatinine, DETERMINANT: Mandelic acid in urine, SAMPLING TIME: prior to shift, NOTE: Non-specific (observed after the exposure to other substances)

BEI: 240 mg/g creatinine, DETERMINANT: Phenylglyoxylic acid in urine, SAMPLING TIME: end of shift, NOTE: Non-specific (observed after the exposure to other substances)

BEI: 100 mg/g creatinine, DETERMINANT: Phenylglyoxylic acid in urine, SAMPLING TIME: prior to shift, NOTE: Germany

BEI: 600 mg/g, DETERMINANT: Mandelic acid plus Phenylglyoxylic acid in urine, SAMPLING TIME: end of shift, NOTE: measured as mg/g Creatinine

BEI: 600 mg/g, DETERMINANT: Mandelic acid plus Phenylglyoxylic acid in urine, SAMPLING TIME: end of several shifts, NOTE: measured as mg/g Creatinine; for long-term exposures

#### Latvia

BEI: 0.8 g/g Creatinine, DETERMINANT: Mandelic acid in urine, SAMPLING TIME: end of shift

BEI: 0.55 mg/l, DETERMINANT: Styrene in blood, SAMPLING TIME: end of shift

#### Romania

BEI: 800 mg/g creatinine, DETERMINANT: Mandelic acid in urine, SAMPLING TIME: end of shift

BEI: 300 mg/g creatinine, DETERMINANT: Mandelic acid in urine, SAMPLING TIME: beginning of second shift

BEI: 100 mg/g creatinine, DETERMINANT: Phenylglyoxylic acid in urine, SAMPLING TIME: end of shift

BEI: 100 mg/g creatinine, DETERMINANT: Phenylglyoxylic acid in urine, SAMPLING TIME: beginning of second shift BEI: 0.55 mg/L, DETERMINANT: Styrene in blood, SAMPLING TIME: end of shift BEI: 0.02 mg/L, DETERMINANT: Styrene in blood, SAMPLING TIME: beginning of second shift **Slovakia** 

BEI: 600 mg/g creatinine, DETERMINANT: Mandelic acid and phenylglycolic acid in urine, SAMPLING TIME: after all work shifts, NOTE: for long-term exposure

BEI: 600 mg/g creatinine, DETERMINANT: Mandelic acid and phenylglycolic acid in urine, SAMPLING TIME: end of exposure or work shift, NOTE:

Chemical Name	Derived No Effect Level (DNEL)	Predicted No Effect Concentration (PNEC)
Styrene	End Use: Workers	Fresh water
	Exposure Route: Inhalation	Value: 0.028 mg/l
	Exposure Type: Acute, systemic effects Value: 289 mg/m <sup>3</sup> (68 ppm)	
	· · · · · · · · · · · · · · · · · · ·	Sea water
	End Use: Workers	Value: 0.0028 mg/l
	Exposure Route: Inhalation	Assessment factor: 100
	Exposure Type: Acute, local effects	
	Value: 306 mg/m <sup>3</sup> (72 ppm)	Water
		Value: 0.04 mg/l Intermittent
	End Use: Workers	Releases Assessment factor: 100
	Exposure Route: Inhalation	
	Exposure Type: Long term, systemic	Fresh water sediment
	effects	Value: 0.614 mg/kg dw
	Value: 85 mg/m <sup>3</sup> (20 ppm)	
		Sea sediment
	End Use: Workers	Value: 0.0614 mg/kg dw
	Exposure Route: Dermal	
	Exposure Type: Long term, systemic	Sewage Treatment Plant
	effects	Value: 5 mg/l
	Value: 406 mg/kg bw/day	Assessment factor: 100
	End Use: General Population Exposure	Soil
	Route: Inhalation	Value: 0.2 mg/kg dw
	Exposure Type: Acute, systemic effects	
	Value: 174.25 mg/m <sup>3</sup> (41 ppm)	
	End Use: General Population Exposure	
	Route: Inhalation	
	Exposure Type: Acute, local effects Value: 182.75 mg/m <sup>3</sup> (43 ppm)	
	End Use: General Population Exposure	
	Route: Inhalation	
	Exposure Type: Long term, systemic	
	effects	
	Value: 10.2 mg/m³ (2.4 ppm)	
	End Use: General Population Exposure Route: Dermal	
	Exposure Type: Long term, systemic	
	effects Value: 343 mg/kg bw/day	
Cobalt bis(2-ethylhexanoate)	End Use: Workers	Fresh water
	Exposure Route: Inhalation	Value: 0.51 ug Co/L
	Exposure Type: Long term, local effects	
	Value: 235 ug/m <sup>3</sup>	Marine water
	5	Value: 2.36 ug Co/L
	End Use: General Population Exposure	
	Route: Oral	Sediment
	Exposure Type: Long term, systemic	Value: 9.5 mg Co/kg sed. dw

	effects Value: 55.8 ug/kg bw/day End Use: General Population Exposure Route: Inhalation Exposure Type: Long term, local effects Value: 0.37 mg Co/l Value: 37 ug/m <sup>3</sup>		
8.2. Exposure controls Engineering Controls	Use general ventilation to maintain airborne concentrations to levels that are below regulatory and recommended occupational exposure limits. Local ventilation may be required during certain operations.		
Personal protective equipment Eye Protection	Safety glasses with side-shields conforming to EN166. If splashes are likely to occur:. Tightly fitting safety goggles (EN166). Ensure that eyewash stations and safety showers are close to the workstation location.		
Skin Protection	Impervious clothing.		
Hand Protection	Protective gloves complying with EN374. Wear protective nitrile rubber or Viton <sup>™</sup> gloves. Gloves made of nitrile rubber or polyvinyl chloride (PVC) may be used for splash protection and brief or intermittent contact with styrenated polyester resin. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.		
Respiratory Protection Recommended Filter Type	None required if hazards have been assessed and airborne concentrations are maintained below the exposure limits listed in Section 8. Wear an approved air- purifying respirator with organic vapor cartridges and particulate filters where airborne concentrations may exceed exposure limits in Section 8 and/or there is exposure to dust or mists due to sanding, grinding, cutting, or spraying. Use an approved positive-pressure air-supplied respirator with emergency escape provisions if there is any potential for an uncontrolled release, airborne concentrations are not known, or any other circumstances where air-purifying respirators may not provide adequate protection.Type A (EN141) and Type P2 (EN143)		
Environmental exposure controls	Local authorities should be advised if significant spillages cannot be contained.		

# 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical	and chemical properties	
Appearance	Pink	
Physical State	Liquid	
Odour	Pungent	
Odour Threshold	0.2 ppm	
	(Styrene)	
		Remarks Method
рН	Not applicable	None known
Melting point / Freezing point	- 30°Ċ (Styrene)	None known
Boiling point / boiling range	146°C (Styrene)	None known
Flash Point	32 °C	Seta closed cup
Evaporation rate	0.49 (BuAc = 1) (Styrene)	None known
Flammability Limit in Air	-	
Upper	6.1% (Styrene)	
Lower	1.1% (Styrene)	
Vapour pressure Vapour	6.7 hPa (Štyrene) @ 20°C	None known
Density Specific Gravity	3.6 (Air = 1) (Styrene) 1.10	None known
Solubility	±0.02 @23°C Insoluble in	None known
-	water	None known
Partition coefficient: n-octanol/wa	aterNo information available	None known

Autoignition temperature **Decomposition temperature** Viscosity **Explosive properties Oxidising Properties** 

490°C (Styrene) No information available 900 - 1100 mPa·s @ 23°C No information available No information available

None known None known Brookfield Method

Test

9.2. Other information No information available

# **10. STABILITY AND REACTIVITY**

#### 10.1. Reactivity

Unstable upon depletion of inhibitor.

#### 10.2. Chemical Stability

Stable under normal conditions. Stable under recommended storage conditions.

#### **10.3.** Possibility of Hazardous Reactions

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

#### **10.4.** Conditions to Avoid

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

#### **10.5.** Incompatible materials

Strong acids. Strong oxidising agents. Metal salts. Polymerization initiators. Copper. Copper alloys. Brass.

#### 10.6. Hazardous Decomposition Products

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

## **11. TOXICOLOGICAL INFORMATION**

#### 11.1. Information on toxicological effects

Acute toxicity

<u>Styrene</u> Oral LD50 Dermal LD50 Inhalation LC50	= 5000 mg/kg (Rat) > 2000 mg/kg (Rat) = 11.8 mg/l (4 H) (Rat)
Inhalation	Harmful by inhalation. May cause irritation of respiratory tract. Inhalation of high vapor concentrations can cause central nervous system depression and narcosis.
Ingestion	Harmful if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.
Skin Contact	Causes skin irritation. Prolonged skin contact may defat the skin and produce dermatitis. May cause sensitisation by skin contact.
Eye Contact	Irritating to eyes.
Irritation	Irritating to eyes and skin.
Corrosivity	Not corrosive.

Sensitisation	May cause sensitization of susceptible persons by skin contact.	
Carcinogenic Effects	There is no convincing evidence that styrene possesses significant carcinogenic potential in humans.	
Repeated dose toxicity	In humans, styrene may cause a transient decrease in color discrimination and effects on hearing. Repeated or prolonged exposure may cause skin irritation and dermatitis, due to defatting properties of the product. May cause damage to the liver, eyes, brain, respiratory system, central nervous system through prolonged or repeated exposure if inhaled.	
Mutagenic effects	Styrene has given mixed positive and negative results in a number of mutagenicity tests. Styrene was not mutagenic without metabolic activation but gave negative and positive mutagenic results with metabolic activation.	
Target organ(s)	Liver, Central nervous system (CNS), Respiratory system.	
Numerical measures of toxicity - Pro	oduct Information	
Unknown acute toxicity	52.9 % of the mixture consists of ingredient(s) of unknown toxicity	
The following values are calculated based on chapter 3.1 of the GHS documentATEmix (oral)5258 mg/kgATEmix (dermal)2104 mg/kgATEmix (inhalation-dust/mist)1.6 mg/lATEmix (inhalation-vapour)12.3 mg/l		
12. ECOLOGICAL INFORMATION		

#### **12.1.** Toxicity **Ecotoxicity effects:**

Styrene	
Algae	EC50 = 1.4 mg/L (Pseudokirchneriella subcapitata) (72h) EC50   0.46 - 4.3 mg/L (Pseudokirchneriella subcapitata) (72h)
Fish	LC50 3.24 - 4.99 mg/L (Pimephales promelas) (96 h) flow- through LC50 19.03 - 33.53 mg/L (Lepomis macrochirus) (96 h) static LC50 6.75 - 14.5 mg/L (Pimephales promelas) (96 h) static LC50 58.75 - 95.32 mg/L (Poecilia reticulata) (96 h) static
Aquatic Invertebrates Cobalt bis(2-ethylhexanoate)	EC50 3.3 - 7.4 mg/L (Daphnia magna) (48h)
Algae	EC50 = 0.639 mg/L
12.2 Development and de eve de biliés	_

# **12.2. Persistence and degradability** No information available.

## 12.3. Bioaccumulative potential

Not likely to bioaccumulate. Styrene log Kow 2.95 Bioconcentration factor (BCF) 74 12.4. Mobility in soil No information available.

## 12.5. Results of PBT and vPvB assessment

This preparation contains no substance considered to be persistent, bio-accumulating nor toxic (PBT) This mixture contains no substance considered to be very persistent nor very bioaccumulating (vPvB)

## 12.6. Other adverse effects

No information available

# **13. DISPOSAL CONSIDERATIONS**

13.1. Waste treatment methods Waste from residues/unused products	This material and its container must be disposed of as hazardous waste. Dispose of contents/containers in accordance with local regulations. Can be incinerated, when in compliance with local regulations.
Contaminated packaging EWC	Empty containers should be taken for local recycling, recovery or waste disposal.
Waste Disposal No	07 00 00 WASTES FROM ORGANIC CHEMICAL PROCESSES 07 02 00 Wastes from MFSU of plastics, synthetic rubber and man-made fibres 07 02 99 Wastes not otherwise specified

# **14. TRANSPORT INFORMATION**

## ADR/RID

UN-No Proper Shipping Name Hazard Class Packing Group Environmental hazard Classification Code Hazard identification number (Kemler No.) Tunnel restriction code ADR Exception	UN1866 RESIN SOLUTION 3 III None F1 30 D/E This material meets the viscosity criteria specifie "not dangerous" when packaged in containers of	
UN-No Proper Shipping Name Hazard Class Packing Group Environmental hazard EmS-No IMDG Exception	UN1866 RESIN SOLUTION CLASS 3 PG III None F-E, S-E This material meets the viscosity criteria specifie exempt from the marking, labelling and package in containers of 30 liters or less.	
Transport in bulk according to Anne	k II of MARPOL 73/78 and the IBC Code	No information available
ΙΑΤΑ		

UN-No	UN1866
Proper Shipping Name	<b>RESIN SOLUTION 3</b>
Hazard Class Packing	III
Group Environmental	None
hazard Packing	355; 366
Instructions	

# **15. REGULATORY INFORMATION**

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

<u>Denmark</u>

#### substances and processes that are considered to be carcinogenic

Chemical Name	Status
Styrene (CAS #: 100-42-5)	Present
Cobalt bis(2-ethylhexanoate) (CAS #: 136-52-7)	Present (Cobalt compounds)

#### **Additional information**

Must not be used by youngsters under the age of 18, ref. the notification from the Ministry of Labour regarding work by youngsters. The user must have undergone special training approved by the Labour Inspection Authority (AT) in order to work with products containing carcinogenic substances.

#### Germany

WGK Classification (VwVwS) Hazardous to water/Class 2

#### Netherlands

#### List of Carcinogens, Mutagens and Reproductive Toxins No information available

#### Water Hazard Class

10-May cause long-term adverse effects in the aquatic environment.

International Inventories TSCA Inventory Status:	All components of this material are listed on or are exempt from the US Toxic Substances Control Act (TSCA) inventory.
Canadian Inventory Status:	All components of this material are listed on the Canadian Domestic Substances List (DSL).
Australian Inventory Status:	This product contains one or more chemicals currently not on the Australian Inventory of Chemical Substances.
Korean Inventory Status:	This product contains one or more chemicals currently not on the Korean Chemical Substances List.
Philippine Inventory: Japan	This product contains one or more chemicals currently not on the Philippine Inventory of Chemicals and Chemical Substances.
ENCS:	This product contains one or more chemicals currently not on the Japanese Inventory of Existing and New Chemical Substances.
Chinese IECS:	This product contains one or more chemicals currently not on the Chinese Inventory of Existing Chemical Substances.
New Zealand Inventory:	This product contains one or more chemicals currently not on the New Zealand Inventory of Chemicals.
<u>Product Registrations</u> Norway	Not applicable
15.2. Chemical Safety Assessment	

# Chemical Safety Assessment Not available

# **16. OTHER INFORMATION**

#### **Classification procedure:**

Acute toxicity - Inhalation (Vapours) Acute toxicity - Inhalation (Dusts/ Mists) Skin corrosion/irritation Serious eye damage/eye irritation Calculation method Calculation method Calculation method Calculation method Skin Sensitisation Reproductive Toxicity Specific target organ toxicity (single exposure) Specific target organ toxicity (repeated exposure) Chronic aquatic toxicity Flammable liquid Calculation method Weight of evidence Calculation method Calculation method Calculation method On basis of test data

## Full text of H-Statements referred to under sections 2 and 3

- H304 May be fatal if swallowed and enters airways
- H315 Causes skin irritation
- H319 Causes serious eye irritation
- H332 Harmful if inhaled
- H226 Flammable liquid and vapour
- H302 Harmful if swallowed
- H225 Highly flammable liquid and vapour
- H336 May cause drowsiness or dizziness
- H361d Suspected of damaging the unborn child
- H412 Harmful to aquatic life with long lasting effects
- H400 Very toxic to aquatic life
- H317 May cause an allergic skin reaction
- H361fd Suspected of damaging fertility. Suspected of damaging the unborn

child