



# Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2020/878/EU

**OPN Ceramic Paste Spray**

Date of compilation: 2016-04-13

Revision: 2026-05-05

Revision number: 5.0

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

- 1.1 Product identifier**  
Trade name **OPN Ceramic Paste Spray**  
  
Unique formula identifier (UFI) QSCG-P5E7-9009-KNPM  
Other means of identification  
Article number 61520  
Tariff No 34039900
- 1.2 Relevant identified uses of the substance or mixture and uses advised against**  
Relevant identified uses Consumer use (private households)  
Professional use  
Industrial use  
  
Sector of use Special lubricant  
Uses advised against Do not use for products which come into contact with foodstuffs
- 1.3 Details of the supplier of the safety data sheet**  
OPN-CHEMIE GmbH  
In der Au 14  
57290 Neunkirchen  
  
www.opn-chemie.de  
Competent person responsible for the safety data sheet Barbara Angelika Gros-Petri  
e-mail (competent person) baerbel.petri@opn-chemie.de
- 1.4 Emergency telephone number**  
Emergency information service Poison Information Center Freiburg +49(0)761/19240

## SECTION 2: Hazards identification

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

| Section | Hazard class                                                                    | Hazard class and category | Hazard statement |
|---------|---------------------------------------------------------------------------------|---------------------------|------------------|
| 2.3     | Aerosols                                                                        | Aerosol 1                 | H222,H229        |
| 3.2     | Skin corrosion/irritation                                                       | Skin Irrit. 2             | H315             |
| 3.8D    | Specific target organ toxicity - single exposure (narcotic effects, drowsiness) | STOT SE 3                 | H336             |
| 4.1C    | Hazardous to the aquatic environment - chronic hazard                           | Aquatic Chronic 3         | H412             |

### Remarks

For full text of abbreviations: see SECTION 16

### The most important adverse physicochemical, human health and environmental effects

Spillage and fire water can cause pollution of watercourses.

- 2.2 Label elements**  
Labelling according to Regulation (EC) No 1272/2008 (CLP)

**Signal word** Danger

### Pictograms

GHS02, GHS07



### Hazard statements

H222 Extremely flammable aerosol.  
H229 Pressurised container: May burst if heated.  
H315 Causes skin irritation.  
H336 May cause drowsiness or dizziness.  
H412 Harmful to aquatic life with long lasting effects.

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### Precautionary statements

P102 Keep out of reach of children.  
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P211 Do not spray on an open flame or other ignition source.  
P251 Do not pierce or burn, even after use.  
P261 Avoid breathing spray.  
P271 Use only outdoors or in a well-ventilated area.  
P312 Call a POISON CENTER or doctor/physician if you feel unwell.  
P332+P313 If skin irritation occurs: Get medical advice/attention.  
P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122 °F.  
P501 Dispose of contents / container in accordance with national regulations of the disposal.

### Hazardous ingredients for labelling

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hex-ane

### Additional labelling requirements

Buildup of explosive mixtures possible without sufficient ventilation.

### 2.3 Other hazards

#### Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

#### Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) at a concentration of  $\geq 0,1\%$ .

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

Not relevant (mixture).

### 3.2 Mixtures

#### Description of the mixture

Mixture of substances listed below with nonhazardous additions

| Name of substance                                                 | Identifier                                                                                            | Wt%       | Classification acc. to GHS                                                                                        | Pictograms                                                                                                                                                                                                                                                                                                                                                 | Notes                         |
|-------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|-----------|-------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|
| Butane                                                            | CAS No<br>106-97-8<br><br>EC No<br>203-448-7<br><br>REACH Reg.<br>No<br>01-<br>2119474691-<br>32-xxxx | 25 – < 50 | Flam. Gas 1A / H220<br>Press. Gas L / H280                                                                        |                                                                                                                                                                                  |                               |
| Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane | EC No<br>921-024-6<br><br>REACH Reg.<br>No<br>01-<br>2119475514-<br>35-xxxx                           | 10 – < 25 | Flam. Liq. 2 / H225<br>Skin Irrit. 2 / H315<br>STOT SE 3 / H336<br>Asp. Tox. 1 / H304<br>Aquatic Chronic 2 / H411 |  <br>  | OIN 14(b)<br>OIN 6(b)<br>P(b) |
| Propane                                                           | CAS No<br>74-98-6<br><br>EC No<br>200-827-9<br><br>REACH Reg.<br>No<br>01-<br>2119486944-<br>21-xxxx  | 10 – < 25 | Flam. Gas 1A / H220<br>Press. Gas C / H280                                                                        |                                                                                                                                                                                  | GHS-HC<br>U(b)                |
| White mineral oil (petroleum)                                     | CAS No<br>8042-47-5<br><br>EC No<br>232-455-8<br><br>REACH Reg.<br>No<br>01-<br>2119487078-           | 5 – < 10  | Asp. Tox. 1 / H304                                                                                                |                                                                                                                                                                                                                                                                       |                               |

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| Name of substance | Identifier                                                                                              | Wt%     | Classification acc. to GHS                                                                                                                               | Pictograms   | Notes                     |
|-------------------|---------------------------------------------------------------------------------------------------------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|---------------------------|
|                   | 27-xxxx                                                                                                 |         |                                                                                                                                                          |              |                           |
| Titanium dioxide  | CAS No<br>13463-67-7<br><br>EC No<br>236-675-5<br><br>REACH Reg.<br>No<br>01-<br>2119489379-<br>17-xxxx | 1 – < 5 | Carc. 2 / H351                                                                                                                                           |              | 10(a)<br>GHS-HC<br>V<br>W |
| Isobutane         | CAS No<br>75-28-5<br><br>EC No<br>200-857-2<br><br>REACH Reg.<br>No<br>01-<br>2119485395-<br>27-xxxx    | 1 – < 5 | Flam. Gas 1A / H220<br>Press. Gas C / H280                                                                                                               | <br>         | C<br>GHS-HC<br>U(b)       |
| Cyclohexane       | CAS No<br>110-82-7<br><br>EC No<br>203-806-2<br><br>REACH Reg.<br>No<br>01-<br>2119463273-<br>41-xxxx   | 1 – < 5 | Flam. Liq. 2 / H225<br>Skin Irrit. 2 / H315<br>STOT SE 3 / H336<br>Asp. Tox. 1 / H304<br>Aquatic Acute 1 / H400<br>Aquatic Chronic 1 / H410              | <br><br><br> | IOELV                     |
| n-Hexane          | CAS No<br>110-54-3<br><br>EC No<br>203-777-6<br><br>REACH Reg.<br>No<br>01-<br>2119480412-<br>44-xxxx   | < 0.25  | Flam. Liq. 2 / H225<br>Skin Irrit. 2 / H315<br>Repr. 2 / H361f<br>STOT SE 3 / H336<br>STOT RE 1 / H372<br>Asp. Tox. 1 / H304<br>Aquatic Chronic 2 / H411 | <br><br><br> | GHS-HC<br>IOELV           |

### Notes

- 10(a): Classification as a carcinogen by inhalation: Mixtures in powder form containing 1 % or more of titanium dioxide which is in the form of or incorporated in particles with aerodynamic diameter  $\leq 10\mu\text{m}$ .
- C: Some organic substances may be marketed either in a specific isomeric form or as a mixture of several isomers. In this case the supplier must state on the label whether the substance is a specific isomer or a mixture of isomers.
- GHS-HC: Harmonised classification (the classification of the substance corresponds to the entry in the list according to 1272/2008/EC, Annex VI)
- IOELV: Substance with a community indicative occupational exposure limit value
- OIN: The classification as a specific target organ toxicant category 2; H373 (May cause damage to organs through prolonged or repeated exposure) need not apply. The substance is not classified as carcinogenic
- 14(b): The classification as a reproductive toxicant category 2; H361f (Suspected of damaging fertility) is not required. The substance contains less than 3 % w/w n-hexane (EINECS No 203-777-6)
- P(b): The classification as a carcinogen or mutagen is not required. The substance contains less than 0,1 % w/w benzene (EINECS No 200-753-7). When the substance is not classified as a carcinogen at least the precautionary statements (P102-)P260-P262-P301 + P310-P331 shall apply
- U(b): The allocation to the group 'compressed gas' is based on the physical state in which the gas is packaged
- V: If the substance is to be placed on the market as fibres (with diameter  $< 3\mu\text{m}$ , length  $> 5\mu\text{m}$  and aspect ratio  $\geq 3:1$ ) or particles of the substance fulfilling the WHO fibre criteria or as particles with modified surface chemistry, their hazardous properties must be evaluated in accordance with Title II of Regulation (EC) No. 1272/2008, to assess whether a higher category (Carc. 1B or 1A) and/or additional routes of exposure (oral or dermal) should be applied.
- W: It has been observed that the carcinogenic hazard of this substance arises when respirable dust is inhaled in quantities leading to significant impairment of particle clearance mechanisms in the lung.

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| Name of substance             | Specific Conc. Limits | M-Factors | ATE       | Exposure route        |
|-------------------------------|-----------------------|-----------|-----------|-----------------------|
| White mineral oil (petroleum) | -                     | -         | >5 mg//4h | Inhalation: dust/mist |

### 3.3 Remarks

For full text of abbreviations: see SECTION 16.  
n-Hexane is a component of the hydrocarbon mixture.  
Cyclohexane is a component of the hydrocarbon mixture.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

#### General notes

Do not leave affected person unattended. Remove victim out of the danger area. Keep affected person warm, still and covered. Take off immediately all contaminated clothing. In all cases of doubt, or when symptoms persist, seek medical advice. In case of unconsciousness place person in the recovery position. Never give anything by mouth.

#### Following inhalation

If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. In case of respiratory tract irritation, consult a physician. Provide fresh air.

#### Following skin contact

Wash with plenty of soap and water.

#### Following eye contact

Remove contact lenses, if present and easy to do. Continue rinsing. Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart.

#### Following ingestion

Rinse mouth with water (only if the person is conscious). Do NOT induce vomiting.

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

Narcotic effects.

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

none

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

#### Suitable extinguishing media

Water spray. BC-powder.

#### Unsuitable extinguishing media

Water jet.

### 5.2 Special hazards arising from the substance or mixture

In case of insufficient ventilation and/or in use, may form flammable/explosive vapour-air mixture.

#### Hazardous combustion products

Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>).

### 5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Co-ordinate firefighting measures to the fire surroundings. Do not allow firefighting water to enter drains or water courses. Collect contaminated firefighting water separately. Fight fire with normal precautions from a reasonable distance.

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

#### For non-emergency personnel

Remove persons to safety.

#### For emergency responders

Wear breathing apparatus if exposed to vapours/dust/spray/gases.

### 6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it. If substance has entered a water course or sewer, inform the responsible authority.

### 6.3 Methods and material for containment and cleaning up

#### Advice on how to contain a spill

Covering of drains.

#### Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

### 6.4 Reference to other sections

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Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Physical considerations: see section 13.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

#### Recommendations

#### Measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation. Take precautionary measures against static discharge. Use only in well-ventilated areas. Ground/bond container and receiving equipment.

#### Advice on general occupational hygiene

Wash hands after use. Do not eat, drink and smoke in work areas. Remove contaminated clothing and protective equipment before entering eating areas. Never keep food or drink in the vicinity of chemicals. Never place chemicals in containers that are normally used for food or drink. Keep away from food, drink and animal feedingstuffs.

### 7.2 Conditions for safe storage, including any incompatibilities

#### Managing of associated risks

#### Storage class (LGK)

2 B

#### • Flammability hazards

Do not spray on an open flame or other ignition source. Protect from sunlight.

#### Consideration of other advice

#### • Packaging compatibilities

Only packagings which are approved (e.g. acc. to ADR) may be used.

### 7.3 Specific end use(s)

No further relevant information available.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### National limit values

#### Occupational exposure limit values (Workplace Exposure Limits)

this information is not available

#### Relevant DNELs/DMELs/PNECs and other threshold levels

#### Relevant DNELs of components of the mixture

| Relevant DNELs of components                                      |            |           |                         |                                    |                   |                            |
|-------------------------------------------------------------------|------------|-----------|-------------------------|------------------------------------|-------------------|----------------------------|
| Name of substance                                                 | CAS No     | End-point | Threshold level         | Protection goal, route of exposure | Used in           | Exposure time              |
| Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane |            | DNEL      | 2,035 mg/m <sup>3</sup> | Human, inhalatory                  | Worker (industry) | Chronic - systemic effects |
| Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane |            | DNEL      | 773 mg/kg bw/day        | Human, dermal                      | Worker (industry) | Chronic - systemic effects |
| White mineral oil (petroleum)                                     | 8042-47-5  | DNEL      | 164.6 mg/m <sup>3</sup> | Human, inhalatory                  | Worker (industry) | Chronic - systemic effects |
| White mineral oil (petroleum)                                     | 8042-47-5  | DNEL      | 217.1 mg/kg bw/day      | Human, dermal                      | Worker (industry) | Chronic - systemic effects |
| Titanium dioxide                                                  | 13463-67-7 | DNEL      | 10 mg/m <sup>3</sup>    | Human, inhalatory                  | Worker (industry) | Chronic - local effects    |
| Cyclohexane                                                       | 110-82-7   | DNEL      | 700 mg/m <sup>3</sup>   | Human, inhalatory                  | Worker (industry) | Chronic - systemic effects |
| Cyclohexane                                                       | 110-82-7   | DNEL      | 700 mg/m <sup>3</sup>   | Human, inhalatory                  | Worker (industry) | Acute - systemic effects   |
| Cyclohexane                                                       | 110-82-7   | DNEL      | 700 mg/m <sup>3</sup>   | Human, inhalatory                  | Worker (industry) | Chronic - local effects    |

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| Relevant DNELs of components |          |           |                       |                                    |                   |                            |
|------------------------------|----------|-----------|-----------------------|------------------------------------|-------------------|----------------------------|
| Name of substance            | CAS No   | End-point | Threshold level       | Protection goal, route of exposure | Used in           | Exposure time              |
| Cyclohexane                  | 110-82-7 | DNEL      | 700 mg/m <sup>3</sup> | Human, inhalatory                  | Worker (industry) | Acute - local effects      |
| Cyclohexane                  | 110-82-7 | DNEL      | 2,016 mg/kg bw/day    | Human, dermal                      | Worker (industry) | Chronic - systemic effects |
| n-Hexane                     | 110-54-3 | DNEL      | 75 mg/m <sup>3</sup>  | Human, inhalatory                  | Worker (industry) | Chronic - systemic effects |
| n-Hexane                     | 110-54-3 | DNEL      | 11 mg/kg bw/day       | Human, dermal                      | Worker (industry) | Chronic - systemic effects |

### Relevant PNECs of components of the mixture

| Relevant PNECs of components |            |           |                 |                       |                              |                              |
|------------------------------|------------|-----------|-----------------|-----------------------|------------------------------|------------------------------|
| Name of substance            | CAS No     | End-point | Threshold level | Organism              | Environmental compartment    | Exposure time                |
| Titanium dioxide             | 13463-67-7 | PNEC      | 100 mg/l        | Aquatic organisms     | Sewage treatment plant (STP) | Short-term (single instance) |
| Titanium dioxide             | 13463-67-7 | PNEC      | 0.193 mg/l      | Aquatic organisms     | Water                        | Intermittent release         |
| Cyclohexane                  | 110-82-7   | PNEC      | 0.207 mg/l      | Aquatic organisms     | Freshwater                   | Short-term (single instance) |
| Cyclohexane                  | 110-82-7   | PNEC      | 0.207 mg/l      | Aquatic organisms     | Marine water                 | Short-term (single instance) |
| Cyclohexane                  | 110-82-7   | PNEC      | 3.24 mg/l       | Aquatic organisms     | Sewage treatment plant (STP) | Short-term (single instance) |
| Cyclohexane                  | 110-82-7   | PNEC      | 3.627 mg/kg     | Aquatic organisms     | Freshwater sediment          | Short-term (single instance) |
| Cyclohexane                  | 110-82-7   | PNEC      | 3.627 mg/kg     | Aquatic organisms     | Marine sediment              | Short-term (single instance) |
| Cyclohexane                  | 110-82-7   | PNEC      | 2.99 mg/kg      | Terrestrial organisms | Soil                         | Short-term (single instance) |

## 8.2 Exposure controls

### Appropriate engineering controls

General ventilation.

### Individual protection measures (personal protective equipment)

#### Eye/face protection

Do not spray in eyes. If required use tight-fitting goggles.

#### Skin protection

#### Hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374.

#### Type of material

NBR: acrylonitrile-butadiene rubber.

#### Material thickness

> 0,7 mm

#### Breakthrough times of the glove material

>480 minutes (permeation: level 6)

#### Other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended. Wash hands thoroughly after handling.

#### Respiratory protection

Operate if possible out of doors or in a well-ventilated place. In case of inadequate ventilation wear respiratory protection. Type: A-P2 (combined filters against particles and organic gases and vapours, colour code: Brown/White).

#### Environmental exposure controls

Use appropriate container to avoid environmental contamination. Keep away from drains, surface and ground water.

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## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

|                                                   |                                                   |
|---------------------------------------------------|---------------------------------------------------|
| Physical state                                    | Aerosol (Spray aerosol)                           |
| Colour                                            | White                                             |
| Odour                                             | Solvent like                                      |
| Melting point/freezing point                      | Not applicable, as aerosol.*                      |
| Initial boiling point and boiling range           | Not applicable, as aerosol.*                      |
| Flammability (solid, gas)                         | flammable aerosol in accordance with GHS criteria |
| Explosive limits                                  | 0.6 vol% - 15 vol%                                |
| Flash point                                       | Not applicable, as aerosol.*                      |
| Auto-ignition temperature                         | Not applicable, as aerosol.*                      |
| Decomposition temperature                         | Not relevant                                      |
| Viscosity                                         | Not relevant (Aerosol)                            |
| Water solubility                                  | Insoluble                                         |
| <b>Partition coefficient</b>                      |                                                   |
| Partition coefficient n-octanol/water (log value) | Not relevant (mixture)                            |
| <b>Vapour pressure</b>                            |                                                   |
|                                                   | 3.8 bar at 20 °C                                  |
|                                                   | 6.8 bar at 50 °C                                  |
| <b>Density</b>                                    |                                                   |
|                                                   | 0.8 g/ml at 20 °C<br>(Calculated value)           |
| <b>Particle characteristics</b>                   |                                                   |
|                                                   | Not applicable, as aerosol.*                      |

### 9.2 Other information

\* The finished mixture in an aerosol container is formed after addition of propellant. Several details are not measurable in an hermetic closed, pressurized container.

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

Concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials". The mixture contains reactive substance(s). Risk of ignition.

### 10.2 Chemical stability

See below "Conditions to avoid".

### 10.3 Possibility of hazardous reactions

No known hazardous reactions.

### 10.4 Conditions to avoid

Do not spray on an open flame or other ignition source. Keep away from heat.

#### Hints to prevent fire or explosion

Protect from sunlight.

#### Physical stresses which might result in a hazardous situation and have to be avoided

High temperatures.

### 10.5 Incompatible materials

Oxidisers.

### 10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. Hazardous combustion products: see section 5.

## SECTION 11: Toxicological information

### 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Test data are not available for the complete mixture.

#### Classification procedure

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

#### Classification according to GHS (1272/2008/EC, CLP)

##### Acute toxicity

Shall not be classified as acutely toxic.

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| Acute toxicity estimate (ATE) of components |           |                       |            |
|---------------------------------------------|-----------|-----------------------|------------|
| Name of substance                           | CAS No    | Exposure route        | ATE        |
| White mineral oil (petroleum)               | 8042-47-5 | Inhalation: dust/mist | >5 mg/l/4h |

## Skin corrosion/irritation

Causes skin irritation.

## Serious eye damage/eye irritation

Shall not be classified as seriously damaging to the eye or eye irritant.

## Respiratory or skin sensitisation

Shall not be classified as a respiratory or skin sensitiser.

## Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

## Carcinogenicity

Shall not be classified as carcinogenic.

## Reproductive toxicity

Shall not be classified as a reproductive toxicant.

### • Specific target organ toxicity - single exposure

May cause drowsiness or dizziness.

### • Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

## Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

## 11.2 Information on other hazards

There is no additional information.

## SECTION 12: Ecological information

### 12.1 Toxicity

Harmful to aquatic life with long lasting effects.

Ordinance on systems for handling water-polluting substances (Ordinance on facilities for handling substances hazardous to water) (AwSV): WGK (Germany) 2, obviously hazardous to water

| Aquatic toxicity (chronic) of components                          |            |          |              |                       |               |
|-------------------------------------------------------------------|------------|----------|--------------|-----------------------|---------------|
| Name of substance                                                 | CAS No     | Endpoint | Value        | Species               | Exposure time |
| Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane |            | EL50     | 1.6 mg/l     | Daphnia magna         | 21 d          |
| Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane |            | EC50     | 0.23 mg/l    | Daphnia magna         | 21 d          |
| Titanium dioxide                                                  | 13463-67-7 | LC50     | >20,000 mg/l | Aquatic invertebrates | 24 h          |

### 12.2 Persistence and degradability

| Degradability of components                                       |          |                  |                  |      |        |           |
|-------------------------------------------------------------------|----------|------------------|------------------|------|--------|-----------|
| Name of substance                                                 | CAS No   | Process          | Degradation rate | Time | Method | Source    |
| Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane |          | Oxygen depletion | 10.5 %           | 15 d |        | ECHA Chem |
| n-Hexane                                                          | 110-54-3 | Oxygen depletion | 83 %             | 10 d |        | ECHA Chem |

### 12.3 Bioaccumulative potential

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| Bioaccumulative potential of components                           |          |                 |                           |          |
|-------------------------------------------------------------------|----------|-----------------|---------------------------|----------|
| Name of substance                                                 | CAS No   | BCF             | Log KOW                   | BOD5/COD |
| Butane                                                            | 106-97-8 |                 | 1.09 (pH value: 7, 20 °C) |          |
| Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane |          | ≥26.26 – ≤315.7 | 2.96 – 3.78 (20 °C)       |          |
| Propane                                                           | 74-98-6  |                 | 1.09 (pH value: 7, 20 °C) |          |
| Isobutane                                                         | 75-28-5  |                 | 1.09 (pH value: 7, 20 °C) |          |
| Cyclohexane                                                       | 110-82-7 | 167             | 3.44 (pH value: 7, 25 °C) |          |
| n-Hexane                                                          | 110-54-3 | ≥26.26 – ≤316   | 5.8 (20 °C)               |          |

### 12.4 Mobility in soil

Data are not available.

### 12.5 Results of PBT and vPvB assessment

Does not contain a PBT-/vPvB-substance at a concentration of ≥ 0,1%.

### 12.6 Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) at a concentration of ≥ 0,1%.

### 12.7 Other adverse effects

Data are not available.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

#### Sewage disposal-relevant information

Do not empty into drains. Avoid release to the environment. Refer to special instructions/safety data sheets.

#### Waste treatment of containers/packages

It is a dangerous waste; only packagings which are approved (e.g. acc. to ADR) may be used. Completely emptied packages can be recycled. Handle contaminated packages in the same way as the substance itself.

#### Relevant provisions relating to waste

##### List of wastes

15 01 04 Metallic packaging

15 01 10 Packaging containing residues of or contaminated by dangerous substances

16 05 04 Containing hazardous gases in pressure containers (including halons)

##### Remarks

Please consider the relevant national or regional provisions. Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities.

## SECTION 14: Transport information

### 14.1 UN number or ID number

ADR/RID/ADN

UN  
1950

IMDG-Code

UN  
1950

ICAO-TI

UN  
1950

### 14.2 UN proper shipping name

ADR/RID/ADN

AEROSOLS

IMDG-Code

AEROSOLS

ICAO-TI

Aerosols, flammable

### 14.3 Transport hazard class(es)

ADR/RID/ADN

2

IMDG-Code

2.1

ICAO-TI

2.1

### 14.4 Packing group

Not assigned

### 14.5 Environmental hazards

Hazardous to the aquatic environment

### 14.6 Special precautions for user

Provisions for dangerous goods (ADR) should be complied within the premises.

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### 14.7 Maritime transport in bulk according to IMO instruments

The cargo is not intended to be carried in bulk.

#### Information for each of the UN Model Regulations

##### Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN) Additional information

Classification code 5F  
Danger label(s) 2.1



Environmental hazards Yes (hazardous to the aquatic environment)  
Special provisions (SP) 190, 327, 344, 625  
Excepted quantities (EQ) E0  
Limited quantities (LQ) 1 L  
Transport category (TC) 2  
Tunnel restriction code (TRC) D

##### International Maritime Dangerous Goods Code (IMDG) Additional information

Marine pollutant Yes (hazardous to the aquatic environment)  
Danger label(s) 2.1



Special provisions (SP) 63, 190, 277, 327, 344, 381, 959  
Excepted quantities (EQ) E0  
Limited quantities (LQ) 1 L  
EmS F-D, S-U  
Stowage category -

##### International Civil Aviation Organization (ICAO-IATA/DGR) Additional information

Environmental hazards Yes (hazardous to the aquatic environment)  
Danger label(s) 2.1



Special provisions (SP) A145, A167  
Excepted quantities (EQ) E0  
Limited quantities (LQ) 30 kg

## SECTION 15: Regulatory information

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

#### Relevant provisions of the European Union (EU)

##### List of substances subject to authorisation (REACH, Annex XIV)/SVHC - candidate list

| Substance of Very High Concern (SVHC) |          |                |                   |
|---------------------------------------|----------|----------------|-------------------|
| Name acc. to inventory                | CAS No   | Listed in      | Remarks           |
| n-Hexane                              | 110-54-3 | Candidate list | STOT-re A57(f)-HH |

#### Legend

Candidate list Substances meeting the criteria referred to in Article 57 and for eventual inclusion in Annex XIV  
STOT-re Specific target organ toxicity - repeated exposure (article 57(f) - human health)  
A57(f)-HH

#### Industrial Emissions Directive (IED)

VOC content 62.13 %

#### Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS)

none of the ingredients are listed

#### Regulation concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)

none of the ingredients are listed

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### Water Framework Directive (WFD)

| List of pollutants (WFD) |        |           |         |
|--------------------------|--------|-----------|---------|
| Name of substance        | CAS No | Listed in | Remarks |
| Butane                   |        | A)        |         |
| Isobutane                |        | A)        |         |
| Titanium dioxide         |        | A)        |         |
| Titanium dioxide         |        | A)        |         |
| n-Hexane                 |        | A)        |         |

### Legend

a) Indicative list of the main pollutants

### Regulation on persistent organic pollutants (POP)

none of the ingredients are listed

### Restrictions of occupation

Directive 94/33/EC on the protection of young people at work / Observe national regulations on protection of young people at work.

### National regulations (Germany)

Ordinance on systems for handling water-polluting substances (Ordinance on facilities for handling substances hazardous to water) (AwSV)

Water hazard class 2 (obviously hazardous to water)

### Technical instructions on air quality control (Germany)

| Number | Group of substances | Class | Conc.    | Mass flow | Mass concentration   | Notation |
|--------|---------------------|-------|----------|-----------|----------------------|----------|
| 5.2.5  | Organic substances  |       | ≥ 25 wt% | 0.5 kg/h  | 50 mg/m <sup>3</sup> | 3)       |

### Notation

3) A total mass flow of 0.50 kg/h or a total mass concentration of 50 mg/m<sup>3</sup>, each of which to be indicated as total carbon, shall not be exceeded (except organic particulate matter)

### Storage of hazardous substances in non-stationary containers (TRGS 510) (Germany)

Storage class (LGK) 2 B (Aerosol dispensers or lighters)

### National inventories

| Country | Inventory  | Status                     |
|---------|------------|----------------------------|
| EU      | REACH Reg. | All ingredients are listed |

### Legend

REACH Reg. REACH registered substances

## 15.2 Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

## SECTION 16: Other information

### 16.1 Indication of changes (revised safety data sheet)

| Section | Former entry (text/value) | Actual entry (text/value)                                                                                                     | Safety-relevant |
|---------|---------------------------|-------------------------------------------------------------------------------------------------------------------------------|-----------------|
| 3.2     |                           | Description of the mixture:<br>change in the listing (table)                                                                  | Yes             |
| 15.1    |                           | Substance of Very High Concern (SVHC):<br>change in the listing (table)                                                       | Yes             |
| 15.1    |                           | List of pollutants (WFD):<br>change in the listing (table)                                                                    | Yes             |
| 15.1    |                           | Restrictions of occupation:<br>Directive 94/33/EC on the protection of young people at work / Observe national regulations on | Yes             |

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| Section | Former entry (text/value) | Actual entry (text/value)           | Safety-relevant |
|---------|---------------------------|-------------------------------------|-----------------|
|         |                           | protection of young people at work. |                 |

### 16.2 Abbreviations and acronyms

|                 |                                                                                                                                                                                                                        |
|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ADN             | Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways). |
| ADR             | Accord relatif au transport international des marchandises dangereuses par route (Agreement concerning the International Carriage of Dangerous Goods by Road).                                                         |
| ADR/RID/ADN     | Agreements concerning the International Carriage of Dangerous Goods by Road/Rail/Inland Waterways (ADR/RID/ADN).                                                                                                       |
| Aquatic Acute   | Hazardous to the aquatic environment - acute hazard.                                                                                                                                                                   |
| Aquatic Chronic | Hazardous to the aquatic environment - chronic hazard.                                                                                                                                                                 |
| Asp. Tox.       | Aspiration hazard.                                                                                                                                                                                                     |
| ATE             | Acute Toxicity Estimate.                                                                                                                                                                                               |
| BCF             | Bioconcentration factor.                                                                                                                                                                                               |
| BOD             | Biochemical Oxygen Demand.                                                                                                                                                                                             |
| Carc.           | Carcinogenicity.                                                                                                                                                                                                       |
| CAS             | Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances).                                                                                                                |
| CLP             | Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures.                                                                                                                    |
| COD             | Chemical oxygen demand.                                                                                                                                                                                                |
| DGR             | Dangerous Goods Regulations (see IATA/DGR).                                                                                                                                                                            |
| DMEL            | Derived Minimal Effect Level.                                                                                                                                                                                          |
| DNEL            | Derived No-Effect Level.                                                                                                                                                                                               |
| EC50            | Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval.                                      |
| EC No           | The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union).                                     |
| ED              | Endocrine disruptor.                                                                                                                                                                                                   |
| EINECS          | European Inventory of Existing Commercial Chemical Substances.                                                                                                                                                         |
| EL50            | Effective Loading 50 %: the EL50 corresponds to the loading rate required to produce a response in 50% of the test organisms.                                                                                          |
| ELINCS          | European List of Notified Chemical Substances.                                                                                                                                                                         |
| EmS             | Emergency Schedule.                                                                                                                                                                                                    |
| Flam. Gas       | Flammable gas.                                                                                                                                                                                                         |
| Flam. Liq.      | Flammable liquid.                                                                                                                                                                                                      |
| GHS             | "Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations.                                                                                                             |
| IATA            | International Air Transport Association.                                                                                                                                                                               |
| IATA/DGR        | Dangerous Goods Regulations (DGR) for the air transport (IATA).                                                                                                                                                        |
| ICAO            | International Civil Aviation Organization.                                                                                                                                                                             |
| ICAO-TI         | Technical instructions for the safe transport of dangerous goods by air.                                                                                                                                               |
| IMDG            | International Maritime Dangerous Goods Code.                                                                                                                                                                           |
| IMDG-Code       | International Maritime Dangerous Goods Code.                                                                                                                                                                           |
| LC50            | Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval.                                                                     |
| LGK             | Lagerklasse (storage class according to TRGS 510, Germany).                                                                                                                                                            |
| Log KOW         | n-Octanol/water.                                                                                                                                                                                                       |
| NLP             | No-Longer Polymer.                                                                                                                                                                                                     |
| PBT             | Persistent, Bioaccumulative and Toxic.                                                                                                                                                                                 |
| PNEC            | Predicted No-Effect Concentration.                                                                                                                                                                                     |
| Press. Gas      | Gas under pressure.                                                                                                                                                                                                    |
| REACH           | Registration, Evaluation, Authorisation and Restriction of Chemicals.                                                                                                                                                  |
| Repr.           | Reproductive toxicity.                                                                                                                                                                                                 |
| RID             | Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail).                                               |
| Skin Corr.      | Corrosive to skin.                                                                                                                                                                                                     |
| Skin Irrit.     | Irritant to skin.                                                                                                                                                                                                      |
| STOT RE         | Specific target organ toxicity - repeated exposure.                                                                                                                                                                    |
| STOT SE         | Specific target organ toxicity - single exposure.                                                                                                                                                                      |
| SVHC            | Substance of Very High Concern.                                                                                                                                                                                        |
| TRGS            | Technische Regeln für Gefahrstoffe (technical rules for hazardous substances, Germany).                                                                                                                                |
| VOC             | Volatile Organic Compounds.                                                                                                                                                                                            |
| VPvB            | Very Persistent and very Bioaccumulative.                                                                                                                                                                              |

### 16.3 Key literature references and sources for data

Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures.  
 Regulation (EC) No. 1907/2006 (REACH), amended by 2020/878/EU.  
 Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN).  
 International Maritime Dangerous Goods Code (IMDG).  
 Dangerous Goods Regulations (DGR) for the air transport (IATA).

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### 16.4 Classification procedure

Physical and chemical properties. The classification is based on tested mixture.

Health hazards. The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

### 16.5 List of relevant phrases (code and full text as stated in section 2 and 3)

|       |                                                                 |
|-------|-----------------------------------------------------------------|
| H220  | Extremely flammable gas.                                        |
| H222  | Extremely flammable aerosol.                                    |
| H225  | Highly flammable liquid and vapour.                             |
| H229  | Pressurised container: May burst if heated.                     |
| H280  | Contains gas under pressure; may explode if heated.             |
| H304  | May be fatal if swallowed and enters airways.                   |
| H315  | Causes skin irritation.                                         |
| H336  | May cause drowsiness or dizziness.                              |
| H351  | Suspected of causing cancer.                                    |
| H361f | Suspected of damaging fertility.                                |
| H372  | Causes damage to organs through prolonged or repeated exposure. |
| H400  | Very toxic to aquatic life.                                     |
| H410  | Very toxic to aquatic life with long lasting effects.           |
| H411  | Toxic to aquatic life with long lasting effects.                |
| H412  | Harmful to aquatic life with long lasting effects.              |

### Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.

**End of the safety data sheet**