

SAFETY DATA SHEET



PPG Protective &
Marine Coatings

Date of issue/Date of revision : 7 December 2014

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

1.1 Product identifier

Product name : SIGMA ECOFLEET 290 S REDBROWN
Product code : 00249481
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

1.3 Details of the supplier of the safety data sheet

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

e-mail address of person responsible for this SDS : PMC.Safety@PPG.com

1.4 Emergency telephone number

National advisory body/Poison Centre

Telephone number : Poison Information Centre; emergency telephone, public + 45 82 12 12 12 (health sector +45 35 31 55 55)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

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

Flam. Liq. 3, H226
Acute Tox. 4, H302
Eye Irrit. 2, H319
Skin Sens. 1, H317
STOT SE 3, H335
Aquatic Acute 1, H400
Aquatic Chronic 1, H410

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

Classification according to Directive 1999/45/EC [DPD]

The product is classified as dangerous according to Directive 1999/45/EC and its amendments.

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SECTION 2: Hazards identification

R10

Xn; R22

Xi; R37

R43

N; R50/53

Flammable.

Harmful if swallowed. Irritating to respiratory system. May cause sensitisation by skin contact.

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

See Section 16 for the full text of the R phrases or 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

: Flammable liquid and vapour.
Harmful if swallowed.
Causes serious eye irritation.
May cause an allergic skin reaction.
May cause respiratory irritation.
Very toxic to aquatic life with long lasting effects.

Precautionary statements

Prevention

: Wear protective gloves. Wear eye or face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Avoid breathing vapour.

Response

: IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Storage

: Store in a well-ventilated place. Keep cool.

Disposal

: Not applicable.

Hazardous ingredients

copper oxide
rosin
Solvent naphtha (petroleum), light arom. : Nota(s) P
4-methylpentan-2-one
1,2,4-trimethylbenzene
zineb (ISO) polymeric

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

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SECTION 2: Hazards identification

Containers to be fitted with child-resistant fastenings : Not applicable.

Tactile warning of danger : Not applicable.

2.3 Other hazards

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	% by weight	Classification		Type
			67/548/EEC	Regulation (EC) No. 1272/2008 [CLP]	
copper oxide	EC: 215-270-7	≥25 - <50	Xn; R22	Acute Tox. 4, H302	[1]
rosin	CAS: 1317-39-1 Index: 029-002-00-X REACH #: 01-2119480418-32 EC: 232-475-7	≥10 - <25	N; R50/53 R43	Aquatic Acute 1, H400 Aquatic Chronic 1, H410 Skin Sens. 1, H317	[1]
zinc oxide	CAS: 8050-09-7 Index: 650-015-00-7 REACH #: 01-2119463881-32 EC: 215-222-5	≥5 - <10	N; R50/53	Aquatic Acute 1, H400 Aquatic Chronic 1, H410	[1]
Solvent naphtha (petroleum), light arom. : Nota(s) P	CAS: 1314-13-2 Index: 030-013-00-7 EC: 265-199-0	≥7 - <10	R10	Flam. Liq. 3, H226	[1]
4-methylpentan-2-one	CAS: 64742-95-6 Index: 649-356-00-4 REACH #: 01-2119473980-30 EC: 203-550-1	≥6 - <10	Xn; R65 Xi; R37 R66, R67 N; R51/53 F; R11	STOT SE 3, H335 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411 Flam. Liq. 2, H225	[1] [2]
1,2,4-trimethylbenzene	CAS: 108-10-1 Index: 606-004-00-4 EC: 202-436-9	≥5 - <10	Xn; R20 Xi; R36/37 R66 R10	Acute Tox. 4, H332 Eye Irrit. 2, H319 STOT SE 3, H335 Flam. Liq. 3, H226	[1] [2]
zineb (ISO) polymeric	CAS: 95-63-6 Index: 601-043-00-3 EC: 235-180-1	≥5 - <10	Xn; R20 Xi; R36/37/38 N; R51/53	Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 Aquatic Chronic 2, H411 Skin Sens. 1, H317	[1]
copper oxide	CAS: 12122-67-7 Index: 006-078-00-2 EC: 215-269-1	≥0.3 - <1	R43	STOT SE 3, H335	[1]
copper	CAS: 1317-38-0 EC: 231-159-6	≥0.3 -	N; R50	Aquatic Acute 1, H400	[1]

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SECTION 3: Composition/information on ingredients

lead compounds	CAS: 7440-50-8 EC: 215-267-0	<1	Repr. Cat. 1; R61	Acute Tox. 4, H302	[1] [2]
	CAS: 1317-36-8 Index: 082-001-00-6	≥0.01 - <0.1	Repr. Cat. 3; R62 Xn; R20/22 R33 N; R50/53 See Section 16 for the full text of the R- phrases declared above.	Acute Tox. 4, H332 Repr. 1A, H360Df (Unborn child and Fertility) STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 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 or vPvBs 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

[3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII

[4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII

[5] Substance of equivalent concern

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 delayed

Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : May cause respiratory irritation.
- Skin contact** : Defatting to the skin. May cause skin dryness and irritation. May cause an allergic skin reaction.

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SECTION 4: First aid measures

Ingestion : Harmful if swallowed.

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 the following:
irritation
redness
dryness
cracking

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.

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. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Runoff to sewer may create fire or explosion hazard. 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 dioxide
carbon monoxide
nitrogen oxides
sulfur oxides
metal oxide/oxides

5.3 Advice for firefighters

Special precautions 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 European standard EN 469 will provide a basic level of protection for chemical incidents.

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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. 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. 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.

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. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product.

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). 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. 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. Refer to special instructions/safety data sheet. 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 non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static

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SECTION 7: Handling and storage

electricity during transfer by earthing and bonding containers and equipment before transferring material. 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

: Storage temperature: 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 oxidizing 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.

7.3 Specific end use(s)

Recommendations : Not available.

Industrial sector specific solutions : Not available.

SECTION 8: Exposure controls/personal protection

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).

8.1 Control parameters

Occupational exposure limits

Product/ingredient name	Exposure limit values
4 -methylpentan-2-one	Arbejdstilsynet (Denmark, 10/2012). Absorbed through skin. TWA: 83 mg/m ³ 8 hours. TWA: 20 ppm 8 hours.
1,2,4-trimethylbenzene	Arbejdstilsynet (Denmark, 10/2012). TWA: 100 mg/m ³ 8 hours. TWA: 20 ppm 8 hours.
lead compounds	Arbejdstilsynet (Denmark, 10/2012). Carcinogen. TWA: 0.05 mg/m ³ , (calculated as Pb) 8 hours.

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard 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

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SECTION 8: Exposure controls/personal protection

DNELs - Not available.

PNECs

PNECs - Not available.

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.

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.

Gloves

: 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. Refer to European Standard EN 1149 for further information on material and design requirements and test methods.

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.

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

9.1 Information on basic physical and chemical properties

Appearance

Physical state	: Liquid.
Colour	: Brownish-red.
Odour	: Aromatic.
Odour threshold	: Not available.
pH	: Not available.
Melting point/freezing point	: Not available.
Initial boiling point and boiling range	: >37.78°C
Flash point	: Closed cup: 27.2°C
Evaporation rate	: Not available.
Material supports combustion.	: Yes.
Flammability (solid, gas)	: Not available.
Upper/lower flammability or explosive limits	: Lower: 1.2% Upper: 6.94%
Vapour pressure	: Highest known value: 2.1 kPa (15.8 mm Hg) (at 20°C) (4-methylpentan-2-one). Weighted average: 0.86 kPa (6.45 mm Hg) (at 20°C)
Vapour density	: Highest known value: 4.1 (Air = 1) (1,2,4-trimethylbenzene). Weighted average: 3.73 (Air = 1)
Relative density	: 1.52
Solubility(ies)	: Insoluble in the following materials: cold water.
Partition coefficient: n-octanol/water	: Not available.
Auto-ignition temperature	: Not available.
Decomposition temperature	: Not available.
Viscosity	: Kinematic (40°C): >0.21 cm ² /s
Viscosity	: 60 - 100 s (ISO 6mm)
Explosive properties	: Not available.
Oxidising properties	: Not available.

9.2 Other information

No additional information.

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.

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SECTION 10: Stability and reactivity

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.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
copper oxide	LD50 Oral	Rat	470 mg/kg	-
rosin	LD50 Oral	Rat	7600 mg/kg	-
Solvent naphtha (petroleum), light arom. : Nota(s) P	LD50 Dermal	Rabbit	3.48 g/kg	-
4-methylpentan-2-one	LD50 Oral	Rat	8400 mg/kg	-
	LC50 Inhalation Vapour	Rat	32772 mg/m ³	4 hours
	LD50 Oral	Rat	2.08 g/kg	-
calcium carbonate	LD50 Oral	Rat	6450 mg/kg	-
1,2,4-trimethylbenzene	LC50 Inhalation Vapour	Rat	18000 mg/m ³	4 hours
	LD50 Oral	Rat	5 g/kg	-
zineb (ISO) polymeric	LD50 Oral	Rat	1850 mg/kg	-
diiron trioxide	LD50 Oral	Rat	10 g/kg	-
copper oxide	LD50 Oral	Rat	470 mg/kg	-

Conclusion/Summary : Not available.

Acute toxicity estimates

Route	ATE value
Oral	1615 mg/kg
Inhalation (vapours)	102.6 mg/l

Irritation/Corrosion

Conclusion/Summary : Not available.

Sensitisation

Conclusion/Summary : Not available.

Mutagenicity

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Specific target organ toxicity (single exposure)

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SECTION 11: Toxicological information

Product/ingredient name	Category	Route of exposure	Target organs
☑ Solvent naphtha (petroleum), light arom. : Nota(s) P	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
4-methylpentan-2-one	Category 3	Not applicable.	Respiratory tract irritation
1,2,4-trimethylbenzene	Category 3	Not applicable.	Respiratory tract irritation
zineb (ISO) polymeric	Category 3	Not applicable.	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Route of exposure	Target organs
lead compounds	Category 2	Not determined	Not determined

Aspiration hazard

Product/ingredient name	Result
☑ Solvent naphtha (petroleum), light arom. : Nota(s) P	ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure : Not available.

Potential acute health effects

- Inhalation** : ☑ May cause respiratory irritation.
- Ingestion** : ☑ Harmful if swallowed.
- Skin contact** : Defatting to the skin. May cause skin dryness and irritation. May cause an allergic skin reaction.
- Eye contact** : Causes serious eye irritation.

Symptoms related to the physical, chemical and toxicological characteristics

- Inhalation** : Adverse symptoms may include the following:
respiratory tract irritation
coughing
- Ingestion** : No specific data.
- Skin contact** : Adverse symptoms may include the following:
irritation
redness
dryness
cracking
- Eye contact** : Adverse symptoms may include the following:
pain or irritation
watering
redness

Delayed and immediate effects and also 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.

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SECTION 11: Toxicological information

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

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 : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Other information : Not available.

There are no data available on the mixture itself. The mixture has been assessed following the conventional method of the Dangerous Preparations Directive 1999/45/EC and classified for toxicological hazards 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.

Contains rosin, zineb (ISO) polymeric. May produce an allergic reaction.

SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
Zinc oxide	Acute EC50 0.481 mg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
copper oxide	Acute EC50 92.7 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
copper	Acute LC50 800 ppb	Fish	96 hours

Conclusion/Summary : Not available.

12.2 Persistence and degradability

Conclusion/Summary : Not available.

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
4-methylpentan-2-one	1.31	-	low
1,2,4-trimethylbenzene	3.63	120.23	low
zineb (ISO) polymeric	1.3	-	-

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SECTION 12: Ecological information

12.4 Mobility in soil

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

Mobility : Not available.

12.5 Results of PBT and vPvB assessment

PBT : Not applicable.

vPvB : Not applicable.

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.

European 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	European waste catalogue (EWC)
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.

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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.	No.
Marine pollutant substances	Not applicable.	Not applicable.	(dicopper oxide, zinc oxide)	Not applicable.

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.

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.

SECTION 15: Regulatory information

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

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorisation

Annex XIV

None of the components are listed.

Substances of very high concern

Ingredient name	Intrinsic property	Status	Reference number	Date of revision
☑ Lead monoxide; lead oxide	Toxic to reproduction	Candidate	ED/169/2012	12/19/2012

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

Other EU regulations

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SECTION 15: Regulatory information

Product/ingredient name	Carcinogenic effects	Mutagenic effects	Developmental effects	Fertility effects
Lead compounds	-	-	Repr. 1A, H360D (Unborn child)	Repr. 2, H361f (Fertility)

National regulations

Danish fire class : II-1

Denmark – Cancer risks : National Working Environment Authorities Ordinance on Measures to Prevent Cancer Risks during Work with Substances and Preparations is applicable.

MAL-code : 4-5

Protection based on MAL : **According to the regulations on work involving coded products, the following stipulations apply to the use of personal protective equipment:**

General: Gloves must be worn for all work that may result in soiling. Apron/coveralls/protective clothing must be worn when soiling is so great that regular work clothes do not adequately protect skin against contact with the product. A face shield must be worn in work involving splattering if a full mask is not required. In this case, other recommended use of eye protection is not required.

In all spraying operations in which there is return spray, the following must be worn: respiratory protection and arm protectors/apron/coveralls/protective clothing as appropriate or as instructed.

MAL-code: 4-5

Application: When using scraper or knife, brush, roller etc. for pre- and post-treatments in a spray booth where the operator is outside the spray zone and when working in similar new* facilities of the combined-cabin, spray-cabin and spray-booth type where the operator is working inside the spray zone. When spraying in new* booths and cabins with non-atomizing guns.

- Protective clothing must be worn.

When using scraper or knife, brush, roller, etc. for pre- and post-treatments in cabins or booths of the existing* facility type, if the operator is inside the spray zone. When using scraper or knife, brush, roller, etc. for pre- and post-treatments outside a closed facility, spray booth or spray cabin.

- Air-supplied half mask, protective clothing and eye protection must be worn.

When spraying in new* booths if the operator is outside the spray zone.

- Air-supplied half mask and eye protection must be worn.

When spraying in existing* spray booths, if the operator is outside the spray zone. During non-atomising spraying in existing* facilities of the combined-cabin, spray-cabin and spray-booth type where the operator is working inside the spray zone. During downtimes, cleaning and repair in closed facilities, spray booths or cabins, if there is a risk of contact with wet paint or organic solvents.

- Air-supplied full mask and protective clothing must be worn.

During all spraying where atomisation occurs in cabins or spray booths where the operator is inside the spray zone and during spraying outside a closed facility, cabin or booth.

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- Air-supplied full mask, protective clothing and hood must be worn.

Drying: Items for drying/drying ovens that are temporarily placed on such things as rack trolleys, etc, must be equipped with a mechanical exhaust system to prevent fumes from wet items from passing through workers' inhalation zone.

Polishing: When polishing treated surfaces, a mask with dust filter must be worn. When machine grinding, eye protection must be worn. Work gloves must always be worn.

Caution The regulations contain other stipulations in addition to the above.

*See Regulations.

- Restrictions on use** : Not to be used by professional users below 18 years of age. See the National Working Environment Authorities Executive Order on young people's dangerous work.
- List of undesirable substances** : Listed
- Carcinogenic waste** : Waste containers must be labeled: Contains a substance or substances regulated by Danish working environment legislation on cancer risks.

15.2 Chemical Safety Assessment : No Chemical Safety Assessment has been carried out.

SECTION 16: Other information

✔ Indicates information that has changed from previously issued version.

Abbreviations and acronyms : ATE = Acute Toxicity Estimate
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
DNEL = Derived No Effect Level
EUH statement = CLP-specific Hazard statement
PNEC = Predicted No Effect Concentration
RRN = REACH Registration Number

Full text of abbreviated H statements : **H**225 Highly flammable liquid and vapour.
H226 Flammable liquid and vapour.
H302 Harmful if swallowed.
H302 Harmful if swallowed.
(oral)
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H332 Harmful if inhaled.
(inhalation)
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.
H360Df May damage the unborn child. Suspected of damaging fertility.
(Unborn child and Fertility)
H373 May cause damage to organs through prolonged or repeated exposure.

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	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.
Full text of classifications [CLP/GHS]	: Acute Tox. 4, H302	ACUTE TOXICITY (oral) - Category 4
	Acute Tox. 4, H332	ACUTE TOXICITY (inhalation) - Category 4
	Aquatic Acute 1, H400	ACUTE AQUATIC HAZARD - Category 1
	Aquatic Chronic 1, H410	LONG-TERM AQUATIC HAZARD - Category 1
	Aquatic Chronic 2, H411	LONG-TERM AQUATIC HAZARD - Category 2
	Asp. Tox. 1, H304	ASPIRATION HAZARD - Category 1
	Eye Irrit. 2, H319	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2
	Flam. Liq. 2, H225	FLAMMABLE LIQUIDS - Category 2
	Flam. Liq. 3, H226	FLAMMABLE LIQUIDS - Category 3
	Repr. 1A, H360Df (Unborn child and Fertility)	TOXIC TO REPRODUCTION (Unborn child and Fertility) - Category 1A
	Skin Irrit. 2, H315	SKIN CORROSION/IRRITATION - Category 2
	Skin Sens. 1, H317	SKIN SENSITIZATION - Category 1
	STOT RE 2, H373	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
	STOT SE 3, H335	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
	STOT SE 3, H336	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
Full text of abbreviated R phrases	: R11- Highly flammable.	
	R10- Flammable.	
	R61- May cause harm to the unborn child.	
	R62- Possible risk of impaired fertility.	
	R20- Also harmful by inhalation.	
	R22- Also harmful if swallowed.	
	R20/22- Also harmful by inhalation and if swallowed.	
	R65- Also harmful: may cause lung damage if swallowed.	
	R37- Irritating to respiratory system.	
	R36/37- Irritating to eyes and respiratory system.	
	R36/37/38- Irritating to eyes, respiratory system and skin.	
	R43- May cause sensitisation by skin contact.	
	R33- Danger of cumulative effects.	
	R66- Repeated exposure may cause skin dryness or cracking.	
	R67- Vapours may cause drowsiness and dizziness.	
	R50- Very toxic to aquatic organisms.	
	R50/53- Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.	
	R51/53- Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.	
Full text of classifications [DSD/DPD]	: F - Highly flammable	
	Repr. Cat. 1 - Toxic to reproduction category 1	
	Repr. Cat. 3 - Toxic to reproduction category 3	
	Xn - Harmful	
	Xi - Irritant	
	N - Dangerous for the environment	
	F+225	Highly flammable liquid and vapour.
	H226	Flammable liquid and vapour.
	H302	Harmful if swallowed.
	H302 (oral)	Harmful if swallowed.
	H304	May be fatal if swallowed and enters airways.
	H315	Causes skin irritation.

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H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H332	Harmful if inhaled.
(inhalation)	
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H360Df	May damage the unborn child. Suspected of damaging fertility.
(Unborn child and 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.
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History

Date of issue/ Date of revision : 7 December 2014

Date of previous issue : 2 November 2014

Prepared by : EHS

Version : 9

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