

SAFETY DATA SHEET



Date of issue/Date of revision : 11 September 2024 Version : 1.01

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

1.1 Product identifier

Product name : SIGMASHIELD 905 BASE BLACK
Product code : 00290587
Product type : Liquid.
Other means of identification : Not available.

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

Product use : Professional applications, Used by spraying.
Use of the substance/mixture : Coating.
Uses advised against : Product is not intended, labelled or packaged for consumer use.

1.3 Details of the supplier of the safety data sheet

PPG Coatings Belgium BV/SRL
Tweemontstraat 104
B-2100 Deurne
Belgium
Telephone +32-33606311
Fax +32-33606435

e-mail address of person responsible for this SDS : Product.Stewardship.EMEA@ppg.com

1.4 Emergency telephone number

Supplier
+31 20 4075210

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture
Classification according to UK CLP/GHS

Skin Irrit. 2, H315
Eye Irrit. 2, H319
Skin Sens. 1, H317
Aquatic Chronic 2, H411

The product is classified as hazardous according to UK CLP Regulation 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 : Causes skin irritation.
May cause an allergic skin reaction.
Causes serious eye irritation.
Toxic to aquatic life with long lasting effects.

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SECTION 2: Hazards identification

Precautionary statements

- Prevention** : Wear protective gloves. Wear eye or face protection. Avoid release to the environment. Avoid breathing vapour. Wash thoroughly after handling.
- Response** : Collect spillage.
- Storage** : Not applicable.
- Disposal** : Dispose of contents and container in accordance with all local, regional, national and international regulations.
 P280, P273, P261, P264, P391, P501
- Supplemental label elements** : Not applicable.

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.

SECTION 3: Composition/information on ingredients

3.2 Mixtures : Mixture

Product/ingredient name	Identifiers	%	Classification	Type
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700)	REACH #: 01-2119456619-26 EC: 500-033-5 CAS: 25068-38-6 Index: 603-074-00-8	≥25 - ≤50	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 2, H411	[1]
1,6-Hexanediol, reaction products with epichlorohydrin	REACH #: 01-2119463471-41 EC: 618-939-5 CAS: 933999-84-9	≥5.0 - ≤10	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1B, H317 Aquatic Chronic 3, H412	[1]
benzyl alcohol	REACH #: 01-2119492630-38 EC: 202-859-9 CAS: 100-51-6 Index: 603-057-00-5	≥5.0 - ≤10	Acute Tox. 4, H302 Acute Tox. 4, H332 Eye Irrit. 2, H319	[1]
triiron tetraoxide	REACH #: 01-2119457646-28 EC: 215-277-5 CAS: 1317-61-9	≥1.0 - ≤5.0	Not classified.	[2]
xylene	REACH #: 01-2119488216-32 EC: 215-535-7 CAS: 1330-20-7	≥1.0 - ≤5.0	Flam. Liq. 3, H226 Acute Tox. 4, H312 Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319	[1] [2]

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SECTION 3: Composition/information on ingredients

Octadecanamide, N, N'-1,6-hexanediyldis[12-hydroxy-	CAS: 55349-01-4	<1.0	STOT SE 3, H335 Asp. Tox. 1, H304 Aquatic Chronic 3, H412 Skin Sens. 1, H317 Aquatic Chronic 4, H413	[1]
Octadecanoic acid, 12-hydroxy-, reaction products with ethylenediamine	REACH #: 01-2119979085-27 EC: 309-629-8 CAS: 100545-48-0	<1.0	Skin Sens. 1B, H317 Aquatic Chronic 3, H412	[1]
zinc powder zinc dust (stabilised)	REACH #: 01-2119467174-37 EC: 231-175-3 CAS: 7440-66-6 Index: 030-001-01-9	≤0.30	Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)	[1]
methanol	REACH #: 01-2119433307-44 EC: 200-659-6 CAS: 67-56-1 Index: 603-001-00-X	≤0.30	Flam. Liq. 2, H225 Acute Tox. 3, H301 Acute Tox. 3, H311 Acute Tox. 3, H331 STOT SE 1, H370 See Section 16 for the full text of the H statements declared above.	[1] [2]

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.

Xylene: Several REACH registrations cover the REACH registered substance with xylene isomers, ethylbenzene (and toluene). The other REACH Registrations include: 01-2119555267-33 reaction mass of ethylbenzene and m-xylene and p-xylene, 01-2119486136-34 Aromatic hydrocarbons, C8, 01-2119539452-40 reaction mass of ethylbenzene and xylene.

Type

[1] Substance classified with a health or environmental hazard

[2] Substance with a workplace exposure limit

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

SUB codes represent substances without registered CAS Numbers.

SECTION 4: First aid measures

4.1 Description of first aid measures

- Eye contact** : Remove contact lenses, irrigate copiously with clean, fresh water, holding the eyelids apart for at least 10 minutes and seek immediate medical advice.
- Inhalation** : Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.
- Skin contact** : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognised skin cleanser. Do NOT use solvents or thinners.
- Ingestion** : If swallowed, seek medical advice immediately and show the container or label. Keep person warm and at rest. Do NOT induce vomiting.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

4.2 Most important symptoms and effects, both acute and delayed

Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : No known significant effects or critical hazards.

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SECTION 4: First aid measures

Skin contact : Causes skin irritation. May cause an allergic skin reaction.

Ingestion : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:
pain or irritation
watering
redness

Inhalation : No specific data.

Skin contact : Adverse symptoms may include the following:
irritation
redness

Ingestion : No specific data.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture : In a fire or if heated, a pressure increase will occur and the container may burst. This material is toxic 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 oxides
halogenated compounds
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.

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.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. 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".

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SECTION 6: Accidental release measures

6.2 Environmental precautions : Avoid dispersal of spilled 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. Collect spillage.

6.3 Methods and material for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. 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 spilled 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.

SECTION 7: Handling and storage

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

7.1 Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapour or mist. Avoid release to the environment. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

Store between the following temperatures: 0 to 35°C (32 to 95°F). Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

7.3 Specific end use(s)

See Section 1.2 for Identified uses.

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SECTION 8: Exposure controls/personal protection

8.1 Control parameters

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).

Occupational exposure limits

Product/ingredient name	Exposure limit values
Iron tetraoxide	EH40/2005 WELs (United Kingdom (UK), 9/2006). WEL 15 min limit: 2 mg/m ³ , (As Fe) 15 minutes. WEL 8 hrs limit: 1 mg/m ³ , (As Fe) 8 hours.
xylene	EH40/2005 WELs (United Kingdom (UK), 1/2020). [xylene, o-,m-,p- or mixed isomers] Absorbed through skin. STEL: 441 mg/m ³ 15 minutes. STEL: 100 ppm 15 minutes. TWA: 220 mg/m ³ 8 hours. TWA: 50 ppm 8 hours.
methanol	EH40/2005 WELs (United Kingdom (UK), 1/2020). Absorbed through skin. STEL: 333 mg/m ³ 15 minutes. STEL: 250 ppm 15 minutes. TWA: 266 mg/m ³ 8 hours. TWA: 200 ppm 8 hours.

Biological exposure indices

Product/ingredient name	Exposure indices
xylene	XYLENES

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
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700)	DNEL	Long term Inhalation	12.25 mg/m ³	Workers	Systemic
	DNEL	Short term Inhalation	12.25 mg/m ³	Workers	Systemic
	DNEL	Long term Dermal	8.33 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Dermal	8.33 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Dermal	3.571 mg/kg bw/day	General population [Consumers]	Systemic
	DNEL	Short term Dermal	3.571 mg/kg bw/day	General population [Consumers]	Systemic
	DNEL	Long term Oral	0.75 mg/kg bw/day	General population [Consumers]	Systemic
1,6-Hexanediol, reaction products with epichlorohydrin	DNEL	Short term Oral	0.75 mg/kg bw/day	General population [Consumers]	Systemic
	DNEL	Short term Dermal	13.6 µg/cm ²	General population	Local
	DNEL	Long term Dermal	13.6 µg/cm ²	General population	Local
	DNEL	Short term Dermal	22.6 µg/cm ²	Workers	Local
	DNEL	Long term Dermal	22.6 µg/cm ²	Workers	Local
	DNEL	Long term Inhalation	0.27 mg/m ³	General population	Local
	DNEL	Long term Inhalation	0.44 mg/m ³	Workers	Local
	DNEL	Short term Oral	1.5 mg/kg bw/day	General population	Systemic
	DNEL	Long term Oral	1.5 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	3 mg/kg bw/day	General population	Systemic

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SECTION 8: Exposure controls/personal protection

benzyl alcohol	DNEL	Short term Inhalation	5.29 mg/m ³	General population	Systemic
	DNEL	Long term Inhalation	5.29 mg/m ³	General population	Systemic
	DNEL	Long term Dermal	6 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Inhalation	10.57 mg/m ³	Workers	Systemic
	DNEL	Long term Inhalation	10.57 mg/m ³	Workers	Systemic
	DNEL	Long term Oral	4 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	4 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	5.4 mg/m ³	General population	Systemic
	DNEL	Long term Dermal	8 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Oral	20 mg/kg bw/day	General population	Systemic
	DNEL	Short term Dermal	20 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	22 mg/m ³	Workers	Systemic
	DNEL	Short term Inhalation	27 mg/m ³	General population	Systemic
	DNEL	Short term Dermal	40 mg/kg bw/day	Workers	Systemic
xylene	DNEL	Short term Inhalation	110 mg/m ³	Workers	Systemic
	DNEL	Long term Oral	5 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	65.3 mg/m ³	General population	Local
	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	Local
	DNEL	Long term Inhalation	221 mg/m ³	Workers	Systemic
	DNEL	Short term Inhalation	260 mg/m ³	General population	Local
	DNEL	Short term Inhalation	260 mg/m ³	General population	Systemic
	DNEL	Short term Inhalation	442 mg/m ³	Workers	Local
	DNEL	Short term Inhalation	442 mg/m ³	Workers	Systemic
	DNEL	Long term Inhalation	0.055 mg/m ³	General population	Local
	Octadecanoic acid, 12-hydroxy-, reaction products with ethylenediamine	DNEL	Long term Inhalation	0.308 mg/m ³	Workers
DNEL		Short term Oral	4 mg/kg bw/day	General population	Systemic
DNEL		Long term Oral	4 mg/kg bw/day	General population	Systemic
DNEL		Short term Dermal	4 mg/kg bw/day	General population	Systemic
DNEL		Long term Dermal	4 mg/kg bw/day	General population	Systemic
DNEL		Short term Dermal	20 mg/kg bw/day	Workers	Systemic
DNEL		Long term Dermal	20 mg/kg bw/day	Workers	Systemic
DNEL		Short term Inhalation	26 mg/m ³	General population	Local
DNEL		Long term Inhalation	26 mg/m ³	General population	Local
DNEL		Short term Inhalation	26 mg/m ³	General population	Systemic
DNEL		Long term Inhalation	26 mg/m ³	General population	Systemic
DNEL		Short term Inhalation	130 mg/m ³	Workers	Local
DNEL		Long term Inhalation	130 mg/m ³	Workers	Local
DNEL		Short term Inhalation	130 mg/m ³	Workers	Systemic
DNEL	Long term Inhalation	130 mg/m ³	Workers	Systemic	
methanol	DNEL	Long term Inhalation	0.308 mg/m ³	Workers	Local
	DNEL	Short term Oral	4 mg/kg bw/day	General population	Systemic
	DNEL	Long term Oral	4 mg/kg bw/day	General population	Systemic
	DNEL	Short term Dermal	4 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	4 mg/kg bw/day	General population	Systemic
	DNEL	Short term Dermal	20 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Dermal	20 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Inhalation	26 mg/m ³	General population	Local
	DNEL	Long term Inhalation	26 mg/m ³	General population	Local
	DNEL	Short term Inhalation	26 mg/m ³	General population	Systemic
	DNEL	Long term Inhalation	26 mg/m ³	General population	Systemic
	DNEL	Short term Inhalation	130 mg/m ³	Workers	Local
	DNEL	Long term Inhalation	130 mg/m ³	Workers	Local
	DNEL	Short term Inhalation	130 mg/m ³	Workers	Systemic
DNEL	Long term Inhalation	130 mg/m ³	Workers	Systemic	

PNECs

Product/ingredient name	Compartment Detail	Value	Method Detail
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700)	Fresh water	0.006 mg/l	Assessment Factors
	Marine water	0.001 mg/l	Assessment Factors
	Sewage Treatment Plant	10 mg/l	Assessment Factors
	Fresh water sediment	0.996 mg/kg dwt	Equilibrium Partitioning
	Marine water sediment	0.1 mg/kg dwt	Equilibrium Partitioning
	Fresh water	0.327 mg/l	-
	Marine water	0.327 mg/l	-
	Sewage Treatment Plant	6.58 mg/l	-
	Fresh water sediment	12.46 mg/kg dwt	-
	Marine water sediment	12.46 mg/kg dwt	-
xylene	Soil	2.31 mg/kg	-
	Fresh water	20.6 µg/l	Sensitivity Distribution
zinc powder zinc dust (stabilised)	Fresh water	20.6 µg/l	Sensitivity Distribution

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SECTION 8: Exposure controls/personal protection

methanol	Marine water	6.1 µg/l	Sensitivity Distribution
	Sewage Treatment Plant	100 µg/l	Assessment Factors
	Fresh water sediment	118 mg/kg dwt	Sensitivity Distribution
	Marine water sediment	56.5 mg/kg dwt	Equilibrium Partitioning
	Soil	35.6 mg/kg dwt	Sensitivity Distribution
	Fresh water	20.8 mg/l	Assessment Factors
	Marine water	2.08 mg/l	Assessment Factors
	Sewage Treatment Plant	100 mg/l	Assessment Factors
	Fresh water sediment	77 mg/kg	Equilibrium Partitioning
	Marine water sediment	7.7 mg/kg	Equilibrium Partitioning
Soil	100 mg/kg	Assessment Factors	

8.2 Exposure controls

Appropriate engineering controls : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

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. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Chemical splash goggles.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. When prolonged or frequently repeated contact may occur, a glove with a protection class of 6 (breakthrough time greater than 480 minutes according to EN 374) is recommended. When only brief contact is expected, a glove with a protection class of 2 or higher (breakthrough time greater than 30 minutes according to EN 374) is recommended. 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 the particular conditions of use, as included in the user's risk assessment.
butyl rubber

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.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Wear a respirator conforming to EN140. Filter type: organic vapour (Type A) and particulate filter P3

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

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SECTION 9: Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

9.1 Information on basic physical and chemical properties

Appearance

- Physical state** : Liquid.
Colour : Black.
Odour : Aromatic.
Odour threshold : Not available.
Melting point/freezing point : May start to solidify at the following temperature: 1597°C (2906.6°F) This is based on data for the following ingredient: triiron tetraoxide. Weighted average: 255.43°C (491.8°F)
Initial boiling point and boiling range : >37.78°C (>100°F)
Flammability (solid, gas) : liquid
Upper/lower flammability or explosive limits : Greatest known range: Lower: 1.3% Upper: 13% (benzyl alcohol)
Flash point : Closed cup: 73°C (163.4°F)
Auto-ignition temperature :

Ingredient name	°C	°F	Method
xylene	432	809.6	

- pH** : Not applicable.
 Not applicable. insoluble in water.

- Viscosity** : Kinematic (40°C): >21 mm²/s

- Solubility(ies)** :

Media	Result
cold water	Not soluble

- Miscible with water** : No.

- Partition coefficient: n-octanol/ water** : Not applicable.

- Vapour pressure** :

Ingredient name	Vapour Pressure at 20°C			Vapour pressure at 50°C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
xylene	6.7	0.89				

- Relative density** : 1.37

- Vapour density** : Highest known value: 3.7 (Air = 1) (benzyl alcohol). Weighted average: 3.7 (Air = 1)

- Explosive properties** : The product itself is not explosive, but the formation of an explosible mixture of vapour or dust with air is possible.

- Oxidising properties** : Product does not present an oxidizing hazard.

Particle characteristics

- Median particle size** : Not applicable.

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SECTION 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** : The product is stable.
- 10.3 Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.
- 10.4 Conditions to avoid** : When exposed to high temperatures may produce hazardous decomposition products. Refer to protective measures listed in sections 7 and 8.
- 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** : Depending on conditions, decomposition products may include the following materials: carbon oxides halogenated compounds metal oxide/oxides

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700)	LD50 Dermal	Rabbit	>2 g/kg	-
1,6-Hexanediol, reaction products with epichlorohydrin	LD50 Oral	Rat	>2 g/kg	-
	LD50 Dermal	Rat - Male, Female	>2000 mg/kg	-
	LD50 Oral	Rat - Male, Female	2189 mg/kg	-
benzyl alcohol	LC50 Inhalation Dusts and mists	Rat	>4178 mg/m ³	4 hours
	LD50 Dermal	Rabbit	2000 mg/kg	-
triiron tetraoxide	LD50 Oral	Rat	1.23 g/kg	-
	LC50 Inhalation Dusts and mists	Rat	>5.05 mg/l	4 hours
xylene	LD50 Oral	Rat	>5000 mg/kg	-
	LD50 Dermal	Rabbit	1.7 g/kg	-
	LD50 Oral	Rat	4.3 g/kg	-
Octadecanoic acid, 12-hydroxy-, reaction products with ethylenediamine	LC50 Inhalation Dusts and mists	Rat	5.05 mg/l	4 hours
	LD50 Oral	Rat	>2000 mg/kg	-
zinc powder zinc dust (stabilised)	LC50 Inhalation Dusts and mists	Rat	>5.4 mg/l	4 hours
	LD50 Oral	Rat	>2000 mg/kg	-
methanol	LC50 Inhalation Vapour	Rat	64000 ppm	4 hours
	LD50 Dermal	Rabbit	15800 mg/kg	-
	LD50 Oral	Rat	5600 mg/kg	-

Conclusion/Summary : There are no data available on the mixture itself.

Acute toxicity estimates

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SECTION 11: Toxicological information

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
SIGMASHIELD 905 BASE BLACK	12684.1	98033.6	N/A	721.8	17.8
1,6-Hexanediol, reaction products with epichlorohydrin	2189	N/A	N/A	N/A	N/A
benzyl alcohol	1230	N/A	N/A	N/A	1.5
xylene	4300	1700	N/A	11	N/A
Octadecanoic acid, 12-hydroxy-, reaction products with ethylenediamine	N/A	N/A	N/A	N/A	5.05
methanol	100	300	64000	3	N/A

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Reaction product: bisphenol-A-(epichlorohydrin); epoxy resin (number average molecular weight ≤ 700)	Eyes - Mild irritant	Rabbit	-	100 mg	-
	Eyes - Moderate irritant	Rabbit	-	-	-
	Skin - Moderate irritant	Rabbit	-	-	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 UI	-
	Skin - Severe irritant	Rabbit	-	24 hours 2 mg	-
xylene	Skin - Moderate irritant	Rabbit	-	24 hours 500 mg	-

Conclusion/Summary : Not available.
Skin : There are no data available on the mixture itself.
Eyes : There are no data available on the mixture itself.
Respiratory : There are no data available on the mixture itself.

Sensitisation

Product/ingredient name	Route of exposure	Species	Result
Reaction product: bisphenol-A-(epichlorohydrin); epoxy resin (number average molecular weight ≤ 700)	skin	Mouse	Sensitising
Octadecanoic acid, 12-hydroxy-, reaction products with ethylenediamine	skin	Guinea pig	Sensitising

Conclusion/Summary
Skin : There are no data available on the mixture itself.
Respiratory : There are no data available on the mixture itself.

Mutagenicity

Conclusion/Summary : There are no data available on the mixture itself.

Carcinogenicity

Conclusion/Summary : There are no data available on the mixture itself.

Reproductive toxicity

Conclusion/Summary : There are no data available on the mixture itself.

Teratogenicity

Conclusion/Summary : There are no data available on the mixture itself.

Specific target organ toxicity (single exposure)

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Product/ingredient name	Category	Route of exposure	Target organs
xylene	Category 3	-	Respiratory tract irritation
methanol	Category 1	-	-

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Product/ingredient name	Result
xylene	ASPIRATION HAZARD - Category 1

Information on likely routes of exposure : Not available.

Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : Causes skin irritation. May cause an allergic skin reaction.
- 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** : No specific data.
- Skin contact** : Adverse symptoms may include the following:
irritation
redness
- Ingestion** : No specific data.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Short term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

Long term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

Potential chronic health effects

Not available.

- Conclusion/Summary** : Not available.
- General** : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
- Carcinogenicity** : No known significant effects or critical hazards.
- Mutagenicity** : No known significant effects or critical hazards.
- Reproductive toxicity** : No known significant effects or critical hazards.

Other information : Not available.

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SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700) 1,6-Hexanediol, reaction products with epichlorohydrin	Chronic NOEC 0.3 mg/l	Daphnia	21 days
	Acute EC50 47 mg/l Fresh water	Daphnia	48 hours
	Acute LC50 30 mg/l Fresh water	Fish	96 hours
	Acute LC50 10000 mg/l	Fish	96 hours
	Acute EC50 >100 mg/l	Algae - <i>Pseudokirchneriella subcapitata</i>	72 hours
	Acute EC50 >10 mg/l	Daphnia - <i>Daphnia magna</i>	48 hours
	Acute LC50 >10 mg/l	Fish - <i>Oncorhynchus mykiss</i>	96 hours
triiron tetraoxide Octadecanoic acid, 12-hydroxy-, reaction products with ethylenediamine	Acute EC50 0.106 mg/l Fresh water	Algae - <i>Pseudokirchneriella subcapitata</i>	72 hours
	Acute EC50 354 µg/l Fresh water	Daphnia - Water flea - <i>Daphnia magna</i>	48 hours
	Chronic EC10 6.3 µg/l	Daphnia - Water flea - <i>Daphnia magna</i> - Neonate	21 days
	Chronic LC10 185 µg/l Fresh water	Fish - Rainbow trout, donaldson trout - <i>Oncorhynchus mykiss</i> - Juvenile (Fledgling, Hatchling, Weanling)	30 days
zinc powder zinc dust (stabilised)	Acute EC50 0.106 mg/l Fresh water	Fish - Trout	96 hours
	Acute LC50 13 mg/l Fresh water	Fish - Trout	96 hours
methanol	Acute LC50 13 mg/l Fresh water	Fish - Trout	96 hours

Conclusion/Summary : Not available.

12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700) 1,6-Hexanediol, reaction products with epichlorohydrin	OECD 301F	5 % - 28 days	-	-
	OECD 301D Ready Biodegradability - Closed Bottle Test	47 % - Not readily - 28 days	-	-
Octadecanoic acid, 12-hydroxy-, reaction products with ethylenediamine	301D Ready Biodegradability - Closed Bottle Test	22 % - 28 days	-	-

Conclusion/Summary : Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700) 1,6-Hexanediol, reaction products with epichlorohydrin benzyl alcohol xylene Octadecanoic acid, 12-hydroxy-, reaction products with ethylenediamine	-	-	Not readily
	-	-	Not readily
	-	-	Readily
	-	-	Readily
	-	-	Inherent

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SECTION 12: Ecological information

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700)	2.64 to 3.78	31	Low
1,6-Hexanediol, reaction products with epichlorohydrin	0.822	-	Low
benzyl alcohol	0.87	-	Low
xylene	3.12	7.4 to 18.5	Low
Octadecanoic acid, 12-hydroxy-, reaction products with ethylenediamine	>5.86	-	High
methanol	-0.77	-	Low

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

Mobility : Not available.

12.5 Results of PBT and vPvB assessment

This 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.

SECTION 13: Disposal considerations

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

13.1 Waste treatment methods

Product

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. 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

Waste code	Waste designation
08 01 11*	waste paint and varnish containing organic solvents or other hazardous 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
Container	15 01 06 mixed packaging

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SECTION 13: Disposal considerations

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. Avoid dispersal of spill material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

	ADR/RID	ADN	IMDG	IATA
14.1 UN number	UN3082	UN3082	UN3082	UN3082
14.2 UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (reaction product: bisphenol-A-(epichlorohydrin); epoxy resin) Reaction product: bisphenol-A-(epichlorohydrin); epoxy resin	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (reaction product: bisphenol-A-(epichlorohydrin); epoxy resin) Reaction product: bisphenol-A-(epichlorohydrin); epoxy resin	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (reaction product: bisphenol-A-(epichlorohydrin); epoxy resin) Reaction product: bisphenol-A-(epichlorohydrin); epoxy resin	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (reaction product: bisphenol-A-(epichlorohydrin); epoxy resin) Reaction product: bisphenol-A-(epichlorohydrin); epoxy resin
14.3 Transport hazard class(es)	9	9	9	9
14.4 Packing group	III	III	III	III
14.5 Environmental hazards Marine pollutant substances	Yes. Not applicable.	Yes. Not applicable.	Yes. Reaction product: bisphenol-A-(epichlorohydrin); epoxy resin	Yes. Not applicable.

Additional information

ADR/RID : This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.

Tunnel code : (-)

ADN : This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.

IMDG : This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.

IATA : This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 5.0.2.4.1, 5.0.2.6.1.1 and 5.0.2.8.

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 IMO instruments : Not available.

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SECTION 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

None of the components are listed.

Ozone depleting substances

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

E2

SECTION 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
Skin Irrit. 2, H315	Calculation method
Eye Irrit. 2, H319	Calculation method
Skin Sens. 1, H317	Calculation method
Aquatic Chronic 2, H411	Calculation method

Full text of abbreviated H statements

H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H311	Toxic in contact with skin.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.

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SECTION 16: Other information

H331	Toxic if inhaled.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H370	Causes damage to organs.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
H413	May cause long lasting harmful effects to aquatic life.

Full text of classifications

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

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