

SAFETY DATA SHEET



ENVIROGRAF®

HS083-EP/FS/IN/SB-01-2024

Product Number: 83
EP/FS/IN/SB Spirit Based
Intumescent Coating for Steel Protection

Description:

Spirit based paint suitable for the protection of external steel and aluminium.
Can be applied over existing paint after removal of any loose particles and washing down.

This product comprises of the following materials and therefore is supported by Health & Safety Data Sheets:

- (Appendix 89) EP/FS/IN/SB Spirit based Steel Paint

*The information contained in this safety data sheet is given in good faith. It is accurate to the best of our knowledge and belief and represents the most up to date information. The information given in this data sheet does not constitute or replace the user's own assessment of workplace risk as required by other health and safety legislation.

HEALTH & SAFETY INFORMATION SHEET
APPENDIX 89
EP/FS/IN/SB

1. IDENTIFICATION OF THE PREPARATION AND COMPANY

1.1 Product identifier

Product name : EP/FS/IN/SB Spirit-based intumescent coating for steel
Product code : Not available
Product description : Paint
Product type : Liquid
Other means of identification : Not available

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

Uses in Coatings – Industrial use
 Uses in Coatings – Professional use

1.3 Details of the supplier of the safety data sheet

Envirograf
 Envirograf House, Barfrestone, Dover, Kent, CT15 7JG
 Telephone/fax/email: 01304 842555 01304 842666 sales@envirograf.com

1.4 Emergency telephone number

National advisory body/Poison Centre

Telephone number : Contact NHS Direct; phone 0845 4647 or 111. Open 24/7

Supplier

Telephone number : 01304 842555 (Not 24 Hours)

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Product definition : Mixture

Classification According to UK CLP/GHS:

Flam. Liq. 3 : H226
 Skin Irrit. 2 : H315
 Eye Irrit. 2 : H319
 Carc. 2 : H351
 Repr. 2 : H361F
 STOT SE 3 : H335
 Aquatic Chronic 3 : H412

The product is classified as hazardous according to UK CLP Regulations SI 2019/720 as amended.

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

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label Elements

Hazard pictograms



Signal word

: Warning

Hazard statements

: H226 - Flammable liquid and vapour.
 : H315 - Causes skin irritation.
 : H319 - Causes serious eye irritation.

- : H335 - May cause respiratory irritation.
- : H351 - Suspected of causing cancer.
- : H361F - Suspected of damaging fertility.
- : H412 - Harmful to aquatic life with long lasting effects.

Precautionary statements

General

Prevention

- : Not applicable
- : P201 - Obtain special instructions before use.
- : P280 - Wear protective gloves, protective clothing, eye protection, face protection, or hearing protection.
- : P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- : P273 - Avoid release in the environment.
- : P261 - Avoid breathing vapour.

Response

- : P308 + P313 - IF exposed or concerned: Get medical advice or attention.
- : P304 + P312 - IF INHALED: Call a POISON CENTER or doctor if you feel unwell.
- : P362 + P364 - Take off contaminated clothing and wash it before reuse.
- : P302 + P352 - IF ON SKIN: Wash with plenty of water.
- : P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- : P337 + P313 - If eye irritation persists: Get medical advice or attention.

Storage

Disposal

- : P403 + P233 - Store in a well-ventilated place. Keep container tightly closed.
- : P501 - Dispose of contents and container in accordance with all local, regional, national & international regulations.

Supplemental label elements

- : EUH211 - Warning! Hazardous respirable droplets may be formed when sprayed. Do not breath spray or mist.

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

- : Not applicable.

Special packaging requirements

Containers to be fitted with child-resistant fastenings

- : Not applicable.

Tactile warning of danger

- : Not applicable.

2.3 Other hazards

Product meets the criteria For PBT or vPvB according To Regulation (EC) No. 1907/2006, Annex XIII

- : This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

Other hazards which do not Result in classification

- : None known

3. COMPOSITION / INFORMATION ON INGREDIENTS

Substance/mixture : Mixture

Product/ingredient name	Identifiers	%	Classification Regulation (EC) No. 1272/2008 [CLP]	Type
Xylene	REACH # 01-2119488216-32 EC: 215-535-7 CAS: 1330-20-7 Index: 601-022-00-9	≥ 10- ≤25	Flam. Liq 3, H226 Acute Tox. 4, H312 Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Irrit. 2 H319 STOT SE 3, H335 Asp. Tox. 1, H304 Aquatic chronic 3, H412	[1] [2]
Titanium dioxide	REACH # 01-2119489379-17 EC: 236-675-5 CAS: 13463-67-7 Index: 022-006-00-2	≤ 10	Carc. 2 H351 (inhalation)	[1] [2] [*]
Melamine	REACH # 01-2119485947-16 EC: 203-615-4 CAS: 108-78-1	< 10	Carc. 2, H351 Repr. 2, H361F (oral) STOT RE2, H373 (urinary tract)	[1]
Pentaerythritol	EC: 204-104-9 CAS: 115-77-5	≤ 10	Not classified.	[2]
Ethylbenzene	REACH# 01-2119489370-35 EC: 202-849-4 CAS: 100-41-4 Index: 601-023-00-4	<10	Flam. Liq. 2, H225 Acute. Tox. 4, H332 STOT RE 2, H373 (hearing organs) Asp. Tox. 1, H304 Aquatic chronic 3, H412	[1] [2]
Kaolin	EC: 310-127-6 CAS: 1332-58-7	≤ 3	Not classified.	[2]
1,3,5-Trazine-2,4,6-triamine, polymer with formaldehyde, butylated	CAS: 68002-25-5	≤ 3	Aquatic Chronic 4, H413	[1]
			See section 16 for the full text of the H statements declared above.	

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, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

[1] Substance classified with a health or environmental hazard

[2] Substance with a workplace exposure limit

[*] The classification as a carcinogen by inhalation applies only to mixtures placed on the market in powder form containing 1% or more of titanium dioxide particles with aerodynamic diameter ≤ 10 µm not bound within a matrix.

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

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 centre 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. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

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. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. 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

There are no data available on the mixture itself. The mixture has been assessed following the conventional method of the CLP Regulation (EC) No 1272/2008 and is classified for toxicological properties accordingly. See Section 2 and 3 for details.

Exposure to component solvent vapour concentrations in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness.

Solvents may cause some of the above effects by absorption through the skin. Repeated or prolonged contact with the mixture may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin.

If splashed in the eyes, the liquid may cause irritation and reversible damage.

Ingestion may cause nausea, diarrhea and vomiting.

This takes into account, where known, delayed and immediate effects and also chronic effects of components from short-term and long-term exposure by oral, inhalation and dermal routes of exposure and eye contact.

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: Irritation, redness

Ingestion

: No specific data

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician:

: In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Specific treatments:

: No specific treatment.

See toxicological information (Section 11).

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media : Recommended: alcohol-resistant foam, CO₂, powders, water spray.

Unsuitable extinguishing media : 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. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous combustion products : Decomposition products may include the following materials:
carbon dioxide,
carbon monoxide,
nitrogen oxides,
phosphorus oxides,
halogenated compounds,
carbonyl halides,
metal oxide/oxides.

5.3 Advice for firefighters

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

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.

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.
Personnel : Evacuate surrounding area. 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 : If 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). Water polluting material. May be harmful to the environment if released in large quantities.

6.3 Methods and material for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. 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. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. 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 (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

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

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). Avoid exposure - obtain special instruction before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or in skin or clothing. Do not ingest. Avoid breathing vapour or mist. Avoid release to the environment. 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, keep tightly closed when 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 handles, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering enter 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 i 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 oxidising materials. Keep container tightly closed and sealed until ready to 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. See Section 10 for incompatible materials before handling or use.

7.3 Specific end use(s)

Recommendations : Not available

Industrial sector specific solutions : Not available

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Occupational exposure limits

Product/ingredient name	Exposure limit values
Xylene	EH40/2005 WELs (United Kingdom (UK), 1/2020). Absorbed through skin. STEL: 441 mg/m ³ 15 minutes STEL: 100 ppm 15 minutes TWA: 220mg/m ³ 8 hours TWA: 50 ppm 8 hours
Titanium dioxide	EH40/2005 WELs (United Kingdom (UK), 1/2020) TWA: 4mg/m ³ 8 hours. Form: respirable TWA: 10mg/m ³ 8 hours. Form: total inhalable
Pentaerythritol	EH40/2005 WELs (United Kingdom (UK), 1/2020) TWA: 4mg/m ³ 8 hours. Form: respirable dust STEL: 20mg/m ³ 15 minutes. Form: inhalable dust TWA: 10mg/m ³ 8 hours. Form: inhalable dust
Ethylbenzene	EH40/2005 WELs (United Kingdom (UK). 01/2020). Absorbed through skin. STEL: 552 mg/m ³ 15 minutes STEL: 125 ppm 15 minutes TWA: 441mg/m ³ 8 hours TWA: 100 ppm 8 hours
Kaolin	EH40/2005 WELs (United Kingdom (UK), 1/2020) TWA: 2mg/m ³ 8 hours. Form: respirable dust

Biological exposure indices

No exposure indices known.

Recommended monitoring procedures

: Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

Product/ingredient name	Type	Exposure	Value	Population	Effects
Xylene	DNEL	Long term Inhalation	65.3 mg/m ³	General population	Local
	DNEL	Short term Inhalation	260 mg/m ³	General population	Local
	DNEL	Short term Inhalation	260 mg/m ³	General population	Systemic
	DNEL	Long term Inhalation	221 mg/m ³	Workers	Local
	DNEL	Long term Oral	12.5 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	65.3 mg/m ³	General population	Systemic
	DNEL	Long term Dermal	125 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	212 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	221 mg/m ³	Workers	Systemic
	DNEL	Short term Inhalation	442 mg/m ³	Workers	Local
	DNEL	Short term Inhalation	442 mg/m ³	Workers	Systemic
	Melamine	DNEL	Long term Oral	0.42 mg/kg bw/day	General population
DNEL		Long term Inhalation	1.5 mg/m ³	General population	Systemic
DNEL		Long term Dermal	4.2 mg/kg bw/day	General population	Systemic
DNEL		Long term Inhalation	8.3 mg/m ³	Workers	Systemic
DNEL		Long term Dermal	11.8 mg/kg bw/day	Workers	Systemic
DNEL		Short term Dermal	117 mg/kg bw/day	Workers	Systemic
DNEL		Short term Inhalation	82.3 mg/m ³	Workers	Systemic
Pentaerythritol	DNEL	Long term Oral	5 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	5 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	8.7 mg/m ³	General population	Systemic
	DNEL	Long term Dermal	10 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	11.8 mg/m ³	Workers	Systemic
Ethylbenzene	DNEL	Long term Oral	1.6 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	15 mg/m ³	General population	Systemic
	DNEL	Long term Inhalation	77 mg/m ³	Workers	Systemic

	DNEL	Long term Dermal	180 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Inhalation	293 mg/m ³	Workers	Local
	DNEL	Long term Inhalation	442 mg/m ³	Workers	Local
	DNEL	Short term Inhalation	884 mg/m ³	Workers	Systemic

PNECs

Product/ingredient name	Type	Compartment Detail	Value	Method Detail
Xylene	PNEC	Fresh water	0,327 mg/l	-
	PNEC	Marine	0,327 mg/l	-
	PNEC	Sewage treatment plant	6,58 mg/l	-
	PNEC	Plant	-	-
	PNEC	Fresh water sediment	12,46 mg/kg dwt	-
	PNEC	Marine water sediment	12,46 mg/kg dwt	-
	PNEC	Soil	2,31 mg/kg dwt	-
Ethylbenzene	PNEC	Fresh Water	0,1 mg/l	-
	PNEC	Marine	0,01 mg/l	-
	PNEC	Sewage treatment plant	9,6 mg/l	-
	PNEC	Plant	-	-
	PNEC	Fresh water sediment	13,7 mg/kg dwt	-
	PNEC	Soil	2,68 mg/kg dwt	-
	PNEC	Secondary Poisoning	20 mg/kg	-

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 eyewear complying to EN 16321-1:2022 should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin protection

Hand Protection

: There is no one glove material or combination of materials that will give unlimited resistance to any individual or combination of chemicals.
 : The breakthrough time must be greater than the end use time of the product.
 : The instructions and information provided by the glove manufacture on use, storage, maintenance and replacement must be followed.
 : Gloves should be replaced regularly and if there is any sign of damage to the glove material.
 : Always ensure that gloves are free from defects and that they are stored and used correctly.
 : The performance or effectiveness of the glove may be reduced by physical/chemical damage and poor maintenance.
 : Barrier creams may help to protect the exposed areas of the skin but should not be applied once exposure has occurred.

Gloves

: Wear suitable gloves tested to ISO 374-1:2016
 : Not recommended, gloves (breakthrough time) < 1 hour: butyl rubber (> 0.4 mm).
 : May be used, gloves (breakthrough time) 4-8 hours: neoprene (> 0.35 mm), PVC (> 0.5 mm).
 : Recommended, gloves (breakthrough time) > 8 hours: 4H/Silver Shield (> 0.07 mm), Teflon (> 0.35 mm), nitrile rubber (> 0.4 mm), polyvinyl alcohol (PVA) (> 0.3 mm).
 : For right choice of glove materials, with focus on chemical resistance and time of penetration, seek advice by the supplier of chemical resistant gloves.
 : The user must check that the final choice of type of glove selected for handling this product is

the most appropriate and takes into account that particular conditions of use, as included in the user's risk assessment.

- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : If workers are exposed to concentrations above the exposure limit, they must use a respirator according to EN 140. Use respiratory mask with charcoal and dust filter when spraying this product, according to EN 14387 (as filter combination A2-P2). In confined spaces, use compressed-air or fresh-air respiratory equipment. When using roller or brush, consider use of charcoal filter.
- Environmental exposure control** : Do not allow to enter drains or watercourses.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance

- Physical state** : Liquid
- Colour** : White
- Odour** : Characteristic
- Odour threshold** : Not applicable.
- Melting/freezing point** : Not applicable.
- Initial boiling point and boiling range** : Lowest known value: 136.1°C (277°F) (ethylbenzene). Weighted average: 136.14°C (277.1°F)
- Flammability** : Not applicable.
- Upper/lower flammability or explosive limits** : 0.8 - 6.7 %
- Flash point** : Closed cup: 24°C (75.2°F)
- Auto-ignition temperature** : Lowest known value: 432°C (809.6°F) (xylene)
- Decomposition temperature** : Not available.
- pH** : Not applicable.
- Viscosity** : Kinematic (40°C): >20.5 mm²/s
- Partition coefficient: n-octanol/water** : Not available
- Vapour pressure** : Highest known value: 1.2 kPa (9.3 mm Hg) (at 20°C) (ethylbenzene). Weighted average: 0.98 kPa (7.35 mm Hg) (at 20°C)
- Evaporation rate** : Highest known value: 0.84 (ethylbenzene). Weighted Average: 0.79 compared with butyl acetate.
- Density** : 1.326 g/cm³
- Vapour density** : Highest known value: 3.7 (Air = 1) (xylene). Weighted average: 3.7 (Air = 1)
- Explosive properties** : Not available.
- Oxidising properties** : Not available.

Evaporation rate : Highest known value: 0.84 (ethylbenzene). Weighted Average: 0.79 compared with butyl acetate.

Flammability (solid, gas) : Not applicable

Burning time : Not applicable

Burning rate : Not applicable

Particle characteristics

Medial particle size : Not applicable.

9.2 Other information

No additional information.

10. STABILITY AND REACTIVITY

10.1 Reactivity	: No specific test data related to reactivity available for this product or its ingredients.
10.2 Chemical stability	: Stable under recommended storage and handling conditions (see Section 7).
10.3 Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reaction will not occur.
10.4 Conditions to avoid	: When exposed to high temperatures may produce hazardous decomposition products.
10.5 Incompatible materials	: Keep away from the following materials to prevent strong exothermic reactions: oxidising agents, strong alkalis, strong acids.
10.6 Hazardous decomposition products	: Decomposition products may include the following materials: carbon monoxide, carbon dioxide, smoke, oxides of nitrogen.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

There are no data available on the mixture itself. The mixture has been assessed following the conventional method of the CLP Regulation (EC) No. 1272/2008 and is classified for toxicological properties accordingly. See Sections 2 and 3 for details.

Exposure to component solvent vapour concentrations in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness.

Solvents may cause some of the above effects by absorption through the skin. Repeated or prolonged contact with the mixture may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin.

If splashed in the eyes, the liquid may cause irritation and reversible damage.

Ingestion may cause nausea, diarrhea and vomiting.

This takes into account, where known, delayed and immediate effects and also chronic effects of components from short-term and long-term exposure by oral, inhalation and dermal routes of exposure and eye contact.

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Xylene	LC50 Inhalation Vapour	Rat	20 mg/l	4 hours
	LD50 Oral	Rat	4300 mg/kg	-
	TDL ₀ Dermal	Rabbit	4300 mg/kg	-
Ethylbenzene	LC50 Inhalation gas	Rabbit	4000 ppm	4 hours
	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	3500 mg/kg	-
Melamine	LD50 Oral	Rat	3161 mg/kg	-
Pentaerythritol	LD50 Oral	Rat	18500 mg/kg	-
Ethylbenzene	LC50 Inhalation Vapour	Rat - Male	17.8 mg/l	4 hours
	LD50 Dermal	Rabbit	> 5000 mg/kg	-
	LD50 Oral	Rat	3500 mg/kg	-

Acute toxicity estimates

Product/ ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
EP/FS/IN/SB Spirit-based intumescent coating for steel	N/A	5304.4	N/A	70.2	NA
Xylene	4300	1100	N/A	20	N/A
Melamine	3161	N/A	N/A	N/A	N/A
Pentaerythritol	18500	N/A	N/A	N/A	N/A
Ethylbenzene	3500	N/A	N/A	17.8	N/A

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Xylene	Eyes - Mild irritant	Rabbit	-	87 milligrams	-
	Skin - Mild irritant	Rat	-	8 hours 60 microliters	-
Titanium dioxide	Skin - Mild irritant	Human	-	72 hours	-
Melamine	Eyes- Mild irritant	Rabbit	-	24 hours 500 miligrams	-

Sensitisation

Based on available data, the classification criteria are not met.

Mutagenicity

No known significant effects or critical hazards.

Carcinogenicity

It has been observed that the carcinogenic hazard of this product arises when respirable dust is inhaled in quantities leading to significant impairment of particle clearance mechanisms in the lung.

Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.

Reproductive toxicity

Product/ingredient name	Maternal toxicity	Fertility	Developmental toxin	Species	Dose	Exposure
Melamine	-	Positive	-	Rat - Male	Oral: 89 mg/kg	days

Developmental effects

: No known significant effects or critical hazards.

Fertility effects

: Suspected of damaging fertility.

Teratogenicity

No known significant effects or critical hazards.

Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
Xylene	Category 3	-	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Route of exposure	Target Organs
Melamine	Category 2	-	Urinary tract
Ethylbenzene	Category 2	Not determined	Hearing organs

Aspiration hazard

Product / ingredients name	Result
Xylene	ASPIRATION HAZARD – Category 1
Ethylbenzene	ASPIRATION HAZARD – Category 1

Potential acute health effects

Eye contact

: Causes serious eye irritation.

Inhalation

: May cause respiratory irritation.

Skin contact

: Causes skin irritation.

Ingestion

: No known significant effects or critical hazards.

Symptoms related to the physical chemical and toxicological characteristics

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.
General : No known significant effects or critical hazards.
Other information : None identified.

12. ECOLOGICAL INFORMATION

12.1 Toxicity:

There are no data available on the mixture itself.
Do not allow to enter drains or watercourses.

The mixture has been assessed following the summation method of the CLP Regulation (EC) No 1272/2008 and is classified for eco-toxicological properties accordingly. See Section 2 and 3 for details.

Product/ingredient name	Result	Species	Exposure
Xylene	Acute LC50 8500 µg/l Marine water	Crustaceans - Daggerblade grass	48 hours
	Acute LC50 13400 µg/l Fresh water	shrimp - Palaemonetes pugio Fish - Fathead minnow - Pimephales promelas	96 hours
Titanium dioxide	Acute LC50 3 mg/l Fresh water	Crustaceans - Water flea - Ceriodaphnia dunia - Neonate	48 hours
	Acute LC50 6.5 mg/l Fresh water	Daphnia - Water flea - Daphnia pulex - Neonate	48 hours
	Acute LC50 > 1000000 µg/l Marine water	Fish - Mummichog - Fundulus heteroclitus	96 hours
Pentaerythritol	Acute EC50 33600000 to 37043000 µg/l Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
Ethylbenzene	Acute EC50 7700 µg/l Marine water	Algae - Diatom - Skeletonema costatum	96 hours
	Acute EC50 2.93 mg/l	Daphnia	48 hours
	Acute LC50 4.2 mg/l	Fish	96 hours

Conclusion/Summary : This material is harmful to aquatic life with long lasting effects.

12.2 Persistence and degradability:

Conclusion/Summary : Not available

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Xylene	-	-	Readily
Ethylbenzene	-	-	Readily

12.3 Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
Xylene	3.12	8.1 to 25.9	Low
Melamine	- 1.22	< 3.8	
Pentaerythritol	- 1.7	1.26	Low
Ethylbenzene	3.6	-	Low

12.4 Mobility in soil

Soil/water partition coefficient (Koc) : Not available
Mobility : Not available

12.5 Results of PBT and vPvB assessment

The mixture does not contain any substances that are assessed to be a PBT or a vPvB.

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

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. 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. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor.
Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

Hazardous waste

: Yes.

Waste catalogue (EWC)

Waste code	Waste designation
08 01 11*	Waste paint and varnish containing organic solvents or other dangerous substances

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.

Type of packaging	Waste catalogue
CEPE Guidelines	15 01 10* packaging containing residues of or contaminated by hazardous substances

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. Vapour 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 spill material and runoff and contact with soil, waterways, drains and sewers.

14. TRANSPORT INFORMATION

	ADR/RID	ADN	IMDG	IATA
14.1 UN number	UN1263	UN1263	UN1263	UN1263
14.2 UN proper shipping name	PAINT	PAINT	PAINT	PAINT
14.3 Transport hazard class(es)	3 	3 	3 	3 
14.4 Packing group	III	III	III	III
14.5 environmental hazards Marine pollutant substances	No	Yes	No	No

Additional information

ADR/RID

: **Hazard identification number** 30
Tunnel code (D/E)

ADR/RID: Viscous substance. Not restricted, ref. chapter 2.2.3.1.5 (applicable to receptacles < 450 litre capacity).

AND : The product is only regulated as an environmentally hazardous substance when transported in tank vessels.

IMDG : **Emergency schedules** F-E, S-E
 IMDG: Viscous substance. Transport in accordance with paragraph 2.3.2.5 (applicable to receptacles < 450 litre capacity).

IATA : The environmentally hazardous substance mark may appear if required by other transportation regulations.

14.6 Special precautions for user: : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code : Not available

15. REGULATORY INFORMATION

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

UK (GB)/REACH

Annex XIV – List of substances subject to authorisation

Annex XIV

None of the components are listed.

Substances of very high concern

Intrinsic property	Ingredient name	Status	Reference number	Date of revision
Substance of equivalent concern for human health	Melamine	Candidate	-	15.02.2023
Substance of equivalent concern for environment	Melamine	Candidate	-	15.02.2023

Ozone depleting substances

Not listed.

Prior Informed Consent (PIC)

Not listed.

Persistent Organic Pollutants

Not listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Not applicable

Seveso Directive

This product is controlled under the Seveso Directive.

Danger criteria

Category
P5c

EU regulations

Industrial emissions (integrated pollution prevention and control) - Air : Not listed

Industrial emissions (integrated pollution : Not listed

Prevention and control) - Water

International regulations

Chemical Weapon Convention List Schedules I, II, III Chemicals
Not listed.

Montreal Protocol
Not listed.

Stockholm Convention on Persistent Organic Pollutants
Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)
Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals
Not listed.

15.2 Chemical Safety Assessment : This product contains substances for which Chemical Safety Assessments are still required.

16. OTHER INFORMATION

Indicates information that has changed from previously issued version.

Abbreviations and acronyms

- : ATE = Acute Toxicity Estimate
- : GB CLP = UK CLP (EC No 1272/2008) on the Classification, Labelling and Packaging of Substances and Mixtures as amended by (EU Exit) Regulations 2019 No.720 and amendments.
- : DMEL = Derived Minimal Effect Level
- : DNEL = Derived No Effect Level
- : EUH statement = GB CLP-specific Hazard statement
- : N/A = Not Available
- : PBT = Persistent, Bioaccumulative and Toxic
- : PNEC = Predicted No Effect Concentration
- : RRN = REACH Registration Number
- : SGG = Segregation Group
- : vPvB = Very Persistent and Very Bioaccumulative

Procedure used to derive the classification

Classification	Justification
Flam, Liq. 3, H226	On basis of test data
Skin Irrit. 2, H315	Calculation method
Eye Irrit. 2, H319	Calculation method
Carc. 2, H351	Calculation method
Repr. 2, H361F	Calculation method
STOT SE 3, H335	Calculation method
Aquatic Chronic 3, H412	Calculation method

Full text of abbreviations H statements

H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H351	Suspected of causing cancer.
H361F	Suspected of damaging fertility.

H373 H412 H413	May cause damage to organs through prolonged or repeated exposure. Harmful to aquatic life with long lasting effects. May cause long lasting harmful effects to aquatic life.
----------------------	---

Full text of classifications

Acute Tox. 4 Aquatic Chronic 3 Aquatic Chronic 4 Asp. Tox. 1 Carc. 2 Eye Irrit. 2 Flam. Liq. 2 Flam. Liq. 3 Repr. 2 Skin Irrit. 2 STOT RE 2 STOT SE 3	ACUTE TOXICITY - Category 4 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 4 ASPIRATION HAZARD - Category 1 CARCINOGENICITY - Category 2 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2 FLAMMABLE LIQUIDS - Category 2 FLAMMABLE LIQUIDS - Category 3 REPRODUCTIVE TOXICITY - Category 2 SKIN CORROSION/IRRITATION - Category 2 SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2 SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3
--	---

Disclaimer

The information contained in this data sheet is based on present scientific and technical knowledge. The purpose of this information is to draw attention to the health and safety aspects concerning the products supplied by us, and to recommend precautionary measures for the storage and handling of the products. No warranty or guarantee is given in respect of the properties of the products. No liability can be accepted for any failure to observe the precautionary measures described in this data sheet or for any misuse of the products.