

SAFETY DATA SHEET



Date of issue/Date of revision

: 16 June 2025

Version

: 1.01

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

1.1 Product identifier

Product name : SIGMA SAILADVANCE RX(S) BROWN
Product code : 00384245
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 : Antifouling products
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
Flam. Liq. 3, H226
Acute Tox. 4, H302
Skin Irrit. 2, H315
Eye Dam. 1, H318
Skin Sens. 1, H317
Carc. 2, H351
Aquatic Acute 1, H400
Aquatic Chronic 1, H410

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 : Danger


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SECTION 2: Hazards identification

Hazard statements	: Flammable liquid and vapour. Harmful if swallowed. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye damage. Suspected of causing cancer. Very toxic to aquatic life with long lasting effects.
Precautionary statements	
Prevention	: Wear protective gloves, protective clothing and eye or face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Avoid release to the environment.
Response	: Collect spillage. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Storage	: Not applicable.
Disposal	: Dispose of contents and container in accordance with all local, regional, national and international regulations. P280, P210, P273, P391, P305 + P351 + P338, 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	: Prolonged or repeated contact may dry skin and cause irritation.

SECTION 3: Composition/information on ingredients

3.2 Mixtures : Mixture

Product/ingredient name	Identifiers	%	Classification	Type
 copper oxide	REACH #: 01-2119513794-36 EC: 215-270-7 CAS: 1317-39-1 Index: 029-002-00-X	≥25 - ≤50	Acute Tox. 4, H302 Acute Tox. 4, H332 Eye Dam. 1, H318 Aquatic Acute 1, H400 (M=100) Aquatic Chronic 1, H410 (M=10)	[1] [2]
zinc oxide	REACH #: 01-2119463881-32 EC: 215-222-5 CAS: 1314-13-2 Index: 030-013-00-7	≥10 - ≤25	Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)	[1]
rosin	REACH #: 01-2119480418-32 EC: 232-475-7 CAS: 8050-09-7	≥10 - ≤25	Skin Sens. 1, H317	[1] [2]

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SECTION 3: Composition/information on ingredients

xylylene	Index: 650-015-00-7 REACH #: 01-2119488216-32 EC: 215-535-7 CAS: 1330-20-7	≥10 - <20	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]
4-methylpentan-2-one	REACH #: 01-2119473980-30 EC: 203-550-1 CAS: 108-10-1 Index: 606-004-00-4	≥5.0 - ≤10	Flam. Liq. 2, H225 Acute Tox. 4, H332 Eye Irrit. 2, H319 Carc. 2, H351 STOT SE 3, H336 EUH066	[1] [2]
Oils, pine	CAS: 8002-09-3	≥1.0 - ≤5.0	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1B, H317 Asp. Tox. 1, H304 Aquatic Chronic 2, H411	[1]
ethylbenzene	REACH #: 01-2119489370-35 EC: 202-849-4 CAS: 100-41-4 Index: 601-023-00-4	≥1.0 - ≤5.0	Flam. Liq. 2, H225 Acute Tox. 4, H332 STOT RE 2, H373 (hearing organs) Asp. Tox. 1, H304 Aquatic Chronic 3, H412	[1] [2]
copper(II) oxide	REACH #: 01-2119502447-44 EC: 215-269-1 CAS: 1317-38-0 Index: 029-016-00-6	≤1.0	Aquatic Acute 1, H400 (M=100) Aquatic Chronic 1, H410 (M=10)	[1]
copper	REACH #: 01-2119480154-42 EC: 231-159-6 CAS: 7440-50-8	<1.0	Aquatic Acute 1, H400 (M=1) Aquatic Chronic 3, H412	[1]
1,3-bis[12-hydroxy-octadecamide-N-methylene]-benzene	REACH #: 01-2119962189-26 CAS: 911674-82-3 Index: 616-198-00-2	<1.0	Skin Sens. 1, H317 Aquatic Chronic 4, H413	[1]
dipentene	REACH #: 01-2120766421-57 EC: 205-341-0 CAS: 138-86-3 Index: 601-029-00-7	≤0.30	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1, H317 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)	[1]
lead monoxide	EC: 215-267-0 CAS: 1317-36-8 Index: 082-001-00-6	≤0.10	Acute Tox. 4, H302 Acute Tox. 4, H332 Repr. 1A, H360Df STOT RE 2, H373 Aquatic Acute 1, H400 (M=10) Aquatic Chronic 1, H410 (M=1) See Section 16 for the full text of the H statements declared above.	[1] [2]

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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** : Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Seek immediate medical attention.
- 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. 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. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

4.2 Most important symptoms and effects, both acute and delayedPotential acute health effects

- Eye contact** : Causes serious eye damage.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : Causes skin irritation. Defatting to the skin. May cause an allergic skin reaction.
- Ingestion** : Harmful if swallowed.

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
pain
watering
redness
- Inhalation** : No specific data.
- Skin contact** : Adverse symptoms may include the following:
pain or irritation
redness
dryness
cracking
blistering may occur
- Ingestion** : Adverse symptoms may include the following:
stomach pains

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.

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SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Use dry chemical, CO₂, water spray (fog) or foam.

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 very 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
metal oxide/oxides
oxides of lead

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. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to British standard BS EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe 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. Collect spillage.

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.

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SECTION 6: Accidental release measures

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.

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. Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not ingest. 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, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

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

7.2 Conditions for safe storage, including any incompatibilities

Store between the following temperatures: 0 to 35°C (32 to 95°F). Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidising materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. 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
 copper oxide	EH40/2005 WELs (United Kingdom (UK), 1/2020) [Copper and compounds] STEL 15 minutes: 2 mg/m³ (as Cu). Form: Dusts and Mists. TWA 8 hours: 1 mg/m³ (as Cu). Form: Dusts and Mists.
rosin	EH40/2005 WELs (United Kingdom (UK), 1/2020) Inhalation sensitiser. STEL 15 minutes: 0.15 mg/m³. Form: Fume. TWA 8 hours: 0.05 mg/m³. Form: Fume.
xylene	EH40/2005 WELs (United Kingdom (UK), 1/2020) [xylene, o-,m-,p- or mixed isomers] Absorbed through skin. STEL 15 minutes: 441 mg/m³. TWA 8 hours: 50 ppm. TWA 8 hours: 220 mg/m³. STEL 15 minutes: 100 ppm.
4-methylpentan-2-one	EH40/2005 WELs (United Kingdom (UK), 1/2020) Absorbed through skin. STEL 15 minutes: 416 mg/m³. STEL 15 minutes: 100 ppm. TWA 8 hours: 208 mg/m³. TWA 8 hours: 50 ppm.
ethylbenzene	EH40/2005 WELs (United Kingdom (UK), 1/2020) Absorbed through skin. STEL 15 minutes: 552 mg/m³. STEL 15 minutes: 125 ppm. TWA 8 hours: 100 ppm. TWA 8 hours: 441 mg/m³.
lead monoxide	EU Biological limit values (Europe, 3/2024) [lead and its inorganic compounds] OEL surveillance 8 hours: 0.015 mg/m³ (lead). EU OEL (Europe, 3/2024) [lead and its inorganic compounds] Non-threshold reprotoxic substance.. TWA 8 hours: 0.03 mg/m³.

Biological exposure indices

Product/ingredient name	Exposure indices
 xylene	EH40/2005 BMGVs (United Kingdom (UK), 1/2020) [Xylene, o-, m-, p- or mixed isomers] BGV: 650 mmol/mol creatinine, methyl hippuric acid [in urine]. Sampling time: post shift.
4-methylpentan-2-one	EH40/2005 BMGVs (United Kingdom (UK), 1/2020) BGV: 20 µmol/l, 4-methylpentan-2-one [in urine]. Sampling time: post shift.
lead monoxide	EU Biological limit values (Europe, 3/2024) [lead and its inorganic compounds] BEI surveillance: 30 µg/100 ml, lead [in blood]. BLV: 70 µg/100 ml, lead [in blood]. BEI surveillance - females of reproductive capacity: 4.5 µg/100 ml, lead [in blood].

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SECTION 8: Exposure controls/personal protection

Recommended monitoring procedures : Reference should be made to monitoring standards, such as the following: British Standard BS EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) British Standard BS EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) British Standard BS EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) 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
copper oxide	DNEL	Long term Inhalation	1 mg/m ³	Workers	Local
	DNEL	Long term Inhalation	1 mg/m ³	Workers	Systemic
	DNEL	Long term Dermal	137 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Oral	0.041 mg/kg bw/day	General population	Systemic
	DNEL	Short term Oral	0.082 mg/kg bw/day	General population	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
xylene	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 Dermal	4.2 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	11.8 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	14.7 mg/m ³	General population	Local
	DNEL	Long term Inhalation	14.7 mg/m ³	General population	Systemic
4-methylpentan-2-one	DNEL	Long term Inhalation	83 mg/m ³	Workers	Local
	DNEL	Long term Inhalation	83 mg/m ³	Workers	Systemic
	DNEL	Short term Inhalation	155.2 mg/m ³	General population	Local
	DNEL	Short term Inhalation	155.2 mg/m ³	General population	Systemic
	DNEL	Short term Inhalation	208 mg/m ³	Workers	Local
	DNEL	Short term Inhalation	208 mg/m ³	Workers	Systemic
	DNEL	Long term Oral	4.2 mg/kg bw/day	General population	Systemic
	DMEL	Long term Inhalation	442 mg/m ³	Workers	Local
	DMEL	Short term Inhalation	884 mg/m ³	Workers	Systemic
	DNEL	Long term Oral	1.6 mg/kg bw/day	General population	Systemic
ethylbenzene	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	1 mg/m ³	Workers	Local
	DNEL	Long term Inhalation	1 mg/m ³	Workers	Systemic
	DNEL	Long term Dermal	137 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Oral	0.041 mg/kg bw/day	General population	Systemic
	DNEL	Short term Oral	0.082 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	137 mg/kg bw/day	General population	Systemic
copper(II) oxide	DNEL	Long term Dermal	137 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Dermal	273 mg/kg bw/day	General population	Systemic
	DNEL	Short term Dermal	273 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Dermal	273 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Dermal	273 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Dermal	273 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Dermal	273 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Dermal	273 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Dermal	273 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Dermal	273 mg/kg bw/day	Workers	Systemic
copper	DNEL	Short term Dermal	273 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Dermal	273 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Dermal	273 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Dermal	273 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Dermal	273 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Dermal	273 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Dermal	273 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Dermal	273 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Dermal	273 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Dermal	273 mg/kg bw/day	Workers	Systemic

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SECTION 8: Exposure controls/personal protection

Product/ingredient name	Compartment Detail	Value	Method Detail
copper oxide	Fresh water	0.0078 mg/l	-
	Fresh water sediment	87.1 mg/kg dwt	-
	Marine water	0.0056 mg/l	-
	Marine water sediment	676 mg/kg dwt	-
	Soil	64.6 mg/kg dwt	-
	Sewage Treatment Plant	0.23 mg/l	-
zinc oxide	Fresh water	20.6 µg/l	Sensitivity Distribution
	Marine water	6.1 µg/l	Sensitivity Distribution
	Fresh water sediment	117 mg/kg dwt	Sensitivity Distribution
	Sewage Treatment Plant	52 µg/l	Assessment Factors
	Marine water sediment	56.5 mg/kg dwt	Assessment Factors
rosin	Soil	35.6 mg/kg dwt	Sensitivity Distribution
	Fresh water	0.002 mg/l	Assessment Factors
	Marine water	0 mg/l	Assessment Factors
	Sewage Treatment Plant	1000 mg/l	Assessment Factors
	Fresh water sediment	0.007 mg/kg dwt	Equilibrium Partitioning
xylene	Marine water sediment	0.001 mg/kg dwt	Equilibrium Partitioning
	Soil	0 mg/kg dwt	Equilibrium Partitioning
	Fresh water	0.327 mg/l	-
	Marine water	0.327 mg/l	-
	Sewage Treatment Plant	6.58 mg/l	-
4-methylpentan-2-one	Fresh water sediment	12.46 mg/kg dwt	-
	Marine water sediment	12.46 mg/kg dwt	-
	Soil	2.31 mg/kg	-
	Fresh water	0.6 mg/l	Assessment Factors
	Marine water	0.06 mg/l	Assessment Factors
ethylbenzene	Sewage Treatment Plant	27.5 mg/l	Assessment Factors
	Fresh water sediment	8.27 mg/kg	Equilibrium Partitioning
	Marine water sediment	0.83 mg/kg	Equilibrium Partitioning
	Soil	1.3 mg/kg	Equilibrium Partitioning
	Fresh water	0.1 mg/l	Assessment Factors
	Marine water	0.01 mg/l	Assessment Factors
	Sewage Treatment Plant	9.6 mg/l	Assessment Factors
	Fresh water sediment	13.7 mg/kg dwt	Equilibrium Partitioning
	Marine water sediment	1.37 mg/kg dwt	Equilibrium Partitioning
	Soil	2.68 mg/kg dwt	Equilibrium Partitioning
	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. 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 and face shield.

Skin protection**Hand protection**

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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. 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 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.


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** : Brown.
- Odour** : Aromatic. [Slight]
- Odour threshold** : Not available.
- Melting point/freezing point** :
- Initial boiling point and boiling range** : >37.78°C (>100°F)
- Flammability (solid, gas)** : liquid
- Upper/lower flammability or explosive limits** : Not available.
- Flash point** : Closed cup: 27°C (80.6°F)
- Auto-ignition temperature** :

Ingredient name	°C	°F	Method
 ylene	432	809.6	

- pH** : Not applicable.

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SECTION 9: Physical and chemical properties

Viscosity

Not applicable. insoluble in water.

Dynamic (room temperature): Not available.

Kinematic (room temperature): Not available.

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
4-methylpentan-2-one	15.75128	2.1				

Relative density

:

1.7

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.

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 metal oxide/oxides

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure	
copper oxide	LC50 Inhalation Dusts and mists	Rat	3.34 mg/l	4 hours	
	LD50 Dermal	Rat	>2000 mg/kg	-	
	LD50 Oral	Rat	500 mg/kg	-	
	zinc oxide	LC50 Inhalation Dusts and mists	Rat	>5700 mg/m³	4 hours
		LD50 Dermal	Rat	>2000 mg/kg	-
		LD50 Oral	Rat	>5000 mg/kg	-

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SECTION 11: Toxicological information

rosin	LD50 Dermal	Rat	>2000 mg/kg	-
	LD50 Oral	Rat	7600 mg/kg	-
xylene	LD50 Dermal	Rabbit	1.7 g/kg	-
	LD50 Oral	Rat	4.3 g/kg	-
4-methylpentan-2-one	LC50 Inhalation Vapour	Rat	11 mg/l	4 hours
	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	2.08 g/kg	-
Oils, pine	LD50 Dermal	Rabbit	5 g/kg	-
	LD50 Oral	Rat	2.1 g/kg	-
ethylbenzene	LC50 Inhalation Vapour	Rat	17.8 mg/l	4 hours
	LD50 Dermal	Rabbit	17.8 g/kg	-
	LD50 Oral	Rat	3.5 g/kg	-
copper(II) oxide	LD50 Oral	Rat	>2000 mg/kg	-
copper	LC50 Inhalation Dusts and mists	Rat	>5.11 mg/l	4 hours
1,3-bis[12-hydroxy-octadecamide-N-methylene]-benzene	LC50 Inhalation Dusts and mists	Rat	>5.08 mg/l	4 hours
dipentene	LD50 Oral	Rat	5300 mg/kg	-

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

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)
SIGMA SAILADVANCE RX(S) BROWN	1685.8	14015.4	N/A	52.7	11.3
dicopper oxide	500	N/A	N/A	N/A	3.34
rosin	7600	N/A	N/A	N/A	N/A
xylene	4300	1700	N/A	11	N/A
4-methylpentan-2-one	2080	N/A	N/A	11	N/A
Oils, pine	2100	5000	N/A	N/A	N/A
ethylbenzene	3500	17800	N/A	17.8	N/A
dipentene	5300	N/A	N/A	N/A	N/A
lead monoxide	500	N/A	N/A	N/A	1.5

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
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

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.

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SECTION 11: Toxicological informationSpecific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
xylene	Category 3	-	Respiratory tract irritation
4-methylpentan-2-one	Category 3	-	Narcotic effects

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Route of exposure	Target organs
ethylbenzene	Category 2	-	hearing organs
lead monoxide	Category 2	-	-

Aspiration hazard

Product/ingredient name	Result
xylene	ASPIRATION HAZARD - Category 1
Oils, pine	ASPIRATION HAZARD - Category 1
ethylbenzene	ASPIRATION HAZARD - Category 1

Information on likely routes of exposure : Not available.

Potential acute health effects

Eye contact : Causes serious eye damage.
Inhalation : No known significant effects or critical hazards.
Skin contact : Causes skin irritation. Defatting to the skin. May cause an allergic skin reaction.
Ingestion : Harmful if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
 pain
 watering
 redness
Inhalation : No specific data.
Skin contact : Adverse symptoms may include the following:
 pain or irritation
 redness
 dryness
 cracking
 blistering may occur
Ingestion : Adverse symptoms may include the following:
 stomach pains

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

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Conclusion/Summary	: Not available.
General	: Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/ or dermatitis. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
Carcinogenicity	: Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.
Mutagenicity	: No known significant effects or critical hazards.
Reproductive toxicity	: No known significant effects or critical hazards.

Other information : Not available.

SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
copper oxide zinc oxide	LC50 0.003 mg/l	Fish	96 hours
	Acute EC50 0.17 mg/l	Algae	72 hours
	Acute EC50 0.481 mg/l Fresh water	Daphnia - Water flea - <i>Daphnia magna</i> - Neonate	48 hours
4-methylpentan-2-one ethylbenzene	Chronic NOEC 0.017 mg/l Fresh water	Algae	72 hours
	Acute LC50 >179 mg/l	Fish	96 hours
	Acute EC50 1.8 mg/l Fresh water	Daphnia	48 hours
copper	Chronic NOEC 1 mg/l Fresh water	Daphnia - <i>Ceriodaphnia dubia</i>	-
	Acute LC50 810 ppb	Fish	96 hours
	Chronic EC10 8.1 µg/l	Daphnia - Water flea - <i>Daphnia magna</i> - Neonate	21 days
1,3-bis[12-hydroxy-octadecamide-N-methylene]-benzene dipentene	Acute LC50 >100 mg/l	Fish	96 hours
	LC50 0.221 mg/l	Fish	96 hours

Conclusion/Summary : Not available.

12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
4-methylpentan-2-one ethylbenzene	OECD 301F	83 % - Readily - 28 days	-	-
	-	79 % - Readily - 10 days	-	-

Conclusion/Summary : Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
xylene	-	-	Readily
4-methylpentan-2-one	-	-	Readily
ethylbenzene	-	-	Readily

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
osin	1.9 to 7.7	-	High
xylene	3.12	7.4 to 18.5	Low
4-methylpentan-2-one	1.9	-	Low
ethylbenzene	3.6	79.43	Low
dipentene	4.57	-	High

12.4 Mobility in soil

Soil/water partition coefficient : Not available.

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SECTION 12: Ecological information

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

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


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 spilt material and runoff and contact with soil, waterways, drains and sewers.

SECTION 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	Yes.	Yes.	Yes.	Yes. The environmentally hazardous substance mark is not required.

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SECTION 14: Transport information

Marine pollutant substances	Not applicable.	Not applicable.	 (dicopper oxide)	Not applicable.
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Additional information

- ADR/RID : The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg.
- Tunnel code : (D/E)
- ADN : The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg.
- IMDG : The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.
- 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 IMO instruments : Not available.

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


Intrinsic property	Ingredient name	Status	Reference number	Date of revision
 toxic to reproduction	lead monoxide	Candidate	-	12/19/2012

Explosive precursors : Not applicable.

Ozone depleting substances

Not listed.

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


Product/ingredient name	Entry Number (REACH)
 SIGMA SAILADVANCE RX(S) BROWN lead monoxide	3 63

Labelling : Not applicable.

Seveso Directive

This product is controlled under the Seveso Directive.

Danger criteria

Category
 5c E1

National regulations

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SECTION 15: Regulatory information

Product/ingredient name	List name	Name on list	Classification	Notes
Lead monoxide	EU OEL	lead and its inorganic compunds	Non-threshold reprotoxic substance.	-

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
Flam. Liq. 3, H226 Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317 Carc. 2, H351 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	On basis of test data Calculation method Calculation method Calculation method Calculation method Calculation method Calculation method Calculation method

Full text of abbreviated H statements

H225	Highly flammable liquid and vapour.
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.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H351	Suspected of causing cancer.
H360Df	May damage the unborn child. Suspected of damaging fertility.
H373	May cause damage to organs through prolonged or repeated exposure.
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.
EUH066	Repeated exposure may cause skin dryness or cracking.

Full text of classifications

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SECTION 16: Other information

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
Carc. 2	CARCINOGENICITY - Category 2
Eye Dam. 1	SERIOUS EYE DAMAGE/EYE IRRITATION - 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
Repr. 1A	REPRODUCTIVE TOXICITY - Category 1A
Skin Irrit. 2	SKIN CORROSION/IRRITATION - Category 2
Skin Sens. 1	SKIN SENSITISATION - Category 1
Skin Sens. 1B	SKIN SENSITISATION - Category 1B
STOT RE 2	SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2
STOT SE 3	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3

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Version	: 1.01

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