SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

SDS n° : FP16594

POLYCOR LP BR

Former date 27-Feb-2015 **Revision Date** 31-Mar-2015 **Version:** 1

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

1.1. Product identifier

Product name **POLYCOR LP BR**

Chemical Name **Gel Coat polyester for composites.**

Trade name POLYCOR LP BR;POLYCOR ISO BR LV2;POLYCOR LP BR LV;POLYCOR LP BR LV2;POLYCOR LP BR HV;POLYCOR LP BR FC;POLYCOR LP BR IHB;POLYCOR LP BR AD;POLYCOR TOPCOAT LP BR;POLYCOR TOPCOAT LP BR LV;POLYCOR LP BR LV AD;POLYCOR LP BR LV FC;POLYCOR LP BR LV2 FC;POLYCOR LP BR HV F;POLYCOR LP BR LV IHB;POLYCOR TOPCOAT LP BR LV IHB;POLYCOR TOPCOAT LP BR IHB;POLYCOR LP BRUSH GEL COAT;POLYCOR ISO 2871 TR;POLYCOR ISO 2871 TR IHB;POLYCOR LP BR BV FIN;POLYCOR LP BR FIN;POLYCOR LP BRUSH TOP COAT;POLYCOR LP CLEAR BRUSH GEL COAT;POLYCOR LP FAST CURE SPRAY GEL COAT;POLYCOR LP LOW VISC BRUSH GEL COAT;POLYCOR ISO XP BRUSH;POLYCOR ISO LP BR;POLYCOR ISO LP BR C;POLYCOR ISO LP BR CC;POLYCOR ISO LP BR F;POLYCOR ISO LP 16 BR;POLYCOR ISO LP 16 BR C;POLYCOR ISO LP 16 BR CC;POLYCOR ISO LP 16 BR F;POLYCOR ISO LP 16 BR FC;POLYCOR ISO LP 16 BR V;POLYCOR LP PTY

Pure substance/mixture Mixture

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

Identified uses To form a protective and decorative layer for GRP composites. Contact us before using for food contact application.

1.3. Details of the supplier of the safety data sheet

Supplier

Polynt Composites UK Ltd.
Laporte Road
Stallingborough - Near Grimsby
Nth East Lincolnshire DN 41 8DR
United Kingdom
Tel : + 44 1 469 552 570
Fax : + 44 1 469 552 597

For further information, please contact

E-mail address Rccp.SDSmanagement@ccpcomposites.com

Internet Address http://www.ccpcomposites.com

1.4. Emergency telephone number

This telephone number is available 24 hours per day, 7 days per week.	
Europe, America, Middle East, Africa (European language countries) :	+44 (0) 1235 239 670
Middle East/Africa (Arabic speaking countries) :	+44 (0) 1235 239 671
Asia Pacific :	+65 3158 1074

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to EU Directives 67/548/EEC or 1999/45/EC

Symbol(s) Xn - Harmful
R-phrase(s) R10 - Repr. cat. 3;R63 - Xn;R48/20 - Xn;R20 - Xi;R36/37/38 - R52/53

Classification of the substance or mixture - GHS/CLP (n° 1272/2008)

Skin Corrosion/Irritation	Category 2
Serious Eye Damage/Eye Irritation	Category 2
Reproductive Toxicity	Category 2
Specific Target Organ Toxicity (Single Exposure)	Category 3
Specific target organ toxicity - repeated exposure	Category 1
Chronic Aquatic Toxicity	Category 3
Flammable liquids	Category 3

2.2. Label elements

Contains Styrene

Signal word **Danger**

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

Physical hazards
H226 - Flammable liquid and vapour

EU H -Phrases
EUH208 Contains phthalic anhydride, cobalt octoate - May produce an allergic reaction

Precautionary statements
P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P243 - Take precautionary measures against static discharge
P260 - Do not breathe vapour
P273 - Avoid release to the environment
P280 - Wear protective gloves/ protective clothing/ eye protection/ face protection
P302 + P352 - IF ON SKIN: Wash with plenty of soap and water
P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P403 + P233 - Store in a well-ventilated place. Keep container tightly closed.

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Hazardous components

Chemical Name	EC-No	REACH Registration Number	CAS-No	Weight percent	Classification (67/548)	GHS Classification
Styrene	202-851-5	01-2119457861-32	100-42-5	~ 33	R10 Repr. Cat. 3; R63 Xn; R20 Xn; R48/20 Xn; R65 Xi; R36/37/38	Flam. Liq. 3 (H226) Repr. 2 (H361d) Acute Tox. 4 (H332) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Asp. Tox. 1 (H304) STOT SE 3 (H335) STOT RE 1 (H372) Aquatic Chronic 3 (H412)
Titanium dioxide	236-675-5	01-2119489379-17	13463-67-7	~ 11	-	-
Talc	238-877-9	no data available	14807-96-6	~ 10	-	-
Pyrogenic micro-dispersed silica, synthetic X-ray amorphous silicon dioxide (SiO2)	231-545-4	01-2119379499-16	112945-52-5	~ 3	-	-
Naphtha (petroleum), hydrodesulfurized heavy	265-185-4	01-2119490979-12	64742-82-1	< 1	R10 Xn;R65 N;R51/53 R66 R67	Flam. Liq. 3 (H226) Asp. Tox. 1 (H304) STOT SE 3 (H336) Aquatic Chronic 2 (H411)
phthalic anhydride	201-607-5	01-2119457017-41	85-44-9	< 1	Xn; R22 Xi; R37/38 Xi; R41 R42/43	Acute Tox. 4 (H302) Skin Irrit. 2 (H315) Skin Sens. 1 (H317) Eye Dam. 1 (H318) Resp. Sens. 1 (H334) STOT SE 3 (H335)
cobalt octoate	205-250-6	01-2119524678-29	136-52-7	< 0.25	Xi; R36 R43 Repr. Cat. 3; R62 N; R50/53	Skin Sens. 1 (H317) Eye Irrit. 2 (H319) Repr. 2 (H361) Aquatic Acute 1 (H400) Aquatic Chronic 3 (H412)
Xylene	215-535-7	01-2119488216-32	1330-20-7	< 0.5	R10 Xn; R20/21 Xn; R65 Xi; R36/37/38	Flam. Liq. 3 (H226) Asp. Tox. 1 (H304) Acute Tox. 4 (H312) Acute Tox. 4 (H332) Skin Irrit. 2 (H315) Eye Irrit. 2 (H320) STOT SE 3 (H335) STOT RE 2 (H373)

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

SECTION 4: First aid measures

4.1. Description of first aid measures

General advice Show this safety data sheet to the doctor in attendance
Do not breathe dust/fume/gas/mist/vapours/spray

Eye Contact Rinse thoroughly with plenty of water, also under the eyelids.
Keep eye wide open while rinsing.
If symptoms persist, call a physician

Skin contact Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes
If skin irritation persists, call a physician

Inhalation	Move to fresh air If not breathing, give artificial respiration Consult a physician
Ingestion	Do NOT induce vomiting Rinse mouth. Consult a physician
Protection of first-aiders	Use personal protective equipment See section 8 for more information

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

Eye Contact	Irritating to eyes
Skin contact	Irritating to skin May produce an allergic reaction.
Inhalation	Harmful: danger of serious damage to health by prolonged exposure through inhalation Irritating to respiratory system May produce an allergic reaction.
Ingestion	Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.

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

Notes to physician	No information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Dry chemical, Foam, Carbon dioxide (CO_2), (closed systems)
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	Vapours may form explosive mixtures with air. Most vapours are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks) Heating or fire can release toxic gas : Carbon monoxide

5.3. Advice for firefighters

Special protective equipment for fire-fighters	Wear self-contained breathing apparatus and protective suit.
Other information	Cool containers / tanks with water spray. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Personal precautions

Remove all sources of ignition
Heat, flames and sparks.
Take precautionary measures against static charges.
Ensure adequate ventilation
Use personal protective equipment

For emergency responders

Avoid breathing vapours or mists In the event of fire and/or explosion do not breathe fumes. Use personal protective equipment

6.2. Environmental precautions

Environmental precautions

The product should not be allowed to enter drains, water courses or the soil.
Do not flush into surface water or sanitary sewer system

6.3. Methods and material for containment and cleaning up

Methods for cleaning up

Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13)
Use clean non-sparking tools to collect absorbed material

6.4. Reference to other sections

See section 8 for more information
See Section 12 for additional Ecological Information

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling

Avoid static electricity build up with connection to earth
Use only in area provided with appropriate exhaust ventilation
In case of insufficient ventilation, wear suitable respiratory equipment
For personal protection see section 8

Prevention of fire and explosion

Keep away from open flames, hot surfaces and sources of ignition Do not use compressed air for filling, discharging or handling. Empty containers may contain flammable or explosive vapours

Hygiene measures

When using, do not eat, drink or smoke Provide regular cleaning of equipment, work area and clothing Wash hands before breaks and at the end of workday.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures/Storage conditions

Keep in a dry, cool and well-ventilated place.
Keep at temperature not exceeding 30°C
Keep away from heat and sources of ignition.

Materials to avoid

Strong oxidizing agents, Catalyst, Peroxides, Reducing agents

Packageing material

metallic GRP Tanks (Reinforced Glass Polyester)

Unsuitable materials for containers

Aluminium copper Copper alloys

7.3. Specific end use(s)

Specific use(s)

No information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational Exposure limits

Chemical Name	European Union	ACGIH OEL (Ceiling)	The United Kingdom	Ireland
Styrene 100-42-5	-	TLV-8h TWA: 20 ppm - 85 mg/m³ TLV-15min STEL: 40 ppm - 170 mg/m³	STEL 250 ppm STEL 1080 mg/m³ TWA 100 ppm TWA 430 mg/m³	TWA 20 ppm TWA 85 mg/m³ STEL 40 ppm STEL 170 mg/m³
Titanium dioxide 13463-67-7		TWA 10 mg/m³	STEL 30 mg/m³ STEL 12 mg/m³ TWA 10 mg/m³ TWA 4 mg/m³	TWA 10 mg/m³ TWA 4 mg/m³
Talc 14807-96-6		TWA 2 mg/m³	STEL 3 mg/m³ TWA 1 mg/m³	TWA 10 mg/m³ TWA 0.8 mg/m³
phthalic anhydride 85-44-9		TWA 1 ppm	STEL 12 mg/m³ TWA 4 mg/m³ Sen+	TWA 4 mg/m³ STEL 12 mg/m³ Sensitizer
cobalt octoate 136-52-7		0.02 mg/m³	STEL 0.3 mg/m³ TWA 0.1 mg/m³ Sen+	TWA 0.1 mg/m³ Sensitizer
Xylene 1330-20-7	TWA 50 ppm TWA 221 mg/m³ STEL 100 ppm STEL 442 mg/m³ S*	TWA 100 ppm	STEL 100 ppm STEL 441 mg/m³ TWA 50 ppm TWA 220 mg/m³ Skin	TWA 50 ppm TWA 221 mg/m³ STEL 100 ppm STEL 442 mg/m³ Skin

Special hazards arising from the substance or mixture

Biological standards

Chemical Name	European Union	The United Kingdom	Ireland
Styrene 100-42-5	-	We are not aware of any national exposure limit.	We are not aware of any national exposure limit.
Xylene 1330-20-7		Methyl hippuric acid in urine: 650 mmol/mol creatinine, end of shift	We are not aware of any national exposure limit.

Derived No Effect Level (DNEL)

Derived No Effect Level (DNEL)				
Styrene (100-42-5)				
Type	DNEL oral	DNEL dermal	DNEL inhalation	Remark
Workers - Long Term - Systemic effect		406 mg/Kg bw/day	85 mg/m³	
Workers - Acute Short Term - Local effect			306 mg/m³	
Workers - Acute Short term - Systemic effect			289 mg/m³	
General Population - Acute Short Term - Local effect			182.7 mg/m³	
General Population - Acute Short Term - Systemic effect			174.2 mg/m³	
General Population - Long Term - Systemic effect	2.1 mg/Kg bw/day	343 mg/Kg bw/day	10.2 mg/m³	

Titanium dioxide (13463-67-7)				
Type	DNEL oral	DNEL dermal	DNEL inhalation	Remark
Workers - Long Term - Local effect			10 mg/m³	
General Population - Long Term - Systemic effect	700 mg/kg bw/day			

Pyrogenic micro-dispersed silica, synthetic X-ray amorphous silicon dioxide (SiO2) (112945-52-5)				
Type	DNEL oral	DNEL dermal	DNEL inhalation	Remark
Workers - Long Term - Systemic effect			4 mg/m³	

phthalic anhydride (85-44-9)				
Type	DNEL oral	DNEL dermal	DNEL inhalation	Remark
Workers - Long Term - Systemic effect		10 mg/kg bw/day	32.2 mg/m³	
General Population - Long Term - Systemic effect	5 mg/kg bw/day	5 mg/kg bw/day	8.6 mg/m³	

cobalt octoate (136-52-7)				
Type	DNEL oral	DNEL dermal	DNEL inhalation	Remark
Workers - Long Term - Local effect			235.1 µg/m³	
General Population - Long Term - Systemic effect	55.8 µg/kg bw/day			
General Population - Long Term - Local effect			37 µg/m³	

Xylene (1330-20-7)				
Type	DNEL oral	DNEL dermal	DNEL inhalation	Remark
Workers - Long Term - Systemic effect		180 mg/kg bw/day	77 mg/m³	
Workers - Acute Short term - Systemic effect			289 mg/m³	
Workers - Acute Short Term - Local effect			289 mg/m³	
General Population - Long Term - Systemic effect	1.6 mg/kg bw/day	108 mg/kg bw/day	14.8 mg/m³	
General Population - Acute Short Term - Systemic effect			174 mg/m³	
General Population - Acute Short Term - Local effect			174 mg/m³	

Predicted No Effect Concentration (PNEC)

PNEC Component		
Styrene (100-42-5)		
Exposure	Type	PNEC
Fresh water	PNEC Aqua	0.028 mg/L
Marine water	PNEC Aqua	0.014 mg/L
Intermittent use/release	PNEC Aqua	0.04 mg/L
Fresh water	PNEC Sediment	0.614 mg/Kg.dw
Marine water	PNEC Sediment	0.307 mg/Kg.dw
Terrestrial Compartment	PNEC Soil	0.2 mg/Kg.dw
STP microorganisms	PNEC STP	5 mg/L

Titanium dioxide (13463-67-7)		
Exposure	Type	PNEC
Fresh water	PNEC Aqua	0.127 mg/L
Marine water	PNEC Aqua	1 mg/L
Intermittent use/release	PNEC Aqua	0.61 mg/L
	PNEC STP	100 mg/L
Fresh water	PNEC Sediment	1000 mg/kg sediment dw
Marine water	PNEC Sediment	100 mg/kg sediment dw
	PNEC Soil	100 mg/kg soil dw
Secondary Poisoning	PNEC Oral	1667 mg/kg food

Pyrogenic micro-dispersed silica, synthetic X-ray amorphous silicon dioxide (SiO2) (112945-52-5)

Exposure	Type	PNEC
Secondary Poisoning	PNEC Oral	60000 mg/kg

phthalic anhydride (85-44-9)		
Exposure	Type	PNEC
Fresh water	PNEC Aqua	1 mg/L
Marine water	PNEC Aqua	0.1 mg/L
Intermittent use/release	PNEC Aqua	5.6 mg/L
	PNEC STP	10 mg/L
Fresh water	PNEC Sediment	3.8 mg/kg sediment dw
Marine water	PNEC Sediment	0.38 mg/kg sediment dw
Terrestrial Compartment	PNEC Soil	0.173 mg/kg soil dw

cobalt octoate (136-52-7)		
Exposure	Type	PNEC
Fresh water	PNEC Aqua	0.6 µg/L
Marine water	PNEC Aqua	2.36 µg/L
STP microorganisms	PNEC STP	0.37 mg/L
Fresh water	PNEC Sediment	9.5 mg/kg sediment dw
Marine water	PNEC Sediment	9.5 mg/kg sediment dw
Terrestrial Compartment	PNEC Soil	10.9 mg/kg soil dw

Xylene (1330-20-7)		
Exposure	Type	PNEC
Fresh water	PNEC Aqua	0.327 mg/L
Marine water	PNEC Aqua	0.327 mg/L
Intermittent use/release	PNEC Aqua	0.327 mg/L
	PNEC STP	6.58 mg/L
Fresh water	PNEC Sediment	12.46 mg/kg sediment dw
Marine water	PNEC Sediment	12.46 mg/kg sediment dw
	PNEC Soil	2.31 mg/kg soil dw

8.2. Exposure controls

Occupational exposure controls

Engineering measures Apply technical measures to comply with the occupational exposure limits.
When working in confined spaces (tanks, containers, etc.), ensure that there is a supply of air suitable for breathing and wear the recommended equipment

Personal protective equipment

General Information Use personal protective equipment.

Respiratory protection In case of insufficient ventilation wear suitable respiratory equipment
Breathing apparatus with filter
Type A
Respirator must be worn if exposed to dust
Effective dust mask
Type A/P2

Eye protection Safety glasses with side-shields
Do not wear contact lenses

Skin and body protection Antistatic boots
Protective shoes or boots.
Wear fire/flame resistant/retardant clothing

Hand protection Impervious gloves, ,, Glove material, :, Neoprene, ,, Nitriles, ,, Viton (R), or, Polyvinyl alcohol,
, Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

Environmental exposure controls

Environmental exposure controls Do not allow material to contaminate ground water system.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Property	Values	Remark
Appearance	Variable (This Data Sheet includes all the colours)	
Physical state	Liquid	
Particle size		no data available
Odour	Styrene	
Odour Threshold		no data available
pH		no data available
pH (as aqueous solution)		no data available
Melting point/range	- 30 °C	Values related to styrene
Freezing point		no data available
Boiling point	145 °C	Values related to styrene
Flash point	31 °C	
Evapouration rate		no data available
Flammability Limits in Air		
upper	6,1 - 6,8%	Values related to styrene
lower	0,9 -1,1%	Values related to styrene
Vapour pressure	6 hPa	20°C
Vapour density	3.6	Values related to styrene
Density	1.1 - 1.4 g/cm3	20°C
Water solubility	Insoluble in water	
Partition coefficient: n-octanol/water		no data available
Autoignition temperature	490 °C	Values related to styrene
Decomposition temperature		no data available
Viscosity, kinematic	9091 - 27273 mm2/s	20°C
Viscosity, dynamic	10000 - 30000 mPa.s	20°C
Explosive properties		not applicable
Oxidizing properties		not applicable

9.2. Other information

Property	Values	Remark
Solubility in other solvents	Soluble in most organic solvents	

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity Product may ignite and burn at temperatures exceeding the flash point

10.2. Chemical stability

Stability Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

Hazardous reactions In use, may form flammable/explosive vapour-air mixture.

Hazardous polymerisation Polymerisation can occur.

10.4. Conditions to avoid

Conditions to avoid Heat, flames and sparks.
Exposure to light.
Take precautionary measures against static charges.

10.5. Incompatible materials

Materials to avoid Strong oxidizing agents, Catalyst, Peroxides, Reducing agents

10.6. Hazardous decomposition products

Hazardous decomposition products Incomplete combustion and thermolysis produces potentially toxic gases such as carbon monoxide and carbon dioxide

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity

Inhalation Harmful: danger of serious damage to health by prolonged exposure through inhalation
Irritating to respiratory system May produce an allergic reaction.

Ingestion Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation	Read-across (Analogy)
Styrene 100-42-5	5000 mg/kg (Rat)	> 2000 mg/kg bw (Rat) 24h OECD 402	11.8 mg/L (Rat) 4h CSR	
Titanium dioxide 13463-67-7	> 5000 mg/kg bw (Rat) OECD 425	> 10000 mg/kg (Rabbit)	> 6,82 mg/L air (Rat) 4h	
Pyrogenic micro-dispersed silica, synthetic X-ray amorphous silicon dioxide (SiO2) 112945-52-5	> 5000 mg/kg bw (Rat) OECD 401	> 5000 mg/kg (Rabbit)	> 0.14 mg/L air (Rat) 4h (analytical) OECD 403	
phthalic anhydride 85-44-9	1530 mg/kg bw (Rat)	> 3160 mg/kg bw (Rabbit)	> 2.14 mg/L (Rat) 4h OECD 403	
cobalt octoate 136-52-7	3129 mg/kg/bw (Rat) OECD 425			
Xylene 1330-20-7	> 4000 mg/kg/bw (Rat) EU Method B.1	> 5000 mL/kg/bw (Rabbit) Publication	29091 mg/m³ (Rat) 4h EU Method B.2	

Skin corrosion/irritation

Chemical Name	Skin corrosion/irritation	Read-across (Analogy)
Styrene 100-42-5	Irritating to skin in vivo assay rabbit	
Titanium dioxide 13463-67-7	No skin irritation No skin corrosion in vivo assay rabbit OECD 404	
Pyrogenic micro-dispersed silica, synthetic X-ray amorphous silicon dioxide (SiO2) 112945-52-5	No skin irritation rabbit OECD 404	
phthalic anhydride 85-44-9	Irritating to skin in vivo assay rabbit OECD 404	
cobalt octoate 136-52-7	No skin corrosion OECD 431 EU Method B. 40	
Xylene 1330-20-7	Moderate skin irritation No skin corrosion in vivo assay rabbit EU Method B.4	

Serious Eye Damage/Eye Irritation

Chemical Name	Serious Eye Damage/Eye Irritation	Read-across (Analogy)
Styrene 100-42-5	Irritating to eyes in vivo assay rabbit	

Titanium dioxide 13463-67-7	No eye irritation in vivo assay rabbit OECD 405	
Pyrogenic micro-dispersed silica, synthetic X-ray amorphous silicon dioxide (SiO2) 112945-52-5	No eye irritation rabbit OECD 405	
phthalic anhydride 85-44-9	Irritating to eyes in vivo assay rabbit Draize Test	
cobalt octoate 136-52-7	Moderate eye irritation OECD 437 EU Method B.47 Irritating to eyes rabbit OECD 405	
Xylene 1330-20-7	Moderate eye irritation in vivo assay rabbit	

Respiratory or skin sensitisation May produce an allergic reaction.

Chemical Name	Respiratory or skin sensitisation	Read-across (Analogy)
Styrene 100-42-5	Does not cause skin sensitization Does not cause respiratory sensitization CSR	
Titanium dioxide 13463-67-7	Does not cause skin sensitization in vivo assay guinea pig OECD 406 mouse OECD 429	
Pyrogenic micro-dispersed silica, synthetic X-ray amorphous silicon dioxide (SiO2) 112945-52-5	Does not cause skin sensitization Does not cause respiratory sensitization	
phthalic anhydride 85-44-9	May cause sensitisation by inhalation and skin contact in vivo assay guinea pig OECD 406	
cobalt octoate 136-52-7	May cause sensitisation by skin contact	
Xylene 1330-20-7	Does not cause skin sensitization in vivo assay mouse OECD 429	

Mutagenic Effects

In vitro study

Chemical Name	Ames test	Read-across (Analogy)
Styrene 100-42-5	Ambiguous In vitro gene mutation study in bacteria (S. typhimurium G46, TA1530, TA 1535, TA100, TA98, TA1538, TA 1537) OECD 471	
Titanium dioxide 13463-67-7	negative In vitro gene mutation study in bacteria OECD 471	
Pyrogenic micro-dispersed silica, synthetic X-ray amorphous silicon dioxide (SiO2) 112945-52-5	negative In vitro gene mutation study in bacteria OECD 471	

phthalic anhydride 85-44-9	negative In vitro gene mutation study in bacteria (S. typhimurium TA 1535, TA 1537, TA 98, TA100 and TA 102) (Escherichia coli WP2 uvrA) OECD 471	

Chemical Name	In vitro Mammalian Cell Gene Mutation Test	Read-across (Analogy)
Styrene 100-42-5	Ambiguous In vitro gene mutation study in mammalian cells hamster OECD 476	
Titanium dioxide 13463-67-7	negative In vitro gene mutation study in mammalian cells mouse OECD 476	
Pyrogenic micro-dispersed silica, synthetic X-ray amorphous silicon dioxide (SiO2) 112945-52-5	negative In vitro gene mutation study in mammalian cells OECD 476	
phthalic anhydride 85-44-9	negative In vitro gene mutation study in mammalian cells hamster OECD 476	
Xylene 1330-20-7	negative Chromosome aberration test in vitro hamster EU Method B.10	

Chemical Name	In vitro Mammalian Chromosome Aberration Test	Read-across (Analogy)
Styrene 100-42-5	positive Chromosome aberration test in vitro OECD 473 OECD 479	
Titanium dioxide 13463-67-7	negative Chromosome aberration test in vitro hamster OECD 473	
Pyrogenic micro-dispersed silica, synthetic X-ray amorphous silicon dioxide (SiO2) 112945-52-5	negative Chromosome aberration test in vitro OECD 473	
phthalic anhydride 85-44-9	Ambiguous Chromosome aberration test in vitro hamster OECD 473	
Xylene 1330-20-7	negative In vitro gene mutation study in mammalian cells hamster EU Method B.19	

in vivo assay

Chemical Name	Unscheduled DNA Synthesis (UDS)	Read-across (Analogy)
Styrene 100-42-5	negative mouse OECD 486 OECD 474	
Titanium dioxide 13463-67-7	negative mouse	
Pyrogenic micro-dispersed silica, synthetic X-ray amorphous silicon dioxide (SiO2) 112945-52-5	negative rat	
cobalt octoate 136-52-7	negative rat OECD 474 OECD 475	

Xylene 1330-20-7	negative mouse rat OECD 478	

Carcinogenicity Animal testing did not show any carcinogenic effects

Carcinogenicity				
Styrene (100-42-5)				
Exposure routes	Method	Species	Dose	Evaluation
Inhalation	OECD 453	rat	NOAEC systemic (carcinogenicity) >= 4.34 mg/L air (nominal)	negative
Inhalation	OECD 453	mouse	LOAEC (carcinogenicity) female/male = 0.09 - 0.18 mg/L air resp., NOAEC (carcinogenicity) male = 0.09 mg/L air	positive
Oral	No information available	rat	NOAEL (carcinogenicity) >= 2000 mg/kg bw /day	positive
Oral	No information available	mouse	LOAEL (carcinogenicity) = 150 mg/kg bw /day	positive

Titanium dioxide (13463-67-7)				
Exposure routes	Method	Species	Dose	Evaluation
Inhalation	OECD 453	rat	NOAEC lung tumours = 5 mg/m³ air	negative
Oral	No information available	rat	NOEL toxicity > 50000 ppm (nominal)	negative

Pyrogenic micro-dispersed silica, synthetic X-ray amorphous silicon dioxide (SiO2) (112945-52-5)				
Exposure routes	Method	Species	Dose	Evaluation
Oral	OECD 453	rat	NOAEL = 1800 - 3200 mg/kg bw/day	negative

phthalic anhydride (85-44-9)				
Exposure routes	Method	Species	Dose	Evaluation
Oral	No information available	mouse	NOAEL (carcinogenicity, male) = 3570 mg/kg bw/day (72w) NOAEL (carcinogenicity, female) = 1785 mg/kg bw/day (72w)	negative
Oral	No information available	rat	NOAEL (carcinogenicity) = 1000 mg/kg bw/day (105w)	negative

Xylene (1330-20-7)				
Exposure routes	Method	Species	Dose	Evaluation
Oral	EU Method B.32	mouse rat	500 - 1000 mg/kg/bw/day (103 weeks)	negative

Reproductive toxicity Animal testing did not show any effects on fertility

Reproductive toxicity				
Styrene (100-42-5)				
Exposure routes	Method	Species	Dose	Evaluation
Inhalation	No information available	rat	NOAEL/LOAEL (fertility) 60d = 100 - 200 mg/kg bw/day	positive
Oral	OECD 422	rat	NOAEL/LOAEL (fertility) 60d = 200 - 400 mg/kg bw/day	positive

Inhalation	OECD 416	rat	NOAEC (P, F1) = 0.64 mg/L air LOAEC (P, F1) = 2.13 mg/L air NOAEC (F2) = 0.21 mg/L air LOAEC (F2) = 0.64 mg/L air (70d)	negative

Pyrogenic micro-dispersed silica, synthetic X-ray amorphous silicon dioxide (SiO2) (112945-52-5)				
Exposure routes	Method	Species	Dose	Evaluation
Oral	OECD 415	rat	NOAEL = 497 mg/kg bw/day	negative

phthalic anhydride (85-44-9)				
Exposure routes	Method	Species	Dose	Evaluation
Oral	No information available	mouse	NOAEL (reproductive, male) = 3570 mg/kg bw/day (72w) NOAEL (reproductive, female) = 1785 mg/kg bw/day (72w)	negative
Oral	No information available	rat	NOAEL (reproductive, female) = 1000 mg/kg bw/day (105w)	negative

Xylene (1330-20-7)				
Exposure routes	Method	Species	Dose	Evaluation
Inhalation	EPA OPPTS 870.3800	rat	NOAEC (vapour) reproductive and developmental toxicity > 500 ppm (2171 mg/m³)	negative

Developmental Toxicity Suspected of damaging the unborn child.

Developmental Toxicity				
Styrene (100-42-5)				
Route of Exposure	Method	Species	Dose	Evaluation
Inhalation	No information available	rat	NOAEC/LOAEC (maternal toxicity + developemental toxicity) >50d = 1.08 - 2.15 mg/L air	positive
Inhalation	OECD 414	rat	LOAEC (maternal toxicity) 6-15d = 1.28 mg/L air	positive
Inhalation	OECD 414	rat	NOAEC (developmental toxicity) 6-15d >= 2.56 mg/L air	negative
Inhalation	OECD 414	rabbit	NOAEC (maternal toxicity + developmental toxicity) 6-18d = 2.56 mg/L air	negative

Pyrogenic micro-dispersed silica, synthetic X-ray amorphous silicon dioxide (SiO2) (112945-52-5)				
Route of Exposure	Method	Species	Dose	Evaluation
Oral	OECD 414	rat	NOAEL (maternal toxicity) = 1350 mg/kg bw/day NOAEL (teratogenicity) = 1350 mg/kg bw/day	negative

phthalic anhydride (85-44-9)				
Route of Exposure	Method	Species	Dose	Evaluation
Oral	Read-across (Analogy) phthalic acid Cas N° : 88-99-3	rat	NOAEL (maternal toxicity) = 1000 mg/kg bw/day NOAEL (teratogenicity) = 1700 mg/kg bw/day	positive

Xylene (1330-20-7)				
Route of Exposure	Method	Species	Dose	Evaluation

Inhalation	OECD 414	rat	NOAEC (maternal and developmental toxicity) = 2171 mg/m³ NOAEC (teratogenicity) >= 8684 mg/m³	negative

Specific target organ toxicity - single exposure May cause irritation of respiratory tract

Chemical Name	STOT - single exposure	Remark
Pyrogenic micro-dispersed silica, synthetic X-ray amorphous silicon dioxide (SiO2) 112945-52-5	Not classified	
phthalic anhydride 85-44-9	May cause respiratory irritation	

Specific target organ toxicity - repeated exposure

Chemical Name	STOT - repeated exposure	Remarks
Styrene 100-42-5	Causes damage to organs through prolonged or repeated exposure target organ(s) Central nervous system Ears NOAEC (inhalation, rat, male) = 3.47 mg/L air (28d), NOAEC (ototoxicity) = 2.13 mg/L air (28d) NOAEC (inhalation, mouse) = 0.181 mg/L air (28d), OECD 412 NOAEC (inhalation, rat) = 0.688 mg/L air (28d), OECD 412 NOAEC nasal tract. (inhalation, rat) = 0.85 mg/L air (90d), NOAEC overall (inhalation, rat) = 2.13 mg/L air (90d) NOAEL toxicity (oral, rat) = 1000 mg/kg bw/day, LOAEL toxicity (oral, rat) = 2000 mg/kg bw/day NOAEL toxicity (oral, mouse) = 150 mg/kg bw/day, LOAEL toxicity (oral, mouse) = 300 mg/kg bw/day LOAEC local toxicity (inhalation, rat) = 0.21 mg/L air, OECD 453	
Titanium dioxide 13463-67-7	Not classified NOEL (oral, rat) = 24000 mg/kg bw/day (90d) OECD 407 NOEC (inhalation, rat) carcinogenicity = 50 mg/m³ air (male/female) NOEC (inhalation, rat) neoplastic changes = 10 mg/m³ air (male/female)	
Pyrogenic micro-dispersed silica, synthetic X-ray amorphous silicon dioxide (SiO2) 112945-52-5	Not classified NOEL (oral, rat) = 4000 <= 4500 mg/kg bw/day (90d) OECD 408 NOEC (inhalation, rat) = 1.3 mg/m³ air (analytical), NOEC < 1.3 mg/m³ air (analytical) (90d) OECD 413 NOAEL (dermal, rabbit) >= 10000 mg/kg bw/day	
phthalic anhydride 85-44-9	NOAEL (oral, rat) 7 weeks = 1250 mg/kg bw/day LOAEL (oral, rat) 7 weeks = 2500 mg/kg bw/day NOAEL (oral, rat) 105 weeks = 500 mg/kg bw/day LOAEL male/female (mouse) 72 weeks : 2340 - 1717 mg/kg bw/day	
cobalt octoate 136-52-7	NOAEL (female, rat) = 5 mg/kg bw/day, NOAEL (male, rat) = 40 mg/kg bw/day OECD 422 Read across with Cas N° : 13585-84-0	
Xylene 1330-20-7	negative NOAEL (oral, rat) systemic toxicity = 250 mg/kg bw/day, EU Method B.32 NOAEC (inhalation, vapour, rat) >= 3515 mg/m³, publication	

Aspiration hazard Due to the viscosity, this product does not present an aspiration hazard.

Other information None

SECTION 12: Ecological information

12.1. Toxicity

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Do not flush into surface water or sanitary sewer system

Acute aquatic toxicity - Component Information

Chemical Name	Toxicity to algae	Toxicity to daphnia and other aquatic invertebrates.	Toxicity to fish	Toxicity to microorganisms
Styrene 100-42-5	LC50 (72h) = 4.9 mg/L (Pseudokirchnerella subcapitata) EPA OTS 797.1050	EC50 (48h) = 4.7 mg/L (Daphnia magna), NOEC = 1.9 mg/L OECD 202	LC50 (96h) = 4.02 - 10 mg/L (Pimephales promelas) OECD 203	EC (30min) = 500 mg/L (Activated sludge of a predominantly domestic sewage) OECD 209
Titanium dioxide 13463-67-7	EC50 (72h) > 10000 mg/L (Skeletonema costatum) ISO 10253	LC50 (48h) = 20000 mg/L (Daphnia magna)	EC50 (96h) > 100 mg/L (Brachydanio rerio) LC50 (96h) > 1000 mg/L (Fundulus heteroclitus) LC0 (48h) > 1000 mg/L (Leuciscus idus) OECD 203	EC50 (3h) > 1000 mg/L, NOEC (3h) >= 1000 mg/L (Activated sludge of a predominantly domestic sewage) OECD 209
Talc 14807-96-6			LC50 (96h) = 100 g/L (Brachydanio rerio)	
Pyrogenic micro-dispersed silica, synthetic X-ray amorphous silicon dioxide (SiO2) 112945-52-5		EL50 (24h) >= 1000 mg/L (Daphnia magna) OECD 202	LC50 (96h) > 10000 mg/L (Brachydanio rerio) OECD 203	
phthalic anhydride 85-44-9	EC50 (72h) = 68 mg/L, NOEC (72h) = 32 mg/L (Pseudokirchnerella subcapitata) OECD 201	EC50 (48h) = 71 mg/L (Daphnia magna) OECD 202	LC50 (96h) > 99 mg/L (Oryzias latipes) OECD 203	EC50 (3h) > 1000 mg/L (Activated sludge), ISO 8192 EC50 (16h) = 13 mg/L (Pseusomonas putida), ISO 10712
cobalt octoate 136-52-7	EC50 cell number yield (72h) = 283.1 µg/L EC50 growth rate (72h) = 654.2 µg/L NOEC (72h) = 150.6 µg/L (Pseudokirchnerella subcapitata) OECD 201			
Xylene 1330-20-7	EC50 (73h) = 2.2 mg/L (Pseudokirchnerella subcapitata) OECD 201	EC50 (48h) > 3.4 mg/L, NOEC (48h) = 3.4 mg/L (Ceriodaphnia dubia) US EPA 600/4-91-003	LC50 (96h) = 2.6 mg/L (Oncorhynchus mykiss) LC50 (96h) = 8.4 mg/L (Oncorhynchus mykiss) OECD 203	EC50 (24h) = 96 mg/L (Nitrosomonas sp.) Publication NOEC (3h) = 157 mg/L (Activated sludge, domestic) OECD 209

Chronic aquatic toxicity - Component Information

Chemical Name	Toxicity to algae	Toxicity to daphnia and other aquatic invertebrates.	Toxicity to fish	Toxicity to microorganisms
Styrene 100-42-5		NOEC (21d) = 1.01 mg/L (Daphnia magna), LOEC (21d) = 2.06 mg/L, EC50 (21d) = 1.88 mg/L OECD 203		
Titanium dioxide 13463-67-7	NOEC (72h) = 5600 mg/L (Skeletonema costatum) ISO 10253	NOEC (48h) >= 3 mg/L (Daphnia magna) OECD 202, OECD 209		

phthalic anhydride 85-44-9		NOEC (reproduction) 21d = 16 mg/L, EC50 (reproduction) 21d = 42 mg/L (Daphnia magna) OECD 211	LC50 (7d) = 560 mg/L (Danio rerio), OECD 210 LOEC (total embryotoxicity) 60d = 32 mg/L, NOEC (mortality, lengh, weight, embryotoxicity) 60d = 10 mg/L, OECD 210	
cobalt octoate 136-52-7	NOEC/EC10 (freshwater, 7d) mortality = 86.4 µg/L and reproduction = 19.7 - 20.1 µg/L (Ceriodaphnia dubi)			
Xylene 1330-20-7	NOEC (73h) = 0,44 mg/L (Pseudokirchnerella subcapitata) OECD 201		NOEC (56d) > 1.3mg/l (Oncorhynchus mykiss) publication	

Effects on terrestrial organisms - Component Information

Acute toxicity				
phthalic anhydride (85-44-9)				
Acute toxicity	Test Method	Species	Values	Remarks
plants		Lactuca sativa	EC50 (germination) = 731 mg/L	

Chronic toxicity				
Styrene (100-42-5)				
Chronic toxicity	Method	Species	Values	Remarks
Toxicity to invertebrates	OECD 207	Eisenia foetida	LC50 (14d) = 120 mg/kg soil dw LOEC (burrowing time and mean percent weight change) = 65 mg/kg soil dw LOEC (survival) = 180 mg/kg soil dw NOEC (mean percent weight change) = 34 mg/kg soil dw	

12.2. Persistence and degradability

Component	**Biodegradation**	**Evaluation**
Styrene 100-42-5 (~ 33)	87% (20d) similar to OECD 301D	Readily biodegradable
phthalic anhydride 85-44-9 (< 1)	68 % (10d), 74 % (30d) OECD 301 D	Readily biodegradable
cobalt octoate 136-52-7 (< 0.25)	60% (> 10d), OECD 301 B	Readily biodegradable
Xylene 1330-20-7 (< 0.5)	87,8% (28d) Read across with benzoic acid, sodium salt OECD 301 F	Readily biodegradable

12.3. Bioaccumulative potential

Bioconcentration factor (BCF)		
Styrene (100-42-5)		
Method	Species	Bioconcentration factor (BCF)
Calculation method		74

Titanium dioxide (13463-67-7)		
Method	Species	Bioconcentration factor (BCF)
no data available	Oncorhynchus mykiss	20 L/kg (14d)

phthalic anhydride (85-44-9)		
Method	Species	Bioconcentration factor (BCF)

Calculation method		3.16 - 3.4

Xylene (1330-20-7)		
Method	Species	Bioconcentration factor (BCF)
no data available	Oncorhynchus mykiss	25.9 (56d)

Chemical Name	log Pow
Styrene 100-42-5	3
phthalic anhydride 85-44-9	1.6
Xylene 1330-20-7	2.77 - 3.15

12.4. Mobility in soil

Chemical Name	LogKoc	Koc
Styrene 100-42-5	2.55	352
phthalic anhydride 85-44-9	-	31
Xylene 1330-20-7	2.73	537

12.5. Results of PBT and vPvB assessment

Chemical Name	PBT	vPvB
Styrene 100-42-5	This substance is not considered to be persistent, bioaccumulating nor toxic (PBT).	This substance is not considered to be very persistent nor very bioaccumulating (vPvB).
Titanium dioxide 13463-67-7	This substance is not considered to be persistent, bioaccumulating nor toxic (PBT).	This substance is not considered to be very persistent nor very bioaccumulating (vPvB).
Pyrogenic micro-dispersed silica, synthetic X-ray amorphous silicon dioxide (SiO2) 112945-52-5	This substance is not considered to be persistent, bioaccumulating nor toxic (PBT).	This substance is not considered to be very persistent nor very bioaccumulating (vPvB).
phthalic anhydride 85-44-9	This substance is not considered to be persistent, bioaccumulating nor toxic (PBT).	This substance is not considered to be very persistent nor very bioaccumulating (vPvB).
Xylene 1330-20-7	This substance is not considered to be persistent, bioaccumulating nor toxic (PBT).	This substance is not considered to be very persistent nor very bioaccumulating (vPvB).

12.6. Autres effets néfastes

None known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste from Residues/Unused Products Dispose of in accordance with the European Directives on waste and hazardous waste. Do not flush into surface water or sanitary sewer system

Contaminated packaging Empty containers should be taken to an approved waste handling site for recycling or disposal.

Other information According to the European Waste Catalogue, Waste Codes are not product specific, but application specific.
Waste codes should be assigned by the user based on the application for which the product was used.

SECTION 14: Transport information

ADR/RID

UN-No	UN1866
Hazard class	3
Proper shipping name	Resin solution
Packing group	III
Classification Code	F1
Tunnel restriction code	(D/E)
ADR Hazard Id (Kemmler Number)	30
Description	UN1866, RESIN SOLUTION, 3, PG III, (D/E)
Limited quantity	LQ7

IMDG/IMO

UN-No	UN1866
Hazard class	3
Proper shipping name	Resin solution
Packing group	III
Marine pollutant	NP
EmS	F-E, S-E
Description	UN1866, RESIN SOLUTION, 3, PG III, (31°C c.c.)
Limited quantity	5 L

ICAO/IATA

UN-No	UN1866
Hazard class	3
Packing group	III
ERG Code	3L
Description	UN1866, RESIN SOLUTION, 3, PG III
Limited quantity	10 L

ADN

UN-No	UN1866
Hazard class	3
Proper shipping name	Resin solution
Packing group	III
Classification Code	F1
Special Provisions	640E
Description	UN1866, RESIN SOLUTION, 3, PG III
Limited quantity	LQ7
ventilation	VE01

Special precautions for users

Special precautions	No information available

SECTION 15: Regulatory information

This mixture is classified as hazardous according to regulation (EC) No. 1272/2008 [CLP]

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

European Union

Chemical Name	96/82/EC (SEVESO) - §9	96/82/EC (SEVESO) - §6, §7
Styrene - 100-42-5	50000	5000 tonnes 50000 tonnes
Xylene - 1330-20-7	50000	5000 tonnes 50000 tonnes

National regulatory information
The United Kingdom

Avoid exceeding of the given occupational exposure limits (see section 8).

Ireland
Avoid exceeding of the given occupational exposure limits (see section 8).

15.2. Chemical safety assessment
not applicable

SECTION 16: Other information

Full text of H-Statements referred to under sections 2 and 3
H226 - Flammable liquid and vapour
H302 - Harmful if swallowed
H304 - May be fatal if swallowed and enters airways
H312 - Harmful in contact with skin
H315 - Causes skin irritation
H317 - May cause an allergic skin reaction
H318 - Causes serious eye damage
H319 - Causes serious eye irritation
H320 - Causes eye irritation
H332 - Harmful if inhaled
H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled
H335 - May cause respiratory irritation
H336 - May cause drowsiness or dizziness
H361 - Suspected of damaging fertility or the unborn child
H361d - Suspected of damaging the unborn child
H372 - Causes damage to organs through prolonged or repeated exposure if inhaled
H373 - May cause damage to organs through prolonged or repeated exposure
H400 - Very toxic to aquatic life
H411 - Toxic to aquatic life with long lasting effects
H412 - Harmful to aquatic life with long lasting effects
EUH208 - May produce an allergic reaction

Full text of R-phrases referred to under sections 2 and 3
R10 - Flammable
R20 - Harmful by inhalation
R22 - Harmful if swallowed
R36 - Irritating to eyes
R41 - Risk of serious damage to eyes
R43 - May cause sensitisation by skin contact
R62 - Possible risk of impaired fertility
R63 - Possible risk of harm to the unborn child
R65 - Harmful: may cause lung damage if swallowed
R66 - Repeated exposure may cause skin dryness or cracking
R67 - Vapours may cause drowsiness and dizziness
R20/21 - Harmful by inhalation and in contact with skin.
R36/37/38 - Irritating to eyes, respiratory system and skin.
R37/38 - Irritating to respiratory system and skin.
R42/43 - May cause sensitisation by inhalation and skin contact.
R48/20 - Harmful: danger of serious damage to health by prolonged exposure through inhalation.
R50/53 - Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R51/53 - Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R52/53 - Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Former date 27-Feb-2015
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Revision Note
This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet