

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 01.11.2017

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Revision: 01.11.2017

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

- **1.1 Product identifier**
 - **Trade name:** YACHTCARE ANTIFOULING ACTION schwarz
 - **1.2 Relevant identified uses of the substance or mixture and uses advised against**
 - **Sector of Use** Not determined
 - **Application of the substance / the mixture** Antifouling paint
 - **1.3 Details of the supplier of the safety data sheet**
 - **Manufacturer/Supplier:**
Vosschemie GmbH
Esinger Steinweg 50
D-25436 Uetersen
Phone: +49 (0)4122 717 0; Fax: +49 (0)4122 717158; info@vosschemie.de
 - **Further information obtainable from:**
Abteilung Labor / +49 (0)4122 717 0
s.schaller@vosschemie.de
 - **1.4 Emergency telephone number:**
Giftinformationszentrum (GIZ)-Nord, Goettingen, Deutschland
Phone: +49 (0)551 19240
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SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS02 flame

Flam. Liq. 3 H226 Flammable liquid and vapour.



GHS05 corrosion

Eye Dam. 1 H318 Causes serious eye damage.

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GHS09 environment

Aquatic Acute 1 H400 Very toxic to aquatic life.

Aquatic Chronic 1 H410 Very toxic to aquatic life with long lasting effects.

· 2.2 Label elements

· Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the CLP regulation.

· Hazard pictograms



GHS02



GHS05



GHS09

· Signal word Danger

· Hazard-determining components of labelling:

dicopper oxide

· Hazard statements

H226 Flammable liquid and vapour.

H318 Causes serious eye damage.

H410 Very toxic to aquatic life with long lasting effects.

· Precautionary statements

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P261 Avoid breathing mist/vapours/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER/doctor.

P403+P235 Store in a well-ventilated place. Keep cool.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· Additional information:

EUH066 Repeated exposure may cause skin dryness or cracking.

· Active substance (528/2012/EC)

1317-39-1	dicopper oxide	132 g/l	9,9%
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· 2.3 Other hazards

· Results of PBT and vPvB assessment

· PBT: Not applicable.

· vPvB: Not applicable.

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SECTION 3: Composition/information on ingredients

· 3.2 Chemical characterisation: Mixtures

· Description: Mixture of substances listed below with nonhazardous additions.

· Dangerous components:

CAS: 64742-95-6 EINECS: 265-199-0 Reg.nr.: 01-2119455851-35	Solvent naphtha (petroleum), light arom. ⚠ Flam. Liq. 3, H226; ⚠ Asp. Tox. 1, H304; ⚠ Aquatic Chronic 2, H411; ⚠ STOT SE 3, H335-H336	10-≤17%
CAS: 1317-39-1 EINECS: 215-270-7	dicopper oxide ⚠ Eye Dam. 1, H318; ⚠ Aquatic Acute 1, H400 (M=100); Aquatic Chronic 1, H410 (M=10); ⚠ Acute Tox. 4, H302; Acute Tox. 4, H332	5-≤10%
CAS: 1330-20-7 EINECS: 215-535-7 Reg.nr.: 01-2119488216-32	xylene, mixture of isomers ⚠ Flam. Liq. 3, H226; ⚠ Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315	5-≤10%
CAS: 1314-13-2 EINECS: 215-222-5 Reg.nr.: 01-2119463881-32	zinc oxide ⚠ Aquatic Acute 1, H400 (M=10); Aquatic Chronic 1, H410 (M=10)	1-≤3%
CAS: 100-41-4 EINECS: 202-849-4 Reg.nr.: 01-2119489370-35	ethylbenzene ⚠ Flam. Liq. 2, H225; ⚠ STOT RE 2, H373; Asp. Tox. 1, H304; ⚠ Acute Tox. 4, H332	1-≤3%
CAS: 108-10-1 EINECS: 203-550-1 Reg.nr.: 01-2119473980-30	4-methylpentan-2-one ⚠ Flam. Liq. 2, H225; ⚠ Acute Tox. 4, H332; Eye Irrit. 2, H319; STOT SE 3, H335	1-≤2.2%
CAS: 91845-13-5 EINECS: 295-184-4	Fatty acids, tall oil, compounds with (Z) -N-9-octadecenyl-1,3-propanediamine (2: 1) ⚠ Eye Dam. 1, H318; ⚠ Aquatic Acute 1, H400; ⚠ Acute Tox. 4, H302; Skin Irrit. 2, H315	<1%
CAS: 40027-38-1 EINECS: 254-754-2	9-octadecenoic acid (z)-compd. with (Z)-N-octadec-9-enylpropane-1,3-diamine ⚠ STOT RE 2, H373; ⚠ Aquatic Acute 1, H400 (M=10); Aquatic Chronic 1, H410 (M=1); ⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319	<1%
CAS: 1317-38-0 EINECS: 215-269-1	copper oxide ⚠ Aquatic Acute 1, H400 (M=100); Aquatic Chronic 1, H410 (M=1)	<1%
CAS: 7440-50-8 EINECS: 231-159-6	copper ⚠ Acute Tox. 3, H331; ⚠ Aquatic Acute 1, H400 (M=10000); Aquatic Chronic 1, H410 (M=100); ⚠ Acute Tox. 4, H302; Eye Irrit. 2, H319	<1%

· Additional information: For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

· 4.1 Description of first aid measures

· General information:

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

Personal protection for the First Aider.

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Immediately remove any clothing soiled by the product.

· **After inhalation:**

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

In case of unconsciousness place patient stably in side position for transportation.

· **After skin contact:**

Immediately wash with water and soap and rinse thoroughly.

Use skin protection cream for skin protection.

If skin irritation continues, consult a doctor.

· **After eye contact:**

Rinse opened eye for several minutes under running water. Then consult a doctor.

Call a doctor immediately.

· **After swallowing:** Do not induce vomiting; call for medical help immediately.

· **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.

· **4.3 Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

SECTION 5: Firefighting measures

· **5.1 Extinguishing media**

· **Suitable extinguishing agents:**

CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

· **For safety reasons unsuitable extinguishing agents:** Water with full jet

· **5.2 Special hazards arising from the substance or mixture**

Formation of toxic gases is possible during heating or in case of fire.

Carbon monoxide and carbon dioxide

· **5.3 Advice for firefighters**

· **Protective equipment:**

Wear self-contained respiratory protective device.

Wear fully protective suit.

Do not inhale explosion gases or combustion gases.

· **Additional information**

Cool endangered receptacles with water spray.

Collect contaminated fire fighting water separately. It must not enter the sewage system.

Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.

Avoid contact with the eyes and skin.

Do not inhale gases / fumes / aerosols.

Ensure adequate ventilation

Keep away from ignition sources.

· **6.2 Environmental precautions:**

Avoid release to the environment.

Inform respective authorities in case of seepage into water course or sewage system.

Do not allow to enter sewers/ surface or ground water.

· **6.3 Methods and material for containment and cleaning up:**

Ensure adequate ventilation.

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Collect with an inert, non-combustible, absorbent material (i.e. sand, diatomaceous earth, acid binder, universal binder).

· 6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

SECTION 7: Handling and storage

· 7.1 Precautions for safe handling

Keep receptacles tightly sealed.

Ensure good ventilation/exhaustion at the workplace.

Ensure good interior ventilation, especially at floor level. (Fumes are heavier than air).

Do not inhale gases / fumes / aerosols.

Avoid contact with the eyes and skin.

· Information about fire - and explosion protection:

Vapours of the product are heavier than air and may accumulate on the ground, in mines, drains or cellars with higher concentration.

Fumes can combine with air to form an explosive mixture.

Use explosion-proof apparatus / fittings and spark-proof tools.

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

Ground/bond container and receiving equipment.

· 7.2 Conditions for safe storage, including any incompatibilities

· Storage:

· Requirements to be met by storerooms and receptacles:

Store only in the original receptacle.

Adhere to the provisions of the Law on Water Protection.

· Information about storage in one common storage facility:

Store away from oxidising agents.

Do not store together with acids.

Do not store together with alkalis (caustic solutions).

Keep away from foodstuffs, beverages and feed.

· Further information about storage conditions:

Store in cool, dry conditions in well sealed receptacles.

Store receptacle in a well ventilated area.

Protect from heat and direct sunlight.

Anti-explosion protection required

· 7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

· Additional information about design of technical facilities: No further data; see item 7.

· 8.1 Control parameters

· Ingredients with limit values that require monitoring at the workplace:

64742-95-6 Solvent naphtha (petroleum), light arom.

OEL (EU)

Short-term value: 120 mg/m³, 25 ppm

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1330-20-7 xylene, mixture of isomers

<i>WEL (Great Britain)</i>	<i>Short-term value: 441 mg/m³, 100 ppm Long-term value: 220 mg/m³, 50 ppm Sk; BMGV</i>
<i>IOELV (EU)</i>	<i>Short-term value: 442 mg/m³, 100 ppm Long-term value: 221 mg/m³, 50 ppm Skin</i>

100-41-4 ethylbenzene

<i>WEL (Great Britain)</i>	<i>Short-term value: 552 mg/m³, 125 ppm Long-term value: 441 mg/m³, 100 ppm Sk</i>
<i>IOELV (EU)</i>	<i>Short-term value: 884 mg/m³, 200 ppm Long-term value: 442 mg/m³, 100 ppm Skin</i>

108-10-1 4-methylpentan-2-one

<i>WEL (Great Britain)</i>	<i>Short-term value: 416 mg/m³, 100 ppm Long-term value: 208 mg/m³, 50 ppm Sk, BMGV</i>
<i>IOELV (EU)</i>	<i>Short-term value: 208 mg/m³, 50 ppm Long-term value: 83 mg/m³, 20 ppm</i>

· DNELs

64742-95-6 Solvent naphtha (petroleum), light arom.

<i>Oral</i>	<i>Long-term exposure - systemic effects</i>	<i>11 mg/kg bw/day (general population)</i>
<i>Dermal</i>	<i>Long-term exposure - systemic effects</i>	<i>11 mg/kg bw/day (general population) 25 mg/kg bw/day (worker)</i>
<i>Inhalative</i>	<i>Long-term exposure - systemic effects</i>	<i>32 mg/m³ (general population) 150 mg/m³ (worker)</i>

1330-20-7 xylene, mixture of isomers

<i>Oral</i>	<i>Long-term exposure - systemic effects</i>	<i>1.6 mg/kg bw/day (general population)</i>
<i>Dermal</i>	<i>Long-term exposure - systemic effects</i>	<i>108 mg/kg bw/day (general population) 180 mg/kg bw/day (worker)</i>
<i>Inhalative</i>	<i>Long-term exposure - systemic effects</i>	<i>14.8 mg/m³ (general population) 77 mg/m³ (worker)</i>
	<i>Acute/short-term exposure - systemic effects</i>	<i>174 mg/m³ (general population) 289 mg/m³ (worker)</i>
	<i>Acute/short-term exposure - local effects</i>	<i>174 mg/m³ (general population) 289 mg/m³ (worker)</i>

1314-13-2 zinc oxide

<i>Oral</i>	<i>Long-term exposure - systemic effects</i>	<i>0.83 mg/kg bw/day (general population)</i>
<i>Dermal</i>	<i>Long-term exposure - systemic effects</i>	<i>83 mg/kg bw/day (general population) 83 mg/kg bw/day (worker)</i>
<i>Inhalative</i>	<i>Long-term exposure - systemic effects</i>	<i>2.5 mg/m³ (general population) 5 mg/m³ (worker)</i>

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100-41-4 ethylbenzene

Oral	Long-term exposure - systemic effects	1.6 mg/kg bw/day (general population)
Dermal	Long-term exposure - systemic effects	180 mg/kg bw/day (worker)
Inhalative	Long-term exposure - systemic effects	15 mg/m ³ (general population)
		77 mg/m ³ (worker)
	Acute/short-term exposure - local effects	293 mg/m ³ (worker)

108-10-1 4-methylpentan-2-one

Oral	Long-term exposure - systemic effects	4.2 mg/kg bw/day (general population)
Dermal	Long-term exposure - systemic effects	4.2 mg/kg bw/day (general population)
Inhalative		11.8 mg/kg bw/day (worker)
	Long-term exposure - systemic effects	14.7 mg/m ³ (general population)
		83 mg/m ³ (worker)
	Acute/short-term exposure - systemic effects	155.2 mg/m ³ (general population)
		208 mg/m ³ (worker)
	Acute/short-term exposure - local effects	155.2 mg/m ³ (general population)
		208 mg/m ³ (worker)
	Long-term exposure - local effects	14.7 mg/m ³ (general population)
		83 mg/m ³ (worker)

· PNECs

1330-20-7 xylene, mixture of isomers

PNEC aqua	327 mg/l (freshwater)
	327 mg/l (marine water)
	327 mg/l (intermittent releases)
PNEC sediment	12.46 mg/kg (freshwater)
	12.46 mg/kg (marine water)

1314-13-2 zinc oxide

PNEC aqua	0.0206 mg/l (freshwater)
	0.0061 mg/l (marine water)
PNEC sediment	117.8 mg/kg (freshwater)
	56.5 mg/kg (marine water)
PNEC STP	52 mg/l
PNEC soil	35.6 mg/kg (soil dw)

100-41-4 ethylbenzene

PNEC aqua	0.1 mg/l (freshwater)
	0.01 mg/l (marine water)
	0.1 mg/l (intermittent releases)
PNEC sediment	13.7 mg/kg (freshwater)
	2.68 mg/kg (marine water)
PNEC STP	9.6 mg/l
PNEC soil	2.68 mg/kg (soil dw)
PNEC oral	0.02 mg/kg

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108-10-1 4-methylpentan-2-one

PNEC aqua	0.6 mg/l (freshwater)
	0.06 mg/l (marine water)
	1.5 mg/l (intermittent releases)
PNEC sediment	8.27 mg/kg (freshwater)
	0.83 mg/kg (marine water)
PNEC STP	27.5 mg/l
PNEC soil	1.3 mg/kg

· **Ingredients with biological limit values:**

1330-20-7 xylene, mixture of isomers

BMGV (Great Britain)	650 mmol/mol creatinine
	Medium: urine
	Sampling time: post shift
	Parameter: methyl hippuric acid

108-10-1 4-methylpentan-2-one

BMGV (Great Britain)	20 µmol/L
	Medium: urine
	Sampling time: post shift
	Parameter: 4-methylpentan-2-one

· **Additional information:** The lists valid during the making were used as basis.

· **8.2 Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

- Keep away from foodstuffs, beverages and feed.
- Do not eat, drink, smoke or sniff while working.
- Wash hands before breaks and at the end of work.
- Store protective clothing separately.
- Immediately remove all soiled and contaminated clothing
- Wash contaminated clothing before reuse.
- Avoid contact with the eyes and skin.
- Use skin protection cream for skin protection.

· **Respiratory protection:**

- Adhere to the workplace limit values and / or other threshold values.
- In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
- Filter A/P2

· **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- Check the permeability prior to each renewed use of the glove.
- Preventive skin protection by use of skin-protecting agents is recommended.

· **Material of gloves**

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PVA gloves

Fluorocarbon rubber (Viton)

Recommended thickness of the material: ≥ 0.7 mm

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

Value for the permeation: Level ≤ 6 (≥ 480 min.)

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable:**

Nitrile rubber, NBR

· **As protection from splashes gloves made of the following materials are suitable:**

Neoprene gloves

Butyl rubber, BR

Natural rubber, NR

PVC gloves

· **Eye protection:**



Tightly sealed goggles

· **Body protection:** Protective work clothing

SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form:	Liquid
Colour:	Black
Odour:	Solvent-like

· **Change in condition**

Melting point/freezing point:	Undetermined.
Initial boiling point and boiling range:	Undetermined.

· **Flash point:** 29 °C

· **Ignition temperature:** Not determined

· **Explosive properties:** Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

· **Explosion limits:**

Lower:	0,3 Vol %
Upper:	7,6 Vol %

· **Vapour pressure:** Not determined.

· **Density at 20 °C:** 1,3 g/cm³

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| · Solubility in / Miscibility with water: | Not miscible or difficult to mix. |
| · Partition coefficient: n-octanol/water: | Not determined. |
| · Viscosity: | |
| Dynamic: | Not determined. |
| Kinematic: | Not determined. |
| · 9.2 Other information | No further relevant information available. |

SECTION 10: Stability and reactivity

- **10.1 Reactivity** No decomposition if used according to specifications.
- **10.2 Chemical stability** No decomposition if used and stored according to specifications.
- **10.3 Possibility of hazardous reactions**
Reacts with acids, alkalis and oxidising agents.
Reacts with reducing agents.
- **10.4 Conditions to avoid** Avoid naked flames, sparks, other ignition sources and sunlight.
- **10.5 Incompatible materials:**
Reacts with acids, alkalis and oxidising agents.
Reacts with reducing agents.
Reacts with organic substances.
Protect from humidity and water.
- **10.6 Hazardous decomposition products:**
Formation of toxic gases is possible during heating or in case of fire.
Carbon monoxide and carbon dioxide

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.

· **LD/LC50 values relevant for classification:**

Oral	ATE	4,500.5 mg/kg (mix) (Calculation method)
Dermal	ATE	12,278.3 mg/kg (mix) (Calculation method)
Inhalative	ATE	176 mg/l (mix (mist)) (4h / Dust/mist ; Calculation method) 85.7 mg/l (mix) (4h / vapours ; Calculation method)

64742-95-6 Solvent naphtha (petroleum), light arom.

Oral	LD 50	>6,800 mg/kg (rat)
Dermal	LD 50	>3,400 mg/kg (rabbit)
Inhalative	LC 50 / 4h	>10.2 mg/l (rat)

1317-39-1 dicopper oxide

Oral	LD50	470 mg/kg (rat)
Dermal	LD 50	>2,000 mg/kg (rat)
Inhalative	LC 50 / 4h	>5 mg/l (rat) (OECD Guideline 403)

1330-20-7 xylene, mixture of isomers

Oral	LD 50	>4,000 mg/kg (rat)
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Dermal	LD 50	>1,700 mg/kg (rabbit)
Inhalative	LC 50 / 4h	21.7 mg/l (rat) (Vapour)
	LC50 /4h	6,350 ppm (rat) (vapour)
1314-13-2 zinc oxide		
Oral	LD50	7,950 mg/kg (mouse)
	LD 50	>5,000 mg/kg (rat)
Inhalative	LC 50 / 4h	>5.7 mg/l (rat) (Dust/Mist)
100-41-4 ethylbenzene		
Oral	LD50	3,500 mg/kg (rat)
Dermal	LD 50	>5,000 mg/kg (rabbit)
Inhalative	LC50 /4h	17.2 mg/l (rat)
108-10-1 4-methylpentan-2-one		
Oral	LD50	2,080 mg/kg (rat)
Dermal	LD 50	16,000 mg/kg (rab)
Inhalative	LC 50 / 4h	10-20 mg/l (rat)
7440-50-8 copper		
Oral	LD50	>2,500 mg/kg (rat) (OECD 423)
	LDLo	0.01 mg/kg (human)
Dermal	LD 50	>2,000 mg/kg (rat) (OECD 402)
Inhalative	LC 50 / 4h	1.5 mg/l (rat) (Dust / Mist)

- **Primary irritant effect:**
- **Skin corrosion/irritation** Generally the product does not irritate the skin.
- **Serious eye damage/irritation**
Causes serious eye damage.
- **Subacute to chronic toxicity:** No further relevant information available.
- **Additional toxicological information:** Has a narcotising effect.
- **Sensitisation** No sensitising effects known.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
No further relevant information available.
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

- **12.1 Toxicity** Very toxic to aquatic life with long lasting effects.

· Aquatic toxicity:

64742-95-6 Solvent naphtha (petroleum), light arom.

EC50/48h	6.14 mg/l (daphnia magna)
EL50/72h	56 mg/l (Pseudokirchneriella subcapitata) (OECD 201)
LC50/96h	9.22 mg/l (oncorhynchus mykiss)

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LL50/96h	10 mg/l (<i>oncorhynchus mykiss</i>) (OECD 203)
NOELR (aqua chron.)	2.6 mg/l (<i>daphnia magna</i>) (OECD 211, 21d) 2.6 mg/l (<i>pimephales promelas</i>) (OECD 204, 14d)
1317-39-1 dicopper oxide	
M Factor	10 (acute) 1 (chronic)
EC50	0.03 mg/l (<i>Pseudokirchneriella subcapitata</i>) (96h)
EC50/48h	42 mg/l (<i>daphnia</i>)
LC50/96h	75 mg/l (<i>danio rerio</i>)
NOEC (aqua chron.)	4 mg/l (<i>daphnia magna</i>) (42 days, mortality)
1330-20-7 xylene, mixture of isomers	
EC50	>175 mg/l (activated slugde)
EC50/48h	3.82 mg/l (<i>daphnia magna</i>) 8.5 mg/l (<i>palaemonetes pugio</i>) (marine water)
EC50/72h	4.7 mg/l (<i>Pseudokirchneriella subcapitata</i>)
LC50/96h	>780 mg/l (<i>Cyprinus carpio</i>) 13.1-16.5 mg/l (<i>Lepomis macrochirus</i>) 7.6 mg/l (<i>oncorhynchus mykiss</i>) 13.4 mg/l (<i>pimephales promelas</i>)
NOEC	>1.3 mg/l (<i>oncorhynchus mykiss</i>) (56 d)
1314-13-2 zinc oxide	
EC50/48h	98 mg/l (<i>daphnia magna</i>)
EC50/72h	42 mg/l (<i>Pseudokirchneriella subcapitata</i>)
LC50/96h	2.17 mg/l (<i>oncorhynchus mykiss</i>)
NOEC	0.4 mg/l (<i>daphnia magna</i>) (48 h)
NOEC (aqua chron.)	17 mg/l (<i>Pseudokirchneriella subcapitata</i>)
100-41-4 ethylbenzene	
EC50/48h	2.4 mg/l (<i>daphnia magna</i>) >5.2 mg/l (<i>americamysis bahia</i>)
EC50/72h	4.6 mg/l (<i>Pseudokirchneriella subcapitata</i>)
LC50/96h	4.2 mg/l (<i>oncorhynchus mykiss</i>)
108-10-1 4-methylpentan-2-one	
EC50/48h	>200 mg/l (<i>daphnia magna</i>) (OECD 202)
LC50/96h	>179 mg/l (<i>danio rerio</i>) >505 mg/l (<i>pimephales promelas</i>)
NOEC	78 mg/l (<i>daphnia magna</i>) (OECD 211, 21d)
NOEC (aqua chron.)	7.8-38 mg/l (<i>daphnia magna</i>) (21d) 168 mg/l (<i>pimephales promelas</i>) (33d)
7440-50-8 copper	
EC50/48h	0.000072 mg/l (crustacean) (<i>Amphipoda</i> , marine water) 0.0021 mg/l (<i>daphnia</i>)
EC50/72h	13 mg/l (<i>Pseudokirchneriella subcapitata</i>)

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LC50/96h	5.4 mg/l (algae) (marine water)
NOEC (aqua chron.)	0.00756 mg/l (fish) (marine water)
	7 mg/l (<i>Pseudokirchneriella subcapitata</i>) (3 days, fresh water)
	0.0025 mg/l (algae) (<i>Nitzschia closterium</i> , marine water, 72h)
	2 mg/l (daphnia) (21 d)
	0.0008 mg/l (fish) (6 weeks, <i>Oreochromis niloticus</i>)

· **12.2 Persistence and degradability**

64742-95-6 Solvent naphtha (petroleum), light arom.

Biodegradation 74.3 % (ISO/DIS 14593, 28d)

1330-20-7 xylene, mixture of isomers

Biodegradation 87.8 % (28d)

100-41-4 ethylbenzene

Biodegradation >70 % (28 d)

· **12.3 Bioaccumulative potential**

64742-95-6 Solvent naphtha (petroleum), light arom.

log Kow >3

BCF 10-2,500 (lit.) (calculated)

1330-20-7 xylene, mixture of isomers

log Pow >3

BCF 6-23.4 (*oncorhynchus mykiss*)

1314-13-2 zinc oxide

log Pow 2.2

BCF 60,960

100-41-4 ethylbenzene

log Pow 3.1

108-10-1 4-methylpentan-2-one

log Pow 1.38

log Kow 1.31

40027-38-1 9-octadecenoic acid (z)-compd. with (Z)-N-octadec-9-enylpropane-1,3-diamine

BCF 70.8

· **Behaviour in environmental systems:**

· **12.4 Mobility in soil**

64742-95-6 Solvent naphtha (petroleum), light arom.

log Koc 2,36-1,783 (lit.) (calculated value)

Koc 60.7-229.2 (lit.) (calculated value)

· **Additional ecological information:**

· **General notes:**

Do not allow product to reach ground water, water course or sewage system, even in small quantities.

Danger to drinking water if even extremely small quantities leak into the ground.

· **12.5 Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

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· **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**

· **Recommendation**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· **Waste disposal key:**

The waste codes given above are to be considered recommendations; because of regional and industrial sector specific features, application of different waste codes is possible.

· **European waste catalogue**

08 01 11* waste paint and varnish containing organic solvents or other hazardous substances

· **Uncleaned packaging:**

· **Recommendation:** Disposal must be made according to official regulations.

SECTION 14: Transport information

· **14.1 UN-Number**

· **ADR, IMDG, IATA** UN1263

· **14.2 UN proper shipping name**

· **ADR** 1263 PAINT, ENVIRONMENTALLY HAZARDOUS
· **IMDG** PAINT (copper, dicopper oxide), MARINE POLLUTANT
· **IATA** PAINT

· **14.3 Transport hazard class(es)**

· **ADR, IMDG**



· **Class** 3 Flammable liquids.
· **Label** 3

· **IATA**



· **Class** 3 Flammable liquids.
· **Label** 3

· **14.4 Packing group**

· **ADR, IMDG, IATA** III

· **14.5 Environmental hazards:**

Product contains environmentally hazardous substances: dicopper oxide, Solvent naphtha (petroleum), light arom.

· **Marine pollutant:**

No
Symbol (fish and tree)

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· Special marking (ADR):	Symbol (fish and tree)
· 14.6 Special precautions for user	Warning: Flammable liquids.
· Danger code (Kemler):	30
· EMS Number:	F-E, S-E
· Stowage Category	A
· 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADR	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· Transport category	3
· Tunnel restriction code	D/E
· IMDG	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml

SECTION 15: Regulatory information

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

- **Regulation EU 528/2012**

1317-39-1	dicopper oxide	9,9%
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- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **Seveso category**
E1 Hazardous to the Aquatic Environment
P5c FLAMMABLE LIQUIDS
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3

- **National regulations:**

- **Information about limitation of use:**

Employment restrictions concerning juveniles must be observed.
Employment restrictions concerning pregnant and lactating women must be observed.

- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

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· **Relevant phrases**

- 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.
- H318 Causes serious eye damage.
- H319 Causes serious eye irritation.
- H331 Toxic if inhaled.
- H332 Harmful if inhaled.
- H335 May cause respiratory irritation.
- H336 May cause drowsiness or dizziness.
- 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.

· **Classification according to Regulation (EC) No 1272/2008**

- Flam. Liq.3,H226
- Eye Dam.1,H318
- Aquatic Acute 1, H400
- Aquatic Chronic 1,H410

Classification procedure

- On basis of test data
- Calculation method
- Calculation method
- Calculation method

· **Department issuing SDS:** Abteilung Labor

· **Contact:** Frau S. Schaller

· **Abbreviations and acronyms:**

- ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
- IMDG: International Maritime Code for Dangerous Goods
- IATA: International Air Transport Association
- GHS: Globally Harmonised System of Classification and Labelling of Chemicals
- EINECS: European Inventory of Existing Commercial Chemical Substances
- ELINCS: European List of Notified Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- DNEL: Derived No-Effect Level (REACH)
- PNEC: Predicted No-Effect Concentration (REACH)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent
- PBT: Persistent, Bioaccumulative and Toxic
- vPvB: very Persistent and very Bioaccumulative
- Flam. Liq. 2: Flammable liquids – Category 2
- Flam. Liq. 3: Flammable liquids – Category 3
- Acute Tox. 4: Acute toxicity – Category 4
- Acute Tox. 3: Acute toxicity – Category 3
- Skin Irrit. 2: Skin corrosion/irritation – Category 2
- Eye Dam. 1: Serious eye damage/eye irritation – Category 1
- Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
- STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
- STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2
- Asp. Tox. 1: Aspiration hazard – Category 1
- Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
- Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1
- Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2