Safety Data Sheet
According to Annex II to REACH - Regulation 2015/830

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

1.1. Product identifier
Code: NanoPhos_GA_17092018-006
Product name: Sea Queen Extreme

1.2. Relevant identified uses of the substance or mixture and uses advised against
Intended use: Antifouling Paint

1.3. Details of the supplier of the safety data sheet
NANOPHOS S.A.
Technological & Cultural Park
19 500 Lavrio (Greece)
Greece
Tel. +30 22920 69312
Fax +30 22920 69303
iarabatz@NanoPhos.com
Ioannis Arabatzis

1.4. Emergency telephone number
For urgent inquiries refer to: +30 22920 69312

SECTION 2. Hazards identification

2.1. Classification of the substance or mixture

The product is classified as hazardous pursuant to the provisions set forth in (EC) Regulation 1272/2008 (CLP) (and subsequent amendments and supplements). The product thus requires a safety datasheet that complies with the provisions of (EU) Regulation 2015/830.

Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

Hazard classification and indication:
- Reproductive toxicity, category 1B. H360D. May damage the unborn child.
- Acute toxicity, category 2. H300. Fatal if swallowed.
- Specific target organ toxicity - repeated exposure, category 2. H373. May cause damage to organs through prolonged or repeated exposure.
- Serious eye damage, category 1. H318. Causes serious eye damage.
- Skin irritation, category 2. H315. Causes skin irritation.
- Skin sensitization, category 1. H317. May cause an allergic skin reaction.
- Hazardous to the aquatic environment, acute toxicity, category 1. H400. Very toxic to aquatic life.
- Hazardous to the aquatic environment, chronic toxicity, category 1. H410. Very toxic to aquatic life with long lasting effects.
2.2. Label elements

Hazard labelling pursuant to EC Regulation 1272/2008 (CLP) and subsequent amendments and supplements.

Hazard pictograms:

<table>
<thead>
<tr>
<th>Pictogram</th>
<th>Description</th>
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<tbody>
<tr>
<td><img src="" alt="" /></td>
<td>Flammable</td>
</tr>
<tr>
<td><img src="" alt="" /></td>
<td>Corrosive</td>
</tr>
<tr>
<td><img src="" alt="" /></td>
<td>Poisonous</td>
</tr>
<tr>
<td><img src="" alt="" /></td>
<td>Environmental hazard</td>
</tr>
</tbody>
</table>

Signal words: Danger

Hazard statements:

- **H226**: Flammable liquid and vapour.
- **H360D**: May damage the unborn child.
- **H300+H330**: Fatal if swallowed or if inhaled.
- **H312**: Harmful in contact with skin.
- **H373**: May cause damage to organs through prolonged or repeated exposure.
- **H318**: Causes serious eye damage.
- **H315**: Causes skin irritation.
- **H317**: May cause an allergic skin reaction.
- **H410**: Very toxic to aquatic life with long lasting effects.

Precautionary statements:

- **P210**: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- **P260**: Do not breathe dust, fume, gas, mist, vapours or spray.
- **P201**: Obtain special instructions before use.
- **P305+P351+P338**: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- **P280**: Wear protective gloves or protective clothing and eye or face protection.
- **P310**: Immediately call a POISON CENTER or a doctor.
- **P101**: If medical advice is needed, have product container or label at hand.
- **P102**: Keep out of reach of children.
- **P103**: Read label before use.

Contains:

- Zinc Pyrithione
- 4-bromo-2-(4-chlorophenyl)-5-(trifluoromethyl)-1H-pyrrole-3-carbonitrile
- ROSIN
- XYLENE (MIXTURE OF ISOMERS)

2.3. Other hazards

On the basis of available data, the product does not contain any PBT or vPvB in percentage greater than 0.1%.
### SECTION 3. Composition/information on ingredients

#### 3.2. Mixtures

Contains:

<table>
<thead>
<tr>
<th>Identification</th>
<th>x = Conc. %</th>
<th>Classification 1272/2008 (CLP)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>XYLENE (MIXTURE OF ISOMERS)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAS 1330-20-7</td>
<td>10 &lt; x &lt; 30</td>
<td>Flam. Liq. 3 H226, Acute Tox. 4 H312, Acute Tox. 4 H332, Skin Irrit. 2 H315,</td>
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<tr>
<td>EC 215-535-7</td>
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<td>Classification note according to Annex VI to the CLP Regulation: C</td>
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<tr>
<td>INDEX 601-022-00-9</td>
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<tr>
<td><strong>4-METHYLPENTAN-2-ONE</strong></td>
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<td></td>
</tr>
<tr>
<td>CAS 108-10-1</td>
<td>10 &lt; x &lt; 20</td>
<td>Flam. Liq. 2 H225, Acute Tox. 4 H332, Eye Irrit. 2 H319, STOT SE 3 H335, EUH066</td>
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<tr>
<td>EC 203-550-1</td>
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<td>INDEX 606-004-00-4</td>
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<td><strong>ZINC OXIDE</strong></td>
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<td></td>
</tr>
<tr>
<td>CAS 1314-13-2</td>
<td>10 &lt; x &lt; 25</td>
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<td>INDEX 030-013-00-7</td>
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<td><strong>ROSIN</strong></td>
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<td>CAS 8050-09-7</td>
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<td><strong>Zinc Pyrithione</strong></td>
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<td>CAS 13463-41-7</td>
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<tr>
<td></td>
<td></td>
<td>Aquatic Acute 1 H400 M=1000, Aquatic Chronic 1 H410 M=10</td>
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<tr>
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<tr>
<td>INDEX -</td>
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<tr>
<td>**4-bromo-2-(4-chlorophenyl)-5-</td>
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<td></td>
</tr>
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<td>(trifluoromethyl)-1H-pyrrole-3-</td>
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<tr>
<td>(carbonitrile)</td>
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<td></td>
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<td>INDEX 606-002-00-3</td>
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The full wording of hazard (H) phrases is given in section 16 of the sheet.
SECTION 4. First aid measures

4.1. Description of first aid measures

EYES: Remove contact lenses, if present. Wash immediately with plenty of water for at least 15 minutes, opening the eyelids fully. If problem persists, seek medical advice.

SKIN: Remove contaminated clothing. Rinse skin with a shower immediately. Get medical advice/attention immediately. Wash contaminated clothing before using it again.

INHALATION: Remove to open air. If the subject stops breathing, administer artificial respiration. Get medical advice/attention immediately.

INGESTION: Get medical advice/attention immediately. Do not induce vomiting. Do not administer anything not explicitly authorised by a doctor.

4.2. Most important symptoms and effects, both acute and delayed

Specific information on symptoms and effects caused by the product are unknown.

4.3. Indication of any immediate medical attention and special treatment needed

Information not available

SECTION 5. Firefighting measures

5.1. Extinguishing media

SUITABLE EXTINGUISHING EQUIPMENT
Extinguishing substances are: carbon dioxide, foam, chemical powder. For product loss or leakage that has not caught fire, water spray can be used to disperse flammable vapours and protect those trying to stem the leak.

UNSUITABLE EXTINGUISHING EQUIPMENT
Do not use jets of water. Water is not effective for putting out fires but can be used to cool containers exposed to flames to prevent explosions.

5.2. Special hazards arising from the substance or mixture

HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE
Excess pressure may form in containers exposed to fire at a risk of explosion. Do not breathe combustion products.

5.3. Advice for firefighters

GENERAL INFORMATION
Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS
Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

SECTION 6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Block the leakage if there is no hazard.
Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. These indications apply for both processing staff and those involved in emergency procedures.

Send away individuals who are not suitably equipped. Use explosion-proof equipment. Eliminate all sources of ignition (cigarettes, flames, sparks, etc.)
from the leakage site.

6.2. Environmental precautions

The product must not penetrate into the sewer system or come into contact with surface water or ground water.

6.3. Methods and material for containment and cleaning up

Collect the leaked product into a suitable container. Evaluate the compatibility of the container to be used, by checking section 10. Absorb the remainder with inert absorbent material. Make sure the leakage site is well aired. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

6.4. Reference to other sections

Any information on personal protection and disposal is given in sections 8 and 13.

SECTION 7. Handling and storage

7.1. Precautions for safe handling

Keep away from heat, sparks and naked flames; do not smoke or use matches or lighters. Vapours may catch fire and an explosion may occur; vapour accumulation is therefore to be avoided by leaving windows and doors open and ensuring good cross ventilation. Without adequate ventilation, vapours may accumulate at ground level and, if ignited, catch fire even at a distance, with the danger of backfire. Avoid bunching of electrostatic charges. When performing transfer operations involving large containers, connect to an earthing system and wear antistatic footwear. Vigorous stirring and flow through the tubes and equipment may cause the formation and accumulation of electrostatic charges. In order to avoid the risk of fires and explosions, never use compressed air when handling. Open containers with caution as they may be pressurised. Do not eat, drink or smoke during use. Avoid leakage of the product into the environment.

7.2. Conditions for safe storage, including any incompatibilities

Store only in the original container. Store the containers sealed, in a well ventilated place, away from direct sunlight. Store in a cool and well ventilated place, keep far away from sources of heat, naked flames and sparks and other sources of ignition. Keep containers away from any incompatible materials, see section 10 for details.

7.3. Specific end use(s)

Information not available

SECTION 8. Exposure controls/personal protection

8.1. Control parameters

Regulatory References:

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**XYLENE (MIXTURE OF ISOMERS)**

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<th>STEL/15min</th>
<th>Remarks / Observations</th>
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**4-METHYLPENTAN-2-ONE**

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<td>GRC</td>
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**ZINC OXIDE**

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<th>STEL/15min</th>
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</tr>
<tr>
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<td>GRC</td>
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**ROSIN**

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**METHYL ETHYL KETONE**

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<th>STEL/15min</th>
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<td>TLV-ACGIH</td>
<td></td>
<td>590</td>
<td>200</td>
<td>885 300</td>
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</table>

Legend:
8.2. Exposure controls

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration.

When choosing personal protective equipment, ask your chemical substance supplier for advice. Personal protective equipment must be CE marked, showing that it complies with applicable standards.

Provide an emergency shower with face and eye wash station.

Exposure levels must be kept as low as possible to avoid significant build-up in the organism. Manage personal protective equipment so as to guarantee maximum protection (e.g. reduction in replacement times).

HAND PROTECTION

Protect hands with category III work gloves (see standard EN 374).

The following should be considered when choosing work glove material: compatibility, degradation, failure time and permeability.

The work gloves’ resistance to chemical agents should be checked before use, as it can be unpredictable. The gloves’ wear time depends on the duration and type of use.

SKIN PROTECTION

Wear category II professional long-sleeved overalls and safety footwear (see Regulation 2016/425 and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.

Consider the appropriateness of providing antistatic clothing in the case of working environments in which there is a risk of explosion.

EYE PROTECTION

Wear airtight protective goggles (see standard EN 166).

In the presence of risks of exposure to splashes or squirts during work, adequate mouth, nose and eye protection should be used to prevent accidental absorption.

RESPIRATORY PROTECTION

If the threshold value (e.g. TLV-TWA) is exceeded for the substance or one of the substances present in the product, wear a mask with a type AX filter, whose limit of use will be defined by the manufacturer (see standard EN 14387). In the presence of gases or vapours of various kinds and/or gases or vapours containing particulate (aerosol sprays, fumes, mists, etc.) combined filters are required.

Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered. The protection provided by masks is in any case limited.

If the substance considered is odourless or its olfactory threshold is higher than the corresponding TLV-TWA and in the case of an emergency, wear open-circuit compressed air breathing apparatus (in compliance with standard EN 137) or external air-intake breathing apparatus (in compliance with standard EN 138). For a correct choice of respiratory protection device, see standard EN 529.

ENVIRONMENTAL EXPOSURE CONTROLS

The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

Product residues must not be indiscriminately disposed of with waste water or by dumping in waterways.

SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
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<tbody>
<tr>
<td>Appearance</td>
<td>liquid</td>
</tr>
<tr>
<td>Colour</td>
<td>Red, Red-Brown, Black, Blue</td>
</tr>
<tr>
<td>Odour</td>
<td>Characteristic</td>
</tr>
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</table>
Odour threshold: Not available
pH: Not available
Melting point / freezing point: Not available
Initial boiling point: > 35 °C
Boiling range: Not available
Flash point: 23 < T < 60 °C
Evaporation rate: Not available
Flammability (solid, gas): Not available
Lower inflammability limit: Not available
Upper inflammability limit: Not available
Lower explosive limit: Not available
Upper explosive limit: Not available
Vapour pressure: Not available
Vapour density: Not available
Relative density: 1.20 kg/L
Solubility: Not available
Partition coefficient: n-octanol/water: Not available
Auto-ignition temperature: Not available
Decomposition temperature: Not available
Viscosity: Not available
Explosive properties: Not available
Oxidising properties: Not available

9.2. Other information
Information not available

SECTION 10. Stability and reactivity

10.1. Reactivity
There are no particular risks of reaction with other substances in normal conditions of use.

4-METHYL PENTAN-2-ONE
Reacts violently with: light metals. Attacks various types of plastic materials.

METHYL ETHYL KETONE
Reacts with: light metals, strong oxidants. Attacks various types of plastic materials. Decomposes under the effect of heat.

10.2. Chemical stability
The product is stable in normal conditions of use and storage.

10.3. Possibility of hazardous reactions
The vapours may also form explosive mixtures with the air.
XYLENE (MIXTURE OF ISOMERS)

Stable in normal conditions of use and storage. Reacts violently with: strong oxidants, strong acids, nitric acid, perchlorates. May form explosive mixtures with: air.

4-METHYLPENTAN-2-ONE


METHYL ETHYL KETONE


10.4. Conditions to avoid

Avoid overheating. Avoid bunching of electrostatic charges. Avoid all sources of ignition.

4-METHYLPENTAN-2-ONE

Avoid exposure to: sources of heat.

METHYL ETHYL KETONE

Avoid exposure to: sources of heat.

10.5. Incompatible materials

4-METHYLPENTAN-2-ONE

Incompatible with: oxidising substances, reducing substances.

METHYL ETHYL KETONE

Incompatible with: strong oxidants, inorganic acids, ammonia, copper, chloroform.

10.6. Hazardous decomposition products

In the event of thermal decomposition or fire, gases and vapours that are potentially dangerous to health may be released.

SECTION 11. Toxicological information

11.1. Information on toxicological effects

Metabolism, toxicokinetics, mechanism of action and other information

Information not available

Information on likely routes of exposure

XYLENE (MIXTURE OF ISOMERS)

WORKERS: inhalation; contact with the skin.
POPULATION: ingestion of contaminated food or water; inhalation of ambient air.

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

XYLENE (MIXTURE OF ISOMERS)

Toxic effect on the central nervous system (encephalopathy); irritating for the skin, conjunctiva, cornea and respiratory apparatus.

Interactive effects

XYLENE (MIXTURE OF ISOMERS)

Intake of alcohol interferes with the metabolism of the substance, inhibiting it. Ethanol consumption (0.8 g/kg) before a 4-hour exposure to xylene vapours (145 and 280 ppm) causes a 50% reduction in the excretion of methyl hippuric acid, whereas the concentration of xlenes in the blood increases approx. 1.5-2 times. At the same time there is an increase in the secondary side effects of the ethanol. The metabolism of the xlenes is increased by phenobarbital and 3-methyl-colantrene type enzyme inducers. Aspirin and xlenes mutually inhibit their conjugation with the glycine, which results in a decrease in urinary excretion of methyl hippuric acid. Other industrial products can interfere with the metabolism of xlenes.

ACUTE TOXICITY

LC50 (Inhalation - mists / powders) of the mixture: 0.51 mg/l
LC50 (Inhalation - vapours) of the mixture: > 20 mg/l
LD50 (Oral) of the mixture: 49.10 mg/kg
LD50 (Dermal) of the mixture: 1650.00 mg/kg

XYLENE (MIXTURE OF ISOMERS)

LD50 (Oral) 3523 mg/kg Rat
LD50 (Dermal) 4350 mg/kg Rabbit
LC50 (Inhalation) 26 mg/l/4h Rat

METHYL ETHYL KETONE

LD50 (Oral) 2737 mg/kg Rat
LD50 (Dermal) 6480 mg/kg Rabbit
LC50 (Inhalation) 23.5 mg/l/8h Rat

4-METHYL-PENTAN-2-ONE

LD50 (Oral) 2080 mg/kg Rat
LD50 (Dermal) > 16000 mg/kg Rabbit
LC50 (Inhalation) > 8.2 mg/l/4h Rat

Zinc Pyrithione
LD50 (Oral) 269 mg/kg (Rat)
LD50 (Dermal) > 2000 mg/kg rat
LC50 (Inhalation) 0,83 mg/l/4h Male rat

SKIN CORROSION / IRRITATION
Causes skin irritation

SERIOUS EYE DAMAGE / IRRITATION
Causes serious eye damage

RESPIRATORY OR SKIN SENSITISATION
Sensitising for the skin

GERM CELL MUTAGENICITY
Does not meet the classification criteria for this hazard class

CARCINOGENICITY
Does not meet the classification criteria for this hazard class

XYLENE (MIXTURE OF ISOMERS)
Classified in Group 3 (not classifiable as a human carcinogen) by the International Agency for Research on Cancer (IARC). The US Environmental Protection Agency (EPA) affirms that "the data is inadequate for an assessment of the carcinogenic potential".

REPRODUCTIVE TOXICITY
May damage the unborn child

STOT - SINGLE EXPOSURE
Does not meet the classification criteria for this hazard class

STOT - REPEATED EXPOSURE
May cause damage to organs

ASPIRATION HAZARD
Does not meet the classification criteria for this hazard class
SECTION 12. Ecological information

This product is dangerous for the environment and highly toxic for aquatic organisms. In the long term, it have negative effects on aquatic environment.

12.1. Toxicity

**ZINC OXIDE**

\[
\begin{align*}
& \text{LC50 - for Fish} & & 1,1 \text{ mg/l/96h Oncorhynchus mykiss} \\
& \text{EC50 - for Crustacea} & & 1,7 \text{ mg/l/48h Daphnia magna} \\
& \text{EC50 - for Algae / Aquatic Plants} & & 0,14 \text{ mg/l/72h Pseudokirchnerella subcapitata} \\
& \text{Chronic NOEC for Fish} & & 0,53 \text{ mg/l} \\
& \text{Chronic NOEC for Algae / Aquatic Plants} & & 0,024 \text{ mg/l} \\
\end{align*}
\]

Zinc Pyrithione

\[
\begin{align*}
& \text{EC50 - for Algae / Aquatic Plants} & & 0,0082 \text{ mg/l/72h Toxicity to daphnia and other aquatic invertebrates} \\
& \text{Chronic NOEC for Algae / Aquatic Plants} & & 0,00046 \text{ mg/l 120h} \\
\end{align*}
\]

12.2. Persistence and degradability

**XYLENE (MIXTURE OF ISOMERS)**

Solubility in water 100 - 1000 mg/l
Degradability: information not available

**ROSN**

Solubility in water 0,1 - 100 mg/l
Rapidly degradable

**METHYL ETHYL KETONE**

Solubility in water > 10000 mg/l
Rapidly degradable

**4-METHYLPENTAN-2-ONE**

Solubility in water > 10000 mg/l
Rapidly degradable

**ZINC OXIDE**

Solubility in water 2,9 mg/l
Degradability: information not available

NOT rapidly degradable

12.3. Bioaccumulative potential

**XYLENE (MIXTURE OF ISOMERS)**

Partition coefficient: n-octanol/water 3,12
BCF 25,9
ROSIN
Partition coefficient: n-octanol/water  3
BCF  56,23

METHYL ETHYL KETONE
Partition coefficient: n-octanol/water  0,3

4-METHYLPENTAN-2-ONE
Partition coefficient: n-octanol/water  1,9

ZINC OXIDE
BCF  > 175

12.4. Mobility in soil

XYLENE (MIXTURE OF ISOMERS)
Partition coefficient: soil/water  2,73

ROSIN
Partition coefficient: soil/water  3,7289

4-METHYLPENTAN-2-ONE
Partition coefficient: soil/water  2,008

12.5. Results of PBT and vPvB assessment

On the basis of available data, the product does not contain any PBT or vPvB in percentage greater than 0,1%.

12.6. Other adverse effects

Information not available

SECTION 13. Disposal considerations

13.1. Waste treatment methods

Reuse, when possible. Product residues should be considered special hazardous waste. The hazard level of waste containing this product should be evaluated according to applicable regulations. Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations. Waste transportation may be subject to ADR restrictions. CONTAMINATED PACKAGING
Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.
SECTION 14. Transport information

14.1. UN number
ADR / RID, IMDG, IATA: 1263

14.2. UN proper shipping name
ADR / RID: PAINT
IMDG: PAINT (ZINC OXIDE)
IATA: PAINT

14.3. Transport hazard class(es)
ADR / RID: Class: 3 Label: 3
IMDG: Class: 3 Label: 3
IATA: Class: 3 Label: 3

14.4. Packing group
ADR / RID, IMDG, IATA: III

14.5. Environmental hazards
ADR / RID: Environmentally Hazardous
IMDG: Marine Pollutant
IATA: NO
For Air transport, environmentally hazardous mark is only mandatory for UN 3077 and UN 3082.

14.6. Special precautions for user
ADR / RID: HIN - Kemler: 30
          Special Provision: -
IMDG: EMS: F-E, S-E
IATA: Cargo:
      Pass.:
      Special Instructions:
      Limited Quantities: 5 L
      Tunnel restriction code: (D/E)
      Limited Quantities: 5 L
      Packaging instructions: 366
      Maximum quantity: 220 L
      Packaging instructions: 355
      Maximum quantity: 60 L
      A3, A72, A192
14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Information not relevant

SECTION 15. Regulatory information

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

Seveso Category - Directive 2012/18/EC: P5c-H2-E1

Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006

Product Point 3 - 40

Substances in Candidate List (Art. 59 REACH)

On the basis of available data, the product does not contain any SVHC in percentage greater than 0.1%.

Substances subject to authorisation (Annex XIV REACH)

None

Substances subject to exportation reporting pursuant to (EC) Reg. 649/2012:

None

Substances subject to the Rotterdam Convention:

None

Substances subject to the Stockholm Convention:

None

Healthcare controls

Workers exposed to this chemical agent must not undergo health checks, provided that available risk-assessment data prove that the risks related to the workers' health and safety are modest and that the 98/24/EC directive is respected.

15.2. Chemical safety assessment

A chemical safety assessment has not been performed for the preparation/for the substances indicated in section 3.
SECTION 16. Other information

Text of hazard (H) indications mentioned in section 2-3 of the sheet:

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flam. Liq. 2</td>
<td>Flammable liquid, category 2</td>
</tr>
<tr>
<td>Flam. Liq. 3</td>
<td>Flammable liquid, category 3</td>
</tr>
<tr>
<td>Repr. 1B</td>
<td>Reproductive toxicity, category 1B</td>
</tr>
<tr>
<td>Acute Tox. 1/2</td>
<td>Acute toxicity, category 1/2</td>
</tr>
<tr>
<td>Acute Tox. 2</td>
<td>Acute toxicity, category 2</td>
</tr>
<tr>
<td>Acute Tox. 3</td>
<td>Acute toxicity, category 3</td>
</tr>
<tr>
<td>Acute Tox. 4</td>
<td>Acute toxicity, category 4</td>
</tr>
<tr>
<td>STOT RE 1</td>
<td>Specific target organ toxicity - repeated exposure, category 1</td>
</tr>
<tr>
<td>STOT RE 2</td>
<td>Specific target organ toxicity - repeated exposure, category 2</td>
</tr>
<tr>
<td>Eye Dam. 1</td>
<td>Serious eye damage, category 1</td>
</tr>
<tr>
<td>Eye Irrit. 2</td>
<td>Eye irritation, category 2</td>
</tr>
<tr>
<td>Skin Irrit. 2</td>
<td>Skin irritation, category 2</td>
</tr>
<tr>
<td>STOT SE 3</td>
<td>Specific target organ toxicity - single exposure, category 3</td>
</tr>
<tr>
<td>Skin Sens. 1</td>
<td>Skin sensitization, category 1</td>
</tr>
<tr>
<td>Aquatic Acute 1</td>
<td>Hazardous to the aquatic environment, acute toxicity, category 1</td>
</tr>
<tr>
<td>Aquatic Chronic 1</td>
<td>Hazardous to the aquatic environment, chronic toxicity, category 1</td>
</tr>
<tr>
<td>H225</td>
<td>Highly flammable liquid and vapour.</td>
</tr>
<tr>
<td>H226</td>
<td>Flammable liquid and vapour.</td>
</tr>
<tr>
<td>H300D</td>
<td>May damage the unborn child.</td>
</tr>
<tr>
<td>H300+H330</td>
<td>Fatal if swallowed or if inhaled.</td>
</tr>
<tr>
<td>H300</td>
<td>Fatal if swallowed.</td>
</tr>
<tr>
<td>H330</td>
<td>Fatal if inhaled.</td>
</tr>
<tr>
<td>H301</td>
<td>Toxic if swallowed.</td>
</tr>
<tr>
<td>H311</td>
<td>Toxic in contact with skin.</td>
</tr>
<tr>
<td>H312</td>
<td>Harmful in contact with skin.</td>
</tr>
<tr>
<td>H332</td>
<td>Harmful if inhaled.</td>
</tr>
<tr>
<td>H372</td>
<td>Causes damage to organs through prolonged or repeated exposure.</td>
</tr>
<tr>
<td>H373</td>
<td>May cause damage to organs through prolonged or repeated exposure.</td>
</tr>
<tr>
<td>H318</td>
<td>Causes serious eye damage.</td>
</tr>
<tr>
<td>H319</td>
<td>Causes serious eye irritation.</td>
</tr>
<tr>
<td>H315</td>
<td>Causes skin irritation.</td>
</tr>
<tr>
<td>H335</td>
<td>May cause respiratory irritation.</td>
</tr>
<tr>
<td>H317</td>
<td>May cause an allergic skin reaction.</td>
</tr>
<tr>
<td>H336</td>
<td>May cause drowsiness or dizziness.</td>
</tr>
<tr>
<td>H400</td>
<td>Very toxic to aquatic life.</td>
</tr>
<tr>
<td>H410</td>
<td>Very toxic to aquatic life with long lasting effects.</td>
</tr>
<tr>
<td>EUH066</td>
<td>Repeated exposure may cause skin dryness or cracking.</td>
</tr>
</tbody>
</table>

LEGEND:
- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- CAS NUMBER: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE NUMBER: Identifier in ESIS (European archive of existing substances)
- CLP: EC Regulation 1272/2008
- DNEL: Derived No Effect Level
- EmS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- INDEX NUMBER: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent bioaccumulative and toxic as REACH Regulation
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PNEC: Predicted no effect concentration
- REACH: EC Regulation 1907/2006
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA STEL: Short-term exposure limit
- TWA: Time-weighted average exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
- WGK: Water hazard classes (German).

GENERAL BIBLIOGRAPHY
1. Regulation (EC) 1907/2006 (REACH) of the European Parliament
2. Regulation (EC) 1272/2008 (CLP) of the European Parliament
6. Regulation (EU) 618/2012 (III Atp. CLP) of the European Parliament
8. Regulation (EU) 944/2013 (V Atp. CLP) of the European Parliament
12. Regulation (EU) 2016/1179 (IX Atp. CLP)
13. Regulation (EU) 2017/776 (X Atp. CLP)
15. Regulation (EU) 2018/1480 (XII Atp. CLP)
- The Merck Index. - 10th Edition
- Handling Chemical Safety
- INRS - Fiche Toxicologique (toxicological sheet)
- Patty - Industrial Hygiene and Toxicology
- IFA GESTIS website
- ECHA website
- Database of SDS models for chemicals - Ministry of Health and ISS (Istituto Superiore di Sanità) - Italy

Note for users:
The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product. This document must not be regarded as a guarantee on any specific product property.

The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.

Provide appointed staff with adequate training on how to use chemical products.

Product’s classification is based on the calculation methods set out in Annex I of the CLP Regulation, unless otherwise indicated in sections 11 and 12. The data for evaluation of chemical-physical properties are reported in section 9.

Changes to previous review:
The following sections were modified:
02 / 11.