

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878 Issue date: 12/13/2022 Revision date: 12/13/2022 Supersedes version of: 4/11/2017

Version: 3.0

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

1.1. Product identifier

Product form Name UFI Product code Vaporizer Mixture Cleaning Spray 500 ml ECGP-VYCT-D43P-WJXD BU Direct Fastening Aerosol

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

1.2.1. Relevant identified uses

Industrial/Professional use spec

For professional use only

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

| Supplier |
|-----------------------------------------|
| Hilti (Schweiz) AG |
| Soodstrasse 61 |
| CH– 8134 Adliswil |
| Schweiz |
| T +41 844 84 84 85 - F +41 844 84 84 86 |
| info@hilti.ch |

Department issuing data specification sheet Hilti Entwicklungsgesellschaft mbH Hiltistrasse 6 DE– 86916 Kaufering Deutschland T +49 8191 906310 - F +49 8191 90176310 df-hse@hilti.com

1.4. Emergency telephone number

Emergency number

Schweizerisches Toxikologisches Informationszentrum – 24h Service +41 44 251 51 51 (international)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

| Classification according to Regulation (EC) No. 1272/2008 [CLP] | |
|------------------------------------------------------------------------|-----------|
| Aerosol, Category 1 | H222;H229 |
| Skin corrosion/irritation, Category 2 | H315 |
| Specific target organ toxicity – Single exposure, Category 3, Narcosis | H336 |
| Hazardous to the aquatic environment – Chronic Hazard, Category 2 | H411 |
| Full text of H- and EUH-statements: see section 16 | |

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

| Labelling according to Regulation (EC) No. 1272/2 | 008 [CLP] |
|---------------------------------------------------|--------------------------------------------------------------------|
| Hazard pictograms (CLP) | |
| | |
| | GHS02 GHS07 GHS09 |
| Signal word (CLP) | Danger |
| Contains | hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, < 5% n-hexane |
| Hazard statements (CLP) | H222 - Extremely flammable aerosol. |
| | H229 - Pressurised container: May burst if heated. |
| | H315 - Causes skin irritation. |



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| | H336 - May cause drowsiness or dizziness. |
|--------------------------------|-------------------------------------------------------------------------------------------|
| | H411 - Toxic to aquatic life with long lasting effects. |
| Precautionary statements (CLP) | P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. |
| | No smoking. |
| | P251 - Do not pierce or burn, even after use. |
| | P261 - Avoid breathing dust/fume/gas/mist/vapours/spray. |
| | P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove |
| | contact lenses, if present and easy to do. Continue rinsing. |
| Extra phrases | For professional users only. |
| | |

2.3. Other hazards

Contains no PBT/vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

| Component | |
|--------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, < 5% n-hexane | This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII |
| propane (74-98-6) | This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII |
| Butane (106-97-8) | This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII |
| isobutane (75-28-5) | This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII |
| Carbon dioxide (124-38-9) | This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII |

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

| Component | |
|--------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, < 5% n-hexane | The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 |
| propane(74-98-6) | The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 |
| Butane(106-97-8) | The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 |
| isobutane(75-28-5) | The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 |
| Carbon dioxide(124-38-9) | The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 |



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SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable **3.2. Mixtures**

| Name | Product identifier | % | Classification according to Regulation (EC) No. 1272/2008 [CLP] |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|-----------|--------------------------------------------------------------------------------------------------------------|
| hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, < 5% n-hexane | EC-No.: 921-024-6 REACH-no: 01-2119475514- 35 | 50 – 75 | Flam. Liq. 2, H225 Skin Irrit. 2, H315 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411 |
| propane substance with national workplace exposure limit(s) (CH) | CAS-No.: 74-98-6 EC-No.: 200-827-9 EC Index-No.: 601-003-00-5 REACH-no: 01-2119486944- 21 | 10 – 12.5 | Flam. Gas 1A, H220 Press. Gas (Liq.), H280 |
| Butane substance with national workplace exposure limit(s) (CH) | CAS-No.: 106-97-8 EC-No.: 203-448-7 EC Index-No.: 601-004-00-0 REACH-no: 01-2119474691- 32 | 5 – 10 | Flam. Gas 1A, H220 Press. Gas (Liq.), H280 |
| isobutane substance with national workplace exposure limit(s) (CH) | CAS-No.: 75-28-5 EC-No.: 200-857-2 EC Index-No.: 601-004-00-0 REACH-no: 01-2119485395- 27 | 5 – 10 | Flam. Gas 1A, H220 Press. Gas (Comp.), H280 |
| Carbon dioxide (Propellant gas (Aerosol)) substance with national workplace exposure limit(s) (CH); substance with a Community workplace exposure limit | CAS-No.: 124-38-9 EC-No.: 204-696-9 | < 2.5 | Press. Gas (Liq.), H280 |

Product subject to CLP Article 1.1.3.7. The disclosure rules of the components is modified in this case. Full text of H- and EUH-statements: see section 16

SECTION 4: First aid measures

| 4.1. Description of first aid measures | |
|----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| First-aid measures general | Take off immediately all contaminated clothing. Call a poison center or a doctor if you feel unwell. |
| First-aid measures after inhalation | Remove person to fresh air and keep comfortable for breathing. |
| First-aid measures after skin contact | Gently wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention. |
| First-aid measures after eye contact | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical advice/attention. |
| First-aid measures after ingestion | Get immediate medical advice/attention. |
| 4.2. Most important symptoms and eff | fects, both acute and delayed |
| Symptoms/effects after inhalation | Shortness of breath. |

Symptoms/effects after skin contact

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

Irritation.

Treat symptomatically.



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| SECTION 5: Firefighting measures | |
|--------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| 5.1. Extinguishing media | |
| Suitable extinguishing media | Water spray. Carbon dioxide. Dry powder. Foam. Sand. |
| Unsuitable extinguishing media | Do not use a heavy water stream. |
| 5.2. Special hazards arising from the substa | nce or mixture |
| Fire hazard | Extremely flammable aerosol. |
| Explosion hazard | Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries. |
| Hazardous decomposition products in case of fire | Formation of toxic gases is possible during heating or in case of fire. Thermal decomposition generates : Carbon dioxide. Carbon monoxide. |
| 5.3. Advice for firefighters | |
| Precautionary measures fire | Fight fire remotely due to the risk of explosion. |
| Firefighting instructions | DO NOT fight fire when fire reaches explosives. Evacuate area. |
| Protection during firefighting | Do not enter fire area without proper protective equipment, including respiratory protection. |

SECTION 6: Accidental release measures

| 6.1. Personal precautions, protective equipment and emergency procedures | | |
|--------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|--|
| General measures | Evacuate area. No flames, no sparks. Eliminate all sources of ignition. | |
| 6.1.1. For non-emergency personnel Emergency procedures | Ventilate spillage area. Avoid breathing spray, vapours. Evacuate unnecessary personnel. | |
| 6.1.2. For emergency responders | | |
| Protective equipment | Do not attempt to take action without suitable protective equipment. Breathing apparatus. | |
| Emergency procedures | Ventilate area. | |
| 6.2 Environmental processions | | |

6.2. Environmental precautions

Avoid release to the environment. Prevent entry to sewers and public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up

Do not flush with water.

6.4. Reference to other sections

For further information refer to section 13. For further information refer to section 8: "Exposure controls/personal protection".

| SECTION 7: Handling and storage | | |
|--------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| 7.1. Precautions for safe handling | | |
| Additional hazards when processed | Hazardous waste due to potential risk of explosion. Do not pierce or burn, even after use. | |
| Precautions for safe handling | Do not eat, drink or smoke when using this product. Do not breathe vapours. Avoid contact with skin, eyes and clothing. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. | |
| Hygiene measures | Do not eat, drink or smoke when using this product. Always wash hands after handling the product. | |
| 7.2. Conditions for safe storage, including any incompatibilities | | |
| ······································ | any incompatibilities | |
| Technical measures | Proper grounding procedures to avoid static electricity should be followed. | |
| | | |
| Technical measures | Proper grounding procedures to avoid static electricity should be followed. Keep cool. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122 °F. | |
| Technical measures Storage conditions | Proper grounding procedures to avoid static electricity should be followed. Keep cool. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122 °F. Keep in fireproof place. | |
| Technical measures Storage conditions Incompatible materials | Proper grounding procedures to avoid static electricity should be followed. Keep cool. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122 °F. Keep in fireproof place. Heat sources. Direct sunlight. | |



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7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1. National occupational exposure and biological limit values

| propane (74-98-6) | | |
|--------------------------------------------|---------------------------------------------------|--|
| Switzerland - Occupational Exposure Limits | | |
| Local name | Propane / Propan | |
| MAK (OEL TWA) [1] | 1800 mg/m ³ | |
| MAK (OEL TWA) [2] | 1000 ppm | |
| KZGW (OEL STEL) | 7200 mg/m ³ | |
| KZGW (OEL STEL) [ppm] | 4000 ppm | |
| Critical toxicity | Formel / Formal | |
| Remark | NIOSH | |
| Regulatory reference | www.suva.ch, 28.03.2022 | |
| Butane (106-97-8) | | |
| Switzerland - Occupational Exposure Limits | | |
| Local name | n-Butane / n-Butan | |
| MAK (OEL TWA) [1] | 1900 mg/m ³ | |
| MAK (OEL TWA) [2] | 800 ppm | |
| KZGW (OEL STEL) | 7600 mg/m ³ | |
| KZGW (OEL STEL) [ppm] | 3200 ppm | |
| Critical toxicity | SNC / ZNS | |
| Regulatory reference | www.suva.ch, 28.03.2022 | |
| isobutane (75-28-5) | | |
| Switzerland - Occupational Exposure Limits | | |
| Local name | iso-Butane / iso-Butan | |
| MAK (OEL TWA) [1] | 1900 mg/m ³ | |
| MAK (OEL TWA) [2] | 800 ppm | |
| KZGW (OEL STEL) | 7600 mg/m ³ | |
| KZGW (OEL STEL) [ppm] | 3200 ppm | |
| Critical toxicity | SNC / ZNS | |
| Regulatory reference | www.suva.ch, 28.03.2022 | |
| Carbon dioxide (124-38-9) | | |
| Switzerland - Occupational Exposure Limits | | |
| Local name | Gaz carbonique / Kohlendioxid [Kohlenstoffdioxid] | |
| MAK (OEL TWA) [1] | 9000 mg/m ³ | |
| 12/12/2022 (Version: 2.0) | | |



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| Carbon dioxide (124-38-9) | | |
|----------------------------|-------------------------|--|
| MAK (OEL TWA) [2] 5000 ppm | | |
| Critical toxicity | Asphyxie / Asphyxie | |
| Remark | NIOSH | |
| Regulatory reference | www.suva.ch, 28.03.2022 | |

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

| hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, < 5% n-hexane | | |
|--------------------------------------------------------------------|--|--|
| DNEL/DMEL (Workers) | | |
| Long-term - systemic effects, dermal 773 mg/kg bodyweight/day | | |
| Long-term - systemic effects, inhalation 2035 mg/m ³ | | |
| DNEL/DMEL (General population) | | |
| Long-term - systemic effects,oral 699 mg/kg bodyweight/day | | |
| Long-term - systemic effects, inhalation 608 mg/m ³ | | |
| Long-term - systemic effects, dermal 699 mg/kg bodyweight/day | | |

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

8.2.2. Personal protection equipment

Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

Eye protection: Chemical goggles or safety glasses. EN 166. EN 170

8.2.2.2. Skin protection

Hand protection:

In case of repeated or prolonged contact wear gloves



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| Hand protection | | | | | |
|-------------------|----------------------|-------------------|----------------|----------------------------------------|------------|
| Туре | Material | Permeation | Thickness (mm) | Penetration | Standard |
| Disposable gloves | Nitrile rubber (NBR) | 6 (> 480 minutes) | 0,4 | No supplementary information available | EN ISO 374 |

8.2.2.3. Respiratory protection

Respiratory protection:

No respiratory protection needed under normal use conditions. In case of insufficient ventilation, wear suitable respiratory equipment

| Respiratory protection | | | | |
|---------------------------------------|-------|----------------------------------|--------|--|
| Device Filter type Condition Standard | | | | |
| Breathing apparatus with filter | A2/P3 | If conc. in air > exposure limit | EN 143 | |

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

No additional information available

No additional information available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| Physical state | Liquid |
|-------------------------------------------------|----------------------------------------------------------------------------|
| Colour | clear. |
| Appearance | Aerosol. |
| Odour | solvent-like. |
| Odour threshold | Not available |
| Melting point | Not determined |
| Freezing point | Not available |
| Boiling point | Not available |
| Flammability | Extremely flammable aerosol. |
| Explosive properties | Product is not explosive. May form flammable/explosive vapour-air mixture. |
| Lower explosion limit | 0.6 vol % |
| Upper explosion limit | 10.9 vol % |
| Flash point | -12 °C (major component) |
| Auto-ignition temperature | > 200 °C (major component) |
| Decomposition temperature | Not determined |
| рН | Not determined |
| Viscosity, kinematic | Not available |
| Viscosity, dynamic | Not determined |
| Solubility | Practically not miscible. |
| Partition coefficient n-octanol/water (Log Kow) | Not available |
| Partition coefficient n-octanol/water (Log Pow) | Not determined |
| Vapour pressure | 5500 hPa (20°C) |
| Vapour pressure at 50°C | Not available |
| Density | 0.7 g/cm³ (20°C) |
| Relative density | Not determined |
| Relative vapour density at 20°C | Not available |
| Particle characteristics | Not applicable |
| | |



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| 9.2. Other information | | |
|----------------------------------------|---------------------|--|
| 9.2.1. Information with regard to phys | ical hazard classes | |
| % of flammable ingredients | : > 80 % | |
| 9.2.2. Other safety characteristics | | |
| VOC content | 663 g/l (97,90 %) | |

| SECTION 10: Stabilit | y and reactivity |
|-----------------------------|------------------|
|-----------------------------|------------------|

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

No additional information available

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

Heat. Sparks. Open flame. Direct sunlight. Overheating.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Carbon dioxide. Carbon monoxide.

SECTION 11: Toxicological information

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

Acute toxicity (oral)Not classified (Based on available data, the classification criteria are not met)Acute toxicity (dermal)Not classified (Based on available data, the classification criteria are not met)Acute toxicity (inhalation)Not classified (Based on available data, the classification criteria are not met)

| hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, < 5% n-hexane | | |
|--------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|--|
| LD50 oral rat | > 5840 mg/kg bodyweight | |
| LD50 dermal rat | > 2920 mg/kg bodyweight | |
| LC50 Inhalation - Rat (Vapours) | > 25.2 mg/l/4h | |
| propane (74-98-6) | | |
| LC50 Inhalation - Rat [ppm] | > 280000 ppm (literature) | |
| Butane (106-97-8) | | |
| LC50 Inhalation - Rat [ppm] | > 800000 ppm/4h | |
| isobutane (75-28-5) | | |
| LC50 Inhalation - Rat [ppm] | > 18000 ppm | |
| Skin corrosion/irritation | Causes skin irritation. pH: Not determined | |
| Serious eye damage/irritation | Not classified (Based on available data, the classification criteria are not met) pH: Not determined | |
| Respiratory or skin sensitisation | Not classified (Based on available data, the classification criteria are not met) | |
| Germ cell mutagenicity | Not classified (Based on available data, the classification criteria are not met) | |
| Carcinogenicity | Not classified (Based on available data, the classification criteria are not met) | |



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| Reproductive toxicity | Not classified (Based on available data, the classification criteria are not met) | | |
|----------------------------------------------------|-----------------------------------------------------------------------------------|--|--|
| STOT-single exposure | May cause drowsiness or dizziness. | | |
| hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclic | s, < 5% n-hexane | | |
| STOT-single exposure | May cause drowsiness or dizziness. | | |
| STOT-repeated exposure | Not classified (Based on available data, the classification criteria are not met) | | |
| Aspiration hazard | Not classified (Based on available data, the classification criteria are not met) | | |
| Cleaning Spray 500 ml | | | |
| Vaporizer | Aerosol | | |
| Vaporizer | Aerosol | | |

11.2. Information on other hazards

No additional information available

| SECTION 12: Ecological information | | | |
|----------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
| 12.1. Toxicity | | | |
| Hazardous to the aquatic environment, short-term | Not classified (Based on available data, the classification criteria are not met) | | |
| (acute) Hazardous to the aquatic environment, long-term (chronic) | Toxic to aquatic life with long lasting effects. (Based on available data, the classification criteria are not met) | | |
| hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyc | lics, < 5% n-hexane | | |
| LC50 - Fish [1] | 11.4 mg/l (96 h, Oncorhynchus mykiss, (OECD 203 method)) | | |
| EC50 - Crustacea [1] | 3 mg/l (48 h, Daphnia magna, (OECD 202 method)) | | |
| ErC50 algae | ≥ 10 mg/l (72 h, Pseudokirchneriella subcapitata, (OECD 201 method)) | | |
| NOEC (chronic) | 0.17 (21 d, Daphnia magna, (OECD 211 method), <tx:kft_read-across>)</tx:kft_read-across> | | |
| NOEC chronic fish | 2.045 mg/l (Quantitative structure-activity relationship (QSAR)) | | |
| NOEC chronic crustacea | 0.17 mg/l (21 d; Daphnia magna; (OECD 211 method)) | | |
| NOEC chronic algae | 3 mg/l (72 h, Pseudokirchneriella subcapitata, (OECD 201 method)) | | |
| Butane (106-97-8) | | | |
| LC50 - Fish [1] | 24 – 148 mg/l (Quantitative structure-activity relationship (QSAR)) | | |
| EC50 - Crustacea [1] | 7 – 70 mg/l (Quantitative structure-activity relationship (QSAR)) | | |
| EC50 72h - Algae [1] | | | |
| | 7 – 17 mg/l (Quantitative structure-activity relationship (QSAR)) | | |
| isobutane (75-28-5) | 7 – 17 mg/l (Quantitative structure-activity relationship (QSAR)) | | |
| | 7 – 17 mg/l (Quantitative structure-activity relationship (QSAR)) 24.11 – 147.54 mg/l (Quantitative structure-activity relationship (QSAR)) | | |
| isobutane (75-28-5) | | | |
| isobutane (75-28-5) LC50 - Fish [1] | 24.11 – 147.54 mg/l (Quantitative structure-activity relationship (QSAR)) | | |
| isobutane (75-28-5) LC50 - Fish [1] EC50 - Crustacea [1] | 24.11 – 147.54 mg/l (Quantitative structure-activity relationship (QSAR)) 7.02 – 69.43 mg/l (Quantitative structure-activity relationship (QSAR)) | | |
| isobutane (75-28-5) LC50 - Fish [1] EC50 - Crustacea [1] ErC50 algae | 24.11 – 147.54 mg/l (Quantitative structure-activity relationship (QSAR)) 7.02 – 69.43 mg/l (Quantitative structure-activity relationship (QSAR)) | | |
| isobutane (75-28-5) LC50 - Fish [1] EC50 - Crustacea [1] ErC50 algae Carbon dioxide (124-38-9) | 24.11 – 147.54 mg/l (Quantitative structure-activity relationship (QSAR)) 7.02 – 69.43 mg/l (Quantitative structure-activity relationship (QSAR)) 7.71 – 16.5 mg/l (Quantitative structure-activity relationship (QSAR)) | | |
| isobutane (75-28-5) LC50 - Fish [1] EC50 - Crustacea [1] ErC50 algae Carbon dioxide (124-38-9) LC50 - Fish [1] | 24.11 – 147.54 mg/l (Quantitative structure-activity relationship (QSAR)) 7.02 – 69.43 mg/l (Quantitative structure-activity relationship (QSAR)) 7.71 – 16.5 mg/l (Quantitative structure-activity relationship (QSAR)) 35 mg/l (96 h; Salmo gairdneri; Literature data) | | |

Biodegradation

98 % (28 d; (OECD 301F method))



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| propane (74-98-6) | | |
|-------------------------------------------------|----------------------------------------------|--|
| Persistence and degradability | Readily biodegradable in water. | |
| isobutane (75-28-5) | | |
| Persistence and degradability | Readily biodegradable. | |
| Carbon dioxide (124-38-9) | | |
| Persistence and degradability | Not applicable. | |
| 12.3. Bioaccumulative potential | | |
| Cleaning Spray 500 ml | | |
| Partition coefficient n-octanol/water (Log Pow) | Not determined | |
| propane (74-98-6) | | |
| Bioaccumulative potential | Low bioaccumulation potential (Log Kow < 4). | |
| isobutane (75-28-5) | | |
| Partition coefficient n-octanol/water (Log Pow) | 1.09 – 2.8 (20 °C) | |
| Bioaccumulative potential | Bioaccumulation unlikely. | |
| Carbon dioxide (124-38-9) | | |
| Partition coefficient n-octanol/water (Log Pow) | 0.83 (Measured) | |

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional legislation (waste) Waste treatment methods Product/Packaging disposal recommendations Additional information Disposal must be done according to official regulations.

Dispose of contents/container in accordance with licensed collector's sorting instructions. Container under pressure. Do not drill or burn even after use.

Flammable vapours may accumulate in the container.

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HP Code

HP3 - "Flammable:"

– flammable liquid waste: liquid waste having a flash point below 60 °C or waste gas oil, diesel and light heating oils having a flash point > 55 °C and \leq 75 °C;

 flammable pyrophoric liquid and solid waste: solid or liquid waste which, even in small quantities, is liable to ignite within five minutes after coming into contact with air;

- flammable solid waste: solid waste which is readily combustible or may cause or contribute to fire through friction;

- flammable gaseous waste: gaseous waste which is flammable in air at 20 $^{\circ}\text{C}$ and a standard pressure of 101.3 kPa;

- water reactive waste: waste which, in contact with water, emits flammable gases in dangerous quantities;

- other flammable waste: flammable aerosols, flammable self-heating waste, flammable organic peroxides and flammable self-reactive waste.

HP5 - "Specific Target Organ Toxicity (STOT)/Aspiration Toxicity:" waste which can cause specific target organ toxicity either from a single or repeated exposure, or which cause acute toxic effects following aspiration.

HP4 - "Irritant – skin irritation and eye damage:" waste which on application can cause skin irritation or damage to the eye.

HP14 - "Ecotoxic:" waste which presents or may present immediate or delayed risks for one or more sectors of the environment

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / RID

| ADR | IMDG | ΙΑΤΑ | RID |
|---------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------|--------------------------------------|
| 14.1. UN number or ID number | | | |
| UN 1950 | UN 1950 | UN 1950 | UN 1950 |
| 14.2. UN proper shipping name | | | |
| AEROSOLS | AEROSOLS | Aerosols, flammable | AEROSOLS |
| Transport document description | | | |
| UN 1950 AEROSOLS, 2.1, (D) | UN 1950 AEROSOLS, 2.1 | UN 1950 Aerosols, flammable, 2.1 | UN 1950 AEROSOLS, 2.1 |
| 14.3. Transport hazard class(es) | | | |
| 2.1 | 2.1 | 2.1 | 2.1 |
| | | | |
| 14.4. Packing group | | | |
| Not applicable | Not applicable | Not applicable | Not applicable |
| 14.5. Environmental hazards | | · | |
| Dangerous for the environment: Yes | Dangerous for the environment: Yes Marine pollutant: Yes | Dangerous for the environment: Yes | Dangerous for the environment Yes |
| - | ces derogation applies (quantity of lic ore not required, as stated in the ADI | uids ≤ 5 litres or net mass of solids ≤ 5 R regulation, section 5.2.1.8.1. | 5 kg). The environmentally |
| No supplementary information availa | able | | |



according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

| 14.6. Special precautions for user | |
|------------------------------------------------------|----------------------------------|
| Overland transport | |
| Classification code (ADR) | 5F |
| Special provisions (ADR) | 190, 327, 344, 625 |
| Limited quantities (ADR) | 11 |
| Excepted quantities (ADR) | E0 |
| Packing instructions (ADR) | P207, LP200 |
| Special packing provisions (ADR) | PP87, RR6, L2 |
| Mixed packing provisions (ADR) | MP9 |
| Transport category (ADR) | 2 |
| Special provisions for carriage - Packages (ADR) | V14 |
| Special provisions for carriage - Loading, unloading | CV9, CV12 |
| and handling (ADR) | |
| Special provisions for carriage - Operation (ADR) | S2 |
| Tunnel restriction code (ADR) | D |
| Transport by sea | |
| Special provisions (IMDG) | 63, 190, 277, 327, 344, 381, 959 |
| Limited quantities (IMDG) | SP277 |
| Excepted quantities (IMDG) | E0 |
| Packing instructions (IMDG) | P207, LP200 |
| Special packing provisions (IMDG) | PP87, L2 |
| EmS-No. (Fire) | F-D |
| EmS-No. (Spillage) | S-U |
| Stowage category (IMDG) | None |
| Stowage and handling (IMDG) | SW1, SW22 |
| Segregation (IMDG) | SG69 |
| MFAG-No | 126 |
| Air transport | |
| PCA Excepted quantities (IATA) | E0 |
| PCA Limited quantities (IATA) | Y203 |
| PCA limited quantity max net quantity (IATA) | 30kgG |
| PCA packing instructions (IATA) | 203 |
| PCA max net quantity (IATA) | 75kg |
| CAO packing instructions (IATA) | 203 |
| CAO max net quantity (IATA) | 150kg |
| Special provisions (IATA) | A145, A167, A802 |
| ERG code (IATA) | 10L |
| Rail transport | |
| Classification code (RID) | 5F |
| Special provisions (RID) | 190, 327, 344, 625 |
| Limited quantities (RID) | 1L |
| Excepted quantities (RID) | E0 |
| Packing instructions (RID) | P207, LP200 |
| Special packing provisions (RID) | PP87, RR6, L2 |
| Mixed packing provisions (RID) | MP9 |
| Transport category (RID) | 2 |
| Special provisions for carriage – Packages (RID) | W14 |
| Special provisions for carriage - Loading, unloading | CW9, CW12 |
| and handling (RID) | |
| | |
| Colis express (express parcels) (RID) | CE2 |

14.7. Maritime transport in bulk according to IMO instruments

Not applicable



Cleaning Spray 500 ml

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

REACH Annex XVII (Restriction List)

| EU restriction list (REACH Annex XVII) | | |
|----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Reference code | Applicable on | Entry title or description |
| 3(a) | Cleaning Spray 500 ml ; hydrocarbons, C6-C7, n- alkanes, isoalkanes, cyclics, < 5% n-hexane | Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 2.1 to 2.4, 2.6 and 2.7, 2.8 types A and B, 2.9, 2.10, 2.12, 2.13 categories 1 and 2, 2.14 categories 1 and 2, 2.15 types A to F |
| 3(b) | Cleaning Spray 500 ml ; hydrocarbons, C6-C7, n- alkanes, isoalkanes, cyclics, < 5% n-hexane | Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10 |
| 3(c) | Cleaning Spray 500 ml ; hydrocarbons, C6-C7, n- alkanes, isoalkanes, cyclics, < 5% n-hexane | Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard class 4.1 |
| 40. | Cleaning Spray 500 ml ; hydrocarbons, C6-C7, n- alkanes, isoalkanes, cyclics, < 5% n-hexane ; propane ; Butane ; isobutane | Substances classified as flammable gases category 1 or 2, flammable liquids categories 1, 2 or 3, flammable solids category 1 or 2, substances and mixtures which, in contact with water, emit flammable gases, category 1, 2 or 3, pyrophoric liquids category 1 or pyrophoric solids category 1, regardless of whether they appear in Part 3 of Annex VI to Regulation (EC) No 1272/2008 or not. |

REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Contains no substance(s) listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

Ozone Regulation (1005/2009)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

VOC Directive (2004/42)

VOC content

663 g/l (97,90 %)

Seveso Directive (Disaster Risk Reduction)

| Seveso III Part I (Categories of dangerous substances) | Qualifying quantity (tonnes) | |
|-----------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|------------|
| | Lower-tier | Upper-tier |
| P3a FLAMMABLE AEROSOLS 'Flammable' aerosols Category 1 or 2, containing flammable gases Category 1 or 2 or flammable liquids Category 1 | 150 | 500 |
| E2 Hazardous to the Aquatic Environment in Category Chronic 2 | 200 | 500 |



according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

15.1.2. National regulations

Switzerland

Storage class (LK)

LK 2 - Liquefied or pressurized gases

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

| Indication of changes | | | |
|-----------------------|------------------------------------------------------------|----------|-------------------------------------------------------------------|
| Section | Changed item | Change | Comments |
| | General | Modified | SDS EU format according to COMMISSION REGULATION (EU) 2020/878 |
| 1 | UFI | Added | |
| 2.2 | Labelling according to Regulation (EC) No. 1272/2008 [CLP] | Modified | |
| 3 | Composition/information on ingredients | Modified | |
| 8.2 | Personal protective equipment | Added | |
| 9 | Physical and chemical properties | Modified | |
| 11 | Toxicological information | Modified | |
| 12.1 | Ecotoxicological information | Modified | |
| 15 | Regulatory information | Added | |

| Abbreviations and acronyms: | |
|-----------------------------|-------------------------------------------------------------------------------------------------|
| CAS-No. | Chemical Abstract Service number |
| 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 |
| ATE | Acute Toxicity Estimate |
| CLP | Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008 |
| DNEL | Derived-No Effect Level |
| EC50 | Median effective concentration |
| ED | Endocrine disrupting properties |
| EC-No. | European Community number |
| EN | European Standard |
| ΙΑΤΑ | International Air Transport Association |



according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

| Abbreviations and acronyms: | |
|-----------------------------|---------------------------------------------------------------------------------------------------|
| IMDG | International Maritime Dangerous Goods |
| IOELV | Indicative Occupational Exposure Limit Value |
| LC50 | Median lethal concentration |
| LD50 | Median lethal dose |
| NOEC | No-Observed Effect Concentration |
| OECD | Organisation for Economic Co-operation and Development |
| N.O.S. | Not Otherwise Specified |
| OEL | Occupational Exposure Limit |
| РВТ | Persistent Bioaccumulative Toxic |
| PNEC | Predicted No-Effect Concentration |
| REACH | Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006 |
| RID | Regulations concerning the International Carriage of Dangerous Goods by Rail |
| SDS | Safety Data Sheet |
| STP | Sewage treatment plant |
| TLM | Median Tolerance Limit |
| TRGS | Technical Rules for Hazardous Substances |
| VOC | Volatile Organic Compounds |
| WGK | Water Hazard Class |
| vPvB | Very Persistent and Very Bioaccumulative |
| NOAEL | No-Observed Adverse Effect Level |
| NOAEC | No-Observed Adverse Effect Concentration |
| LOAEL | Lowest Observed Adverse Effect Level |

Data sources

Source: European Chemicals Agency, http://echa.europa.eu/. manufacturer.

| Full text of H- and EUH-statements: | |
|-------------------------------------|-------------------------------------------------------------------|
| Aerosol 1 | Aerosol, Category 1 |
| Aquatic Chronic 2 | Hazardous to the aquatic environment – Chronic Hazard, Category 2 |
| Asp. Tox. 1 | Aspiration hazard, Category 1 |
| Flam. Gas 1A | Flammable gases, Category 1A |
| Flam. Liq. 2 | Flammable liquids, Category 2 |
| 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. |



according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

| Full text of H- and EUH-statements: | |
|-------------------------------------|------------------------------------------------------------------------|
| H315 | Causes skin irritation. |
| H336 | May cause drowsiness or dizziness. |
| H411 | Toxic to aquatic life with long lasting effects. |
| Press. Gas (Comp.) | Gases under pressure : Compressed gas |
| Press. Gas (Liq.) | Gases under pressure : Liquefied gas |
| Skin Irrit. 2 | Skin corrosion/irritation, Category 2 |
| STOT SE 3 | Specific target organ toxicity – Single exposure, Category 3, Narcosis |

SDS EU Hilti

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.