Power Lube 400ml

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

1.1. Product identifier

Trade name/designation:

Power Lube 400ml

Article No.:
T221101

UFI:
78MM-S9G5-310S-8WYC

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture:
Lubricating agent

1.3. Details of the supplier of the safety data sheet

Supplier:

KANDO Service GmbH
Hartleitnerstraße 3
4653 Eberstalzell
Austria
Telephone: +43 (0) 7241 213 79
E-mail: msds@kando.eu

1.4. Emergency telephone number

Vergiftungsinformationszentrale (VIZ), Stubenring 6, 1010 Wien, 24h: 01 406 43 43, Montag - Freitag: 8 bis 16 Uhr, Tel.: 01 406 68 98 (keine medizinische Auskunft) (Only available during office hours.)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Hazard classes and hazard categories	Hazard statements	Classification procedure
aerosol dispensers and lighters *(Aerosol 1)*	H222; H229: Extremely flammable aerosol. Pressurised container: May burst if heated.	
Skin corrosion/irritation *(Skin Irrit. 2)*	H315: Causes skin irritation.	
Serious eye damage/eye irritation *(Eye Irrit. 2)*	H319: Causes serious eye irritation.	
Hazardous to the aquatic environment *(Aquatic Chronic 3)*	H412: Harmful to aquatic life with long lasting effects.	

2.2. Label elements

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

Hazard pictograms:

GHS02
Flame

GHS07
Exclamation mark

Power Lube 400ml

Signal word: Danger

Hazard statements for physical hazards	
H222	Extremely flammable aerosol.
H229	Pressurised container: May burst if heated.

Hazard statements for health hazards	
H315	Causes skin irritation.
H319	Causes serious eye irritation.

Hazard statements for environmental hazards	
H412	Harmful to aquatic life with long lasting effects.

Supplemental hazard information	
EUH208	Contains Benzenesulfonic acid, di-C10-18-alkyl derivs., calcium salts. May produce an allergic reaction.

Precautionary statements Prevention	
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.
P264	Wash hands thoroughly after handling.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing and eye protection/face protection.

Precautionary statements Response	
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313	If eye irritation persists: Get medical advice/attention.
P362 + P364	Take off contaminated clothing and wash it before reuse.

Precautionary statements Storage	
P410 + P412	Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

Precautionary statements Disposal	
P501	Dispose of contents/container to an appropriate recycling or disposal facility.

2.3. Other hazards

Other adverse effects:

This mixture does not contain substances classified as PBT or vPvB substances.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Additional information:

There are no additional ingredients present which, according to the supplier's current knowledge, are classified as harmful to health or the environment in the applicable concentrations, are PBT or vPvB substances or substances of equivalent concern, or which have an occupational exposure limit and would therefore need to be reported in this section.
The wording of the listed hazard statements can be found in section 16.

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Hazardous ingredients / Hazardous impurities / Stabilisers:

Product identifiers	Substance name Classification according to Regulation (EC) No 1272/2008 [CLP]	Concentration
CAS No.: 74-98-6 EC No.: 200-827-9 Index No.: 601-003-00-5 REACH No.: 01-2119486944-21	**propane** Flam. Gas 1A (H220), Press. Gas (Comp.) (H280) Danger **Acute Toxicity Estimate** ATE (oral) 5,840 mg/kg ATE (dermal) 13,900 mg/kg ATE (inhalation, gases) > 25 ppmV ATE (inhalation, vapour) ≥ 50 mg/L	≥ 25 – ≤ 50 %
CAS No.: 106-97-8 EC No.: 203-448-7 Index No.: 601-004-00-0 REACH No.: 01-2119474691-32	**butane** Flam. Gas 1A (H220), Press. Gas (Comp.) (H280) Danger **Acute Toxicity Estimate** ATE (oral) ≥ 5,000 mg/kg ATE (dermal) ≥ 5,000 mg/kg ATE (inhalation, gases) 658 ppmV ATE (inhalation, vapour) ≥ 50 mg/L	≥ 25 – ≤ 50 %
CAS No.: 64742-49-0 EC No.: 265-151-9 Index No.: 649-328-00-1	**Naphtha (petroleum), hydrotreated light** Aquatic Chronic 2 (H411), Asp. Tox. 1 (H304), Flam. Liq. 2 (H225), STOT SE 3 (H336), Skin Irrit. 2 (H315) Danger	≤ 14 %
CAS No.: 1305-62-0 EC No.: 215-137-3 REACH No.: 01-2119475151-45	**calcium dihydroxide** Eye Dam. 1 (H318), STOT SE 3 (H335), Skin Irrit. 2 (H315) Danger **Acute Toxicity Estimate** ATE (oral) 7,340 mg/kg	< 3 %
CAS No.: 7429-90-5 EC No.: 231-072-3 Index No.: 013-002-00-1 REACH No.: 01-2119529243-45	**Aluminium powder** Flam. Sol. 1 (H228), Water-react. 2 (H261) Danger	≤ 3 %
CAS No.: 7440-50-8 EC No.: 231-159-6 Index No.: 029-024-00-X REACH No.: 01-2119480154-42	**copper** Acute Tox. 4 (H302), Aquatic Acute 1 (H400), Aquatic Chronic 2 (H411) Warning M-factor (acute): 10 **Acute Toxicity Estimate** ATE (oral) > 2,000 mg/kg ATE (dermal) 300 – 2,500 mg/kg ATE (inhalation, gases) 5.11 ppmV ATE (inhalation, dust/mist) 5.11 mg/L	≤ 1.4 %
CAS No.: 93820-57-6 EC No.: 298-637-4	**Benzenesulfonic acid, di-C10-18-alkyl derivs., calcium salts** Skin Sens. 1 (H317) Warning	< 1 %
CAS No.: 1314-13-2 EC No.: 215-222-5 Index No.: 030-013-00-7 REACH No.: 01-2119463881-32	**zinc oxide** Aquatic Acute 1 (H400), Aquatic Chronic 1 (H410) Warning M-factor (acute): 1 M-factor (chronic): 1 **Acute Toxicity Estimate** ATE (oral) > 5,000 mg/kg ATE (dermal) > 2,000 mg/kg ATE (inhalation, gases) > 5,700 ppmV	≤ 0.87 %

Full text of H- and EUH-phrases: see section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

Following inhalation:

Immediately call Poison Control Centre or a doctor. Remove the affected person to fresh air and immobilise in a position that facilitates breathing. If vapours are still suspected, the rescuer must

wear a suitable respirator or self-contained breathing apparatus. If breathing is absent or irregular or if respiratory arrest occurs, artificial respiration or oxygen administration shall be initiated by trained personnel. It may be dangerous for the person giving first aid to give mouth-to-mouth resuscitation. If unconscious, place in the recovery position and seek immediate medical attention. Keep the airway open. Loosen tight-fitting clothing (e.g. collar, tie, belt or waistband).

In case of skin contact:

Immediately call Poison Control Centre or a doctor. Rinse contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing or wear gloves when doing so. Rinse continuously for at least 10 minutes. Chemical burns must be treated immediately by a doctor. Wash clothing before wearing again. Clean shoes thoroughly before reuse.

After eye contact:

Immediately call Poison Control Centre or a doctor. Immediately flush eyes with plenty of water and occasionally lift upper and lower eyelids. Check for contact lenses and remove if present. Rinse continuously for at least 10 minutes. Chemical burns must be treated immediately by a doctor.

Following ingestion:

Immediately call Poison Control Centre or a doctor. Rinse mouth with water. Remove dentures if present. If the substance has been swallowed and the person is conscious, give small amounts of water to drink. If nausea occurs, do not allow to continue drinking as vomiting can be dangerous. Do not induce vomiting unless specifically instructed to do so by medical personnel. If vomiting occurs, keep the head low so that the vomit does not enter the lungs. Chemical burns must be treated immediately by a doctor. Never administer anything by mouth to an unconscious person. If unconscious, place in recovery position and seek immediate medical attention. Keep airways open. Loosen tight-fitting clothing (e.g. collar, tie, belt or waistband).

Self-protection of the first aider:

No action should be taken that involves personal risk or has not been adequately trained. If it is suspected that there are still vapours are still present, the rescuer must wear a suitable respirator or self-contained breathing apparatus. It may be dangerous for the person giving first aid to perform mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it or wear gloves when doing so.

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

Following inhalation: Cough, Irritation to respiratory tract
In case of skin contact: Pain, Redness, Blistering may occur.
After eye contact: Pain, Tear flow, Redness
Following ingestion: Stomach pain

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

Treat symptomatically. In case of ingestion or inhalation of large quantities, contact the Poison Control Centre specialist immediately.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Use an extinguishing agent that is also suitable for adjacent fires.

Unsuitable extinguishing media:

None known.

5.2. Special hazards arising from the substance or mixture

Extremely flammable aerosol. There is a risk of fire and explosion if it enters the sewage system. When heated or on fire, a pressure rise occurs and the container may burst, creating an explosion hazard. Gas can accumulate in low-lying or enclosed areas or spread very far to an ignition source and cause flashback with fire or explosion. In the event of fire, bursting aerosol canisters can fly around at great speed. This material is very toxic to aquatic organisms. This material is toxic to aquatic organisms and has long-term effects. Extinguishing water contaminated with this material must be contained and must not enter water bodies, sewers or drains.

Hazardous combustion products:

Carbon dioxide, Carbon monoxide, Metal Oxides/Oxides

5.3. Advice for firefighters

In case of fire, immediately seal off the scene and evacuate all persons from the danger area. No action should be taken that involves personal risk or has not been adequately trained.

5.4. Additional information

Firefighters should wear appropriate protective clothing and self-contained breathing apparatus with full facepiece operated in positive pressure mode. Clothing for firefighters (including helmet, protective boots and protective gloves) that complies with the European Standard EN 469 gives a basic protection in case of accidents with chemicals.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Personal precautions:

No action should be taken that involves personal risk or has not been adequately trained. Evacuate the area. Deny access to non-essential and unprotected personnel. Do not touch or walk on spilled substance. Do not breathe vapour or mist. Ensure adequate ventilation. Wear respirator if ventilation is inadequate. Put on suitable personal protective equipment.

6.1.2. For emergency responders

Personal protection equipment:

If special clothing is needed to handle the spill, refer to section 8 on suitable and unsuitable materials. See also information in "Non-emergency trained personnel".

6.2. Environmental precautions

Do not allow to enter into surface water or drains. In case of spillage into water or sewage system, inform the competent authorities. Substance is water polluting. May be harmful to the environment if released in large quantities. Absorb spilled quantities.

6.3. Methods and material for containment and cleaning up

For cleaning up:

Eliminate leakage if safe to do so. Remove container from the discharge area. Dilute with water and wipe up if water soluble. Alternatively, or if insoluble in water, absorb with an inert dry material and place in a suitable waste container. Dispose of via a recognised waste disposal company.

6.4. Reference to other sections

Further information on proper storage: see section 7.
For further information on personal protective equipment: see section 8.
For further information on disposal: see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Protective measures

Advices on safe handling:

Put on suitable protective equipment (see section 8). Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not swallow. Avoid release to the environment. If the material presents a respiratory hazard in normal use, use only with adequate ventilation or wear suitable respiratory protection. Store in the original container or an approved replacement container made of a compatible material. Keep tightly closed when not in use. Empty containers contain product residues and may be hazardous. Do not reuse containers.

Advices on general occupational hygiene

The usual precautions when handling chemicals must be observed. Do not eat, drink, smoke or snort while working. Do not inhale dust/fume/mist. Keep away from food, drink and animal feed. Wash hands before breaks and at the end of work.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions:

Store according to local regulations. Store only in the original container. Protect from direct sunlight. Store only in dry, cool and well-ventilated areas. Do not store with incompatible substances (see section 10) or with food or drink. Store under lock and key. Keep containers tightly closed and sealed until use. Containers which have been opened should be carefully closed and stored upright to prevent leakage. Do not store in unlabelled containers. Use suitable containers to avoid environmental contamination. Remove all sources of ignition.

Storage class (TRGS 510, Germany): 2B – Aerosol dispensers and lighters

7.3. Specific end use(s)

Recommendation:

No data available

Industrial sector specific solutions:

No data available

SECTION 8: Exposure controls/personal protection

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8.1. Control parameters

8.1.1. Occupational exposure limit values

Limit value type (country of origin)	Substance name	① Long-term occupational exposure limit value ② Short-term occupational exposure limit value ③ Instantaneous value ④ Monitoring and observation processes ⑤ Remark
MAK (AT)	**propane** CAS No.: 74-98-6 EC No.: 200-827-9	② 2,000 ppm (3,600 mg/m³) ⑤ (max. 3x60 min./Schicht, Momentanwert)
MAK (AT)	**propane** CAS No.: 74-98-6 EC No.: 200-827-9	① 1,000 ppm (1,800 mg/m³)
MAK (AT)	**butane** CAS No.: 106-97-8 EC No.: 203-448-7	① 800 ppm (1,900 mg/m³)
MAK (AT)	**butane** CAS No.: 106-97-8 EC No.: 203-448-7	② 1,600 ppm (3,800 mg/m³) ⑤ (max. 3x60 min./Schicht, Momentanwert)
MAK (AT)	**Naphtha (petroleum), hydrotreated light** CAS No.: 64742-49-0 EC No.: 265-151-9	① 200 mL/m³ ② 400 mL/m³ ⑤ (für Kohlenwasserstoffgemische mit einem Gehalt an aromatischen Kohlenwasserstoffen von weniger als 1 %, an n-Hexan von weniger als 5 % und an Cyclo-/Isohexanen von weniger als 25 %)
MAK (AT)	**Naphtha (petroleum), hydrotreated light** CAS No.: 64742-49-0 EC No.: 265-151-9	① 170 mL/m³ ② 340 mL/m³ ⑤ (für Kohlenwasserstoffgemische mit einem Gehalt an aromatischen Kohlenwasserstoffen von weniger als 1 %, an n-Hexan von weniger als 5 % und an Cyclo-/Isohexanen von 25 % oder mehr)
MAK (AT)	**calcium dihydroxide** CAS No.: 1305-62-0 EC No.: 215-137-3	② 4 mg/m³ ⑤ (einatembare Fraktion max. 8x5 min./Schicht, Momentanwert)
IOELV (EU) from 21 Feb 2017	**calcium dihydroxide** CAS No.: 1305-62-0 EC No.: 215-137-3	① 1 mg/m³ ② 4 mg/m³ ⑤ (respirable fraction)

Limit value type (country of origin)	Substance name	① Long-term occupational exposure limit value ② Short-term occupational exposure limit value ③ Instantaneous value ④ Monitoring and observation processes ⑤ Remark
MAK (AT) from 2 Sept 2020	**calcium dihydroxide** CAS No.: 1305-62-0 EC No.: 215-137-3	① 1 mg/m³ ⑤ (einatembare Fraktion)
MAK (AT) from 11 Sept 2007	**Aluminium powder** CAS No.: 7429-90-5 EC No.: 231-072-3	① 10 mg/m³ ⑤ (einatembare Fraktion)
MAK (AT) from 11 Sept 2007	**Aluminium powder** CAS No.: 7429-90-5 EC No.: 231-072-3	② 20 mg/m³ ⑤ (einatembare Fraktion, max. 2x60 min./Schicht)
MAK (AT) from 11 Sept 2007	**Aluminium powder** CAS No.: 7429-90-5 EC No.: 231-072-3	① 5 mg/m³ ⑤ (alveolengängige Fraktion)
MAK (AT) from 11 Sept 2007	**Aluminium powder** CAS No.: 7429-90-5 EC No.: 231-072-3	② 10 mg/m³ ⑤ (alveolengängige Fraktion, max. 2x60 min./Schicht)
MAK (AT)	**copper** CAS No.: 7440-50-8 EC No.: 231-159-6	① 1 mg/m³ ② 4 mg/m³ ⑤ (einatembare Fraktion, max. 4x15 min./Schicht)
MAK (AT)	**copper** CAS No.: 7440-50-8 EC No.: 231-159-6	① 0.1 mg/m³ ② 0.4 mg/m³ ⑤ (alveolengängige Fraktion max. 4x15 min./Schicht)
MAK (AT)	**zinc oxide** CAS No.: 1314-13-2 EC No.: 215-222-5	① 5 mg/m³ ⑤ (alveolengängige Fraktion)

8.1.2. Biological limit values

No data available

8.1.3. DNEL-/PNEC-values

Substance name	DNEL value	① DNEL type ② Exposure route
Naphtha (petroleum), hydrotreated light CAS No.: 64742-49-0 EC No.: 265-151-9	1.9 mg/m³	① DNEL worker ② Long-term – inhalation, systemic effects
Naphtha (petroleum), hydrotreated light CAS No.: 64742-49-0 EC No.: 265-151-9	0.41 mg/m³	① DNEL Consumer ② Long-term – inhalation, systemic effects
Naphtha (petroleum), hydrotreated light CAS No.: 64742-49-0 EC No.: 265-151-9	1,286.4 mg/m³	① DNEL worker ② Acute - inhalation, systemic effects
Naphtha (petroleum), hydrotreated light CAS No.: 64742-49-0 EC No.: 265-151-9	1,152 mg/m³	① DNEL Consumer ② Acute - inhalation, systemic effects
Naphtha (petroleum), hydrotreated light CAS No.: 64742-49-0 EC No.: 265-151-9	837.5 mg/m³	① DNEL worker ② Long-term – inhalation, local effects

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Substance name	DNEL value	① DNEL type ② Exposure route
Naphtha (petroleum), hydrotreated light CAS No.: 64742-49-0 EC No.: 265-151-9	178.57 mg/m³	① DNEL Consumer ② Long-term – inhalation, local effects
Naphtha (petroleum), hydrotreated light CAS No.: 64742-49-0 EC No.: 265-151-9	1,066.67 mg/m³	① DNEL worker ② Acute - inhalation, local effects
Naphtha (petroleum), hydrotreated light CAS No.: 64742-49-0 EC No.: 265-151-9	640 mg/m³	① DNEL Consumer ② Acute - inhalation, local effects
Naphtha (petroleum), hydrotreated light CAS No.: 64742-49-0 EC No.: 265-151-9	25.9 mg/kg bw/day	① DNEL worker ② Long-term - dermal, systemic effects
Naphtha (petroleum), hydrotreated light CAS No.: 64742-49-0 EC No.: 265-151-9	149 mg/kg bw/day	① DNEL Consumer ② Long-term - dermal, systemic effects
Naphtha (petroleum), hydrotreated light CAS No.: 64742-49-0 EC No.: 265-151-9	149 mg/kg bw/day	① DNEL Consumer ② Long-term - oral, systemic effects
calcium dihydroxide CAS No.: 1305-62-0 EC No.: 215-137-3	1 mg/m³	① DNEL worker ② Long-term – inhalation, systemic effects
calcium dihydroxide CAS No.: 1305-62-0 EC No.: 215-137-3	4 mg/m³	① DNEL worker ② Acute - inhalation, systemic effects
calcium dihydroxide CAS No.: 1305-62-0 EC No.: 215-137-3	1 mg/m³	① DNEL worker ② Long-term – inhalation, local effects
calcium dihydroxide CAS No.: 1305-62-0 EC No.: 215-137-3	1 mg/m³	① DNEL Consumer ② Long-term – inhalation, local effects
calcium dihydroxide CAS No.: 1305-62-0 EC No.: 215-137-3	4 mg/m³	① DNEL worker ② Acute - inhalation, local effects
calcium dihydroxide CAS No.: 1305-62-0 EC No.: 215-137-3	4 mg/m³	① DNEL Consumer ② Acute - inhalation, local effects
copper CAS No.: 7440-50-8 EC No.: 231-159-6	20 mg/m³	① DNEL worker ② Acute - inhalation, systemic effects
copper CAS No.: 7440-50-8 EC No.: 231-159-6	20 mg/m³	① DNEL Consumer ② Acute - inhalation, systemic effects
copper CAS No.: 7440-50-8 EC No.: 231-159-6	1 mg/m³	① DNEL Consumer ② Long-term – inhalation, local effects
copper CAS No.: 7440-50-8 EC No.: 231-159-6	1 mg/m³	① DNEL Consumer ② Acute - inhalation, local effects
copper CAS No.: 7440-50-8 EC No.: 231-159-6	137 mg/kg bw/day	① DNEL worker ② Long-term - dermal, systemic effects

Substance name	DNEL value	① DNEL type ② Exposure route
copper CAS No.: 7440-50-8 EC No.: 231-159-6	137 mg/kg bw/day	① DNEL Consumer ② Long-term - dermal, systemic effects
copper CAS No.: 7440-50-8 EC No.: 231-159-6	273 mg/kg bw/day	① DNEL worker ② Acute – dermal, systemic effects
copper CAS No.: 7440-50-8 EC No.: 231-159-6	273 mg/kg bw/day	① DNEL Consumer ② Acute – dermal, systemic effects
copper CAS No.: 7440-50-8 EC No.: 231-159-6	0.041 mg/kg bw/day	① DNEL Consumer ② Long-term - oral, systemic effects
zinc oxide CAS No.: 1314-13-2 EC No.: 215-222-5	5 mg/m³	① DNEL worker ② Long-term – inhalation, systemic effects
zinc oxide CAS No.: 1314-13-2 EC No.: 215-222-5	2.5 mg/m³	① DNEL Consumer ② Long-term – inhalation, systemic effects
zinc oxide CAS No.: 1314-13-2 EC No.: 215-222-5	0.5 mg/m³	① DNEL worker ② Long-term – inhalation, local effects
zinc oxide CAS No.: 1314-13-2 EC No.: 215-222-5	83 mg/kg bw/day	① DNEL worker ② Long-term - dermal, systemic effects
zinc oxide CAS No.: 1314-13-2 EC No.: 215-222-5	83 mg/kg bw/day	① DNEL Consumer ② Long-term - dermal, systemic effects
zinc oxide CAS No.: 1314-13-2 EC No.: 215-222-5	0.83 mg/kg bw/day	① DNEL Consumer ② Long-term - oral, systemic effects

Substance name	PNEC Value	① PNEC type
zinc oxide CAS No.: 1314-13-2 EC No.: 215-222-5	6.1 mg/L	① PNEC aquatic, marine water
zinc oxide CAS No.: 1314-13-2 EC No.: 215-222-5	52 mg/L	① PNEC sewage treatment plant
zinc oxide CAS No.: 1314-13-2 EC No.: 215-222-5	117 mg/L	① PNEC sediment, freshwater
zinc oxide CAS No.: 1314-13-2 EC No.: 215-222-5	56.5 mg/L	① PNEC sediment, marine water
zinc oxide CAS No.: 1314-13-2 EC No.: 215-222-5	35.6 mg/kg	① PNEC soil

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Ensure good ventilation/extraction at the workplace. If the work generates dust, fumes, gas, vapours or mists, use process chambers, local exhaust ventilation systems or other technical devices to keep worker exposure below recommended or legally required limits. The technical equipment must also keep the gas, vapour or dust concentrations below any lower explosion limits. Use explosion-proof ventilation equipment.

8.2.2. Personal protection equipment

Eye/face protection:

If the risk assessment so requires, protective goggles complying with a recognised standard should be worn to prevent exposure to liquid splashes, mists, gases or dusts. If contact is possible then the following protective equipment must be worn unless the assessment requires a higher level of protection: chemical splash goggles and/or face shield. In the case of inhalation hazards, a full face respirator may be required instead.

Skin protection:

Hand protection:
When handling chemical products, chemical-resistant, impervious gloves complying with a recognised standard must always be worn if a risk assessment so requires. Taking into account the parameters specified by the glove manufacturer, it must be checked during use that the gloves still ensure their protective properties. It should be noted that the breakthrough time for glove material may vary for different glove manufacturers. Recommended : 1-4 hours (penetration time): Nitrile rubber ; 4-8 hours (penetration time): Viton®/Butyl rubber
Body protection:
Before handling this product, personal protective equipment should be selected based on the task to be performed and the risks involved, and approved by a specialist. Antistatic protective clothing must be worn if there is a risk of ignition from static electricity. For maximum protection against static discharges, clothing should include antistatic coveralls, boots and gloves. See European Standard DIN EN 1149 for more information on the material and design considerations and test procedures.
Non-slip work footwear

Respiratory protection:

Based on the hazard and risk of exposure, select the respirator that meets the appropriate standards and has the appropriate certifications. Respirators must be used in accordance with the respiratory protection programme to ensure proper fit, adequate training and other important aspects of use. Recommended: Filters against organic vapours (type AX) and particles.

Other protection measures:

General protective and hygienic measures:
The usual precautions when handling chemicals must be observed. Do not eat, drink, smoke or snort while working. Do not inhale dust/fume/mist. Keep away from food, drink and animal feed. Wash hands before breaks and at the end of work.

8.2.3. Environmental exposure controls

Emissions from ventilation and process equipment should be checked to ensure that they meet the requirements of environmental legislation. In some cases, exhaust air scrubbers, filters or engineering changes to process equipment will be required to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

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9.1. Information on basic physical and chemical properties

Appearance

Form: Aerosol
Colour: grey
Odour: Benzene
flammability: No data available

Safety relevant basis data

Parameter	Value	at °C	① Method ② Remark
pH	*not applicable*		
Initial boiling point and boiling range	*No data available*		
Flash point	*not applicable*		
Evaporation rate	*No data available*		
Upper/lower flammability or explosive limits	0.6 %		
Vapour pressure	350 kPa		
Density	0.72 g/cm³	20 °C	
Water solubility	*not applicable*		② Immiscible

9.2. Other information
No data available

SECTION 10: Stability and reactivity

10.1. Reactivity
No further relevant information available.

10.2. Chemical stability
Stable under normal conditions.

10.3. Possibility of hazardous reactions
Remove all sources of ignition.

10.4. Conditions to avoid
No further relevant information available.

10.5. Incompatible materials
No further relevant information available.

10.6. Hazardous decomposition products
No dangerous decomposition products known.

SECTION 11: Toxicological information

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

calcium dihydroxide CAS No.: 1305-62-0 EC No.: 215-137-3
LD_{50} oral: 7,340 mg/kg (Ratte)
copper CAS No.: 7440-50-8 EC No.: 231-159-6
LD_{50} oral: >2,000 mg/kg (Rat)
LD_{50} dermal: 300 – 2,500 mg/kg (Rat)
LC_{50} Acute inhalation toxicity (gas): 5.11 ppmV 4 h (Rat)
LC_{50} Acute inhalation toxicity (dust/mist): 5.11 mg/L (Rat)
zinc oxide CAS No.: 1314-13-2 EC No.: 215-222-5
LD_{50} oral: >5,000 mg/kg (Rat)
LD_{50} dermal: >2,000 mg/kg (Rat)
LC_{50} Acute inhalation toxicity (gas): >5,700 ppmV 4 h (Rat)
propane CAS No.: 74-98-6 EC No.: 200-827-9
LD_{50} oral: 5,840 mg/kg (Rat)
LD_{50} dermal: 13,900 mg/kg (Rabbit)
LC_{50} Acute inhalation toxicity (gas): >25 ppmV 4 h (Rat)
LC_{50} Acute inhalation toxicity (vapour): ≥50 mg/L 4 h (Rat)
butane CAS No.: 106-97-8 EC No.: 203-448-7
LD_{50} oral: ≥5,000 mg/kg (Rat)
LD_{50} dermal: ≥5,000 mg/kg (Rabbit)
LC_{50} Acute inhalation toxicity (gas): 658 ppmV 4 h (Rat)
LC_{50} Acute inhalation toxicity (vapour): ≥50 mg/L 4 h (Rat)

Acute oral toxicity:
ATE (oral): 42380.95 mg/kg

Acute dermal toxicity:
Based on available data, the classification criteria are not met.

Acute inhalation toxicity:
Based on available data, the classification criteria are not met.

Skin corrosion/irritation:
Based on available data, the classification criteria are not met.

Serious eye damage/irritation:
Causes serious eye damage.

Respiratory or skin sensitisation:
Based on available data, the classification criteria are not met.

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:
Irritation to respiratory tract, Narcotic effects

STOT-repeated exposure:
Based on available data, the classification criteria are not met.

Aspiration hazard:
Naphta (Erdöl), mit Wasserstoff behandelt, leicht

Additional information:
No data available

11.2. Information on other hazards
No data available

SECTION 12: Ecological information

12.1. Toxicity

calcium dihydroxide CAS No.: 1305-62-0 EC No.: 215-137-3
LC_{50}: 33.8844 mg/L 4 d (fish, Clarias gariepinus)
copper CAS No.: 7440-50-8 EC No.: 231-159-6
LC_{50}: 0.000072 mg/L 2 d (crustaceans, Krustazeen)
LC_{50}: 0.000072 mg/L 2 d (crustaceans, Krustazeen, Adultus)
LC_{50}: 0.000072 mg/L 2 d (crustaceans, Amphipoda)
EC_{50}: 0.0021 mg/L 2 d (crustaceans, Daphnia)
NOEC: 0.0008 mg/L (fish, Oreochromis niloticus)
NOEC: 0.0008 mg/L (crustaceans, Krustazeen)
IC_{50}: 0.016 mg/L 3 d (Algae/water plant, Chlorella pyrenoidosa)
IC_{50}: 0.016 mg/L 3 d (Algae/water plant, Chlorella pyrenoidosa)
zinc oxide CAS No.: 1314-13-2 EC No.: 215-222-5
LC_{50}: 1.1 – 2.5 mg/L 4 d (fish, Oncorhynchus mykiss)
IC_{50}: 1.85 mg/L 4 d (Algae/water plant, Skeletonema costatum)
LC_{50}: 3.31 – 8.062 mg/L 4 d (fish, Brachydanio rerio)
LC_{50}: >320 mg/L 4 d (fish, Lepomis macrochirus)
EC_{50}: 1 mg/L 2 d (crustaceans, Daphnia magna) OECD 202
EC_{50}: 0.412 – 0.83 mg/L 2 d (crustaceans, Ceriodaphnia spec.) U.S. EPA ECOTOX Database

propane CAS No.: 74-98-6 EC No.: 200-827-9
LC_{50}: 9,640 mg/L 4 d (fish, Pimephales promelas)
LC_{50}: 0.41 mg/L 4 d (fish, Oncorhynchus mykiss)
LC_{50}: 49.9 mg/L 4 d (fish) The Ecosar class program has been develo
EC_{50}: >100 mg/L (Algae/water plant, Bacteria)
EC_{50}: 0.17 mg/L 3 d (Algae/water plant, Selenastrum capricornutum)
EC_{50}: 69.43 mg/L 2 d (crustaceans, Daphnia) Calculation using ECOSAR Program v1.00.
NOEC: 0.017 mg/L 3 d (Algae/water plant, Pseudokirchneriella subcapitata)
ErC_{50}: 19.37 mg/L 4 d (Algae/water plant, Algae) Calculation using ECOSAR Program v1.00.
LOEC: 1,000 mg/L (Algae/water plant, Algae)
LOEC: 1,000 mg/L (Algae/water plant, Alge)
butane CAS No.: 106-97-8 EC No.: 203-448-7
LC_{50}: 49.9 mg/L 4 d (fish) The Ecosar class program has been develo
EC_{50}: 69.43 mg/L 2 d (crustaceans, Daphnia sp.) Calculation using ECOSAR Program v1.00
ErC_{50}: 19.37 mg/L 4 d (Algae/water plant, Algae) Calculation using ECOSAR Program v1.00

12.2. Persistence and degradability

propane CAS No.: 74-98-6 EC No.: 200-827-9
Biodegradation: Yes, rapidly
butane CAS No.: 106-97-8 EC No.: 203-448-7
Biodegradation: Yes, rapidly

Additional information:
No further relevant information available.

12.3. Bioaccumulative potential

zinc oxide CAS No.: 1314-13-2 EC No.: 215-222-5
Log K_{OW}: 2.2
Bioconcentration factor (BCF): 28,960
propane CAS No.: 74-98-6 EC No.: 200-827-9
Log K_{OW}: 1.09
butane CAS No.: 106-97-8 EC No.: 203-448-7
Log K_{OW}: 1.09

12.4. Mobility in soil
No further relevant information available.

12.5. Results of PBT and vPvB assessment

calcium dihydroxide CAS No.: 1305-62-0 EC No.: 215-137-3
Results of PBT and vPvB assessment: —
copper CAS No.: 7440-50-8 EC No.: 231-159-6
Results of PBT and vPvB assessment: —
Aluminium powder CAS No.: 7429-90-5 EC No.: 231-072-3
Results of PBT and vPvB assessment: —
zinc oxide CAS No.: 1314-13-2 EC No.: 215-222-5
Results of PBT and vPvB assessment: —
Benzenesulfonic acid, di-C10-18-alkyl derivs., calcium salts CAS No.: 93820-57-6 EC No.: 298-637-4
Results of PBT and vPvB assessment: —
propane CAS No.: 74-98-6 EC No.: 200-827-9
Results of PBT and vPvB assessment: —
butane CAS No.: 106-97-8 EC No.: 203-448-7
Results of PBT and vPvB assessment: —

Naphtha (petroleum), hydrotreated light CAS No.: 64742-49-0 EC No.: 265-151-9
Results of PBT and vPvB assessment: —

This mixture does not contain substances classified as PBT or vPvB substances.

12.6. Endocrine disrupting properties
No further relevant information available.

12.7. Other adverse effects
None known

SECTION 13: Disposal considerations

13.1. Waste treatment methods

13.1.1. Product/Packaging disposal

Waste codes/waste designations according to EWC/AVV

Waste code product

16 05 04 *	Gases in pressure containers (including halons) containing hazardous substances

**: Evidence for disposal must be provided.*

Waste code packaging

15 01 04	metallic packaging

Waste treatment options

Appropriate disposal / Product:
Waste generation should be avoided or minimised wherever possible. Disposal of this product and its solutions and by-products must at all times be carried out in compliance with environmental protection requirements and waste disposal legislation and the requirements of local authorities. be carried out. Dispose of surpluses and products not suitable for recycling via a recognised waste disposal company. Do not discharge waste untreated into the sewerage system unless all applicable regulations of the authorities are complied with.

Appropriate disposal / Package:
Waste generation should be avoided or minimised where possible. Packaging waste should be recycled. Incineration or landfilling should only be considered if recycling is not feasible.

Other disposal recommendations:
Waste and containers must be disposed of in a safe manner. Take care when handling empty containers that have not been cleaned or rinsed out. Empty dispersal and run-off of released material and contact with soil, water bodies, drains and sewers.

SECTION 14: Transport information

Land transport (ADR/RID)	Inland waterway craft (ADN)	Sea transport (IMDG)	Air transport (ICAO-TI / IATA-DGR)
14.1. UN number or ID number			
UN 1950	UN 1950	UN 1950	UN 1950
14.2. UN proper shipping name			
AEROSOLS	AEROSOLS	AEROSOLS	AEROSOLS, FLAMMABLE
14.3. Transport hazard class(es)			
 2.1	 2.1	 2.1	 2.1
14.4. Packing group			
		-	
14.5. Environmental hazards			
No	No	No	No

Land transport (ADR/RID)	Inland waterway craft (ADN)	Sea transport (IMDG)	Air transport (ICAO-TI / IATA-DGR)
14.6. Special precautions for user			
Special Provisions: 190 | 327 | 344 | 625 **Limited quantity (LQ):** 1 L **Excepted Quantities (EQ):** E0 **Classification code:** 5F **Tunnel restriction code:** (D) **Remark:** Transport on the factory premises: only transport in closed containers that are upright and firm. Persons transporting the product must be instructed in the correct behaviour in case of accidents, leakage or spillage.	**Special Provisions:** 190 | 327 | 344 | 625 **Limited quantity (LQ):** 1 L **Excepted Quantities (EQ):** E0 **Classification code:** 5F **Remark:** Transport on the factory premises: only transport in closed containers that are upright and firm. Persons transporting the product must be instructed in the correct behaviour in case of accidents, leakage or spillage.	**Special Provisions:** 63 | 190 | 277 | 327 | 344 | 381 | 959 **Limited quantity (LQ):** Siehe SV277 **Excepted Quantities (EQ):** E0 **EmS-No.:** F-D, S-U **Remark:** Transport on the factory premises: only transport in closed containers that are upright and firm. Persons transporting the product must be instructed in the correct behaviour in case of accidents, leakage or spillage.	**Special Provisions:** A145 | A167 | A802 **Limited quantity (LQ):** Y203 **Excepted Quantities (EQ):** E0 **Remark:** Quantity limit: Passenger and Cargo Aircraft: 75 kg. Packing Instructions: 203. Cargo Aircraft Only: 150 kg. Packing Instructions: 203. Limited Quantities - Passenger Aircraft: 30 kg. Packing Instructions: Y203. Transport on the factory premises: only transport in closed containers that are upright and firm. Persons transporting the product must be instructed in the correct behaviour in case of accidents, leakage or spillage.

14.7. Maritime transport in bulk according to IMO instruments
No data available

SECTION 15: Regulatory information

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

15.1.1. EU legislation

Authorisations:
Regulation (EC) No 1907/2006 ANNEX XVII
Annex XIV - List of substances subject to authorisation: None of the ingredients are included.
Ozone depleting substances (1005/2009/EU): Not listed.
Prior Informed Consent (PIC) (649/2012/EU): Not listed.
Restrictions on the production, placing on the market and use of persistent organic pollutants: Not listed.

Other regulations (EU):
Hazard categories:
• P3a 'Flammable' aerosols Category 1 or 2, containing flammable gases Category 1 or 2 or flammable liquids

Named dangerous substances:
• Liquefied flammable gases, Category 1 or 2 (including liquefied petroleum gas) and natural gas

15.1.2. National regulations
No data available

15.2. Chemical Safety Assessment
No data available

SECTION 16: Other information

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16.1. Indication of changes

8.1.	Control parameters
9.1.	Information on basic physical and chemical properties

16.1.	Indication of changes
16.2.	Abbreviations and acronyms

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16.2. Abbreviations and acronyms

ACGIH	American Conference of Governmental Industrial Hygienists
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
BCF	Bioconcentration Factor
CAS	Chemical Abstracts Service
CLP	Classification, Labelling and Packaging
DIN	German Institute for Standardization / German Industrial Standard
DNEL	derived no-effect level
EC_{50}	Effective Concentration 50%
EN	European Standard
ES	Exposure scenario
EWC	European Waste Catalogue
IC_{50}	Inhibition Concentration 50 %
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods
IMO	International Maritime Organization
ISO	International Standards Organisation
KG	body weight
LC_{50}	Lethal (fatal) Concentration 50%
LD_{50}	Lethal (fatal) Dose 50%
MAK	Maximum concentration in the workplace air (CH)
NFPA	National Fire Protection Association
NIOSH	National Institute for Occupational Safety & Health
NOEC	No Observed Effect Concentration
OECD	Organisation for Economic Cooperation and Development
OSHA	Occupational Safety & Health Administration
PBT	persistent and bioaccumulative and toxic
PNEC	Predicted No Effect Concentration
REACH	Registration, Evaluation and Authorization of Chemicals
RID	Dangerous goods regulations for transport by rail
TRGS	Technische Regeln für Gefahrstoffe
UN	United Nations

16.3. Key literature references and sources for data

No data available

16.4. Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP]

Hazard classes and hazard categories	Hazard statements	Classification procedure
aerosol dispensers and lighters *(Aerosol 1)*	H222; H229: Extremely flammable aerosol. Pressurised container: May burst if heated.	
Skin corrosion/irritation *(Skin Irrit. 2)*	H315: Causes skin irritation.	
Serious eye damage/eye irritation *(Eye Irrit. 2)*	H319: Causes serious eye irritation.	
Hazardous to the aquatic environment *(Aquatic Chronic 3)*	H412: Harmful to aquatic life with long lasting effects.	

16.5. List of relevant hazard statements and/or precautionary statements from sections 2 to 15

Hazard statements	
H220	Extremely flammable gas.
H225	Highly flammable liquid and vapour.

Hazard statements	
H228	Flammable solid.
H261	In contact with water releases flammable gases.
H280	Contains gas under pressure; may explode if heated.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
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.

16.6. Training advice
No data available

16.7. Additional information
To the best of our knowledge, the information contained herein is accurate. However, neither the above-mentioned supplier nor its subsidiaries assume any liability with regard to the correctness or completeness of the information provided. A final determination of the suitability of individual materials is the sole responsibility of the user. All materials may involve unknown risks and should be used with caution. While certain risks are described herein, we cannot guarantee that these are the only possible risks.

* Data changed compared with the previous version.