

Safety Data Sheet

According to ICOP 2014 Issue date: 26/01/2021

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Supersedes: 17/12/2018

Version: 1.1

### SECTION 1: Identification of the hazardous chemical and of the supplier

| 1.1.    | Product identifier |
|---------|--------------------|
| Name    |                    |
| Product | form               |
| Type of | product            |
| Product | code               |
|         |                    |



#### 1.2. Other means of identification

No additional information available

| 1.3.       | . Recommended use of the chemical and restrictions on use |                                       |  |  |
|------------|---|---------------------------------------|--|--|
| Recomm     | ended use   | Paint<br>corrosion-protection product |  |  |
| Restrictio | ons on use  | For professional use only             |  |  |

#### 1.4. Supplier's details

## Department issuing data specification sheet

Hilti Entwicklungsgesellschaft mbH Hiltistraße 6 86916 Kaufering - Deutschland T +49 8191 906876 anchor.hse@hilti.com

#### 1.5. **Emergency phone number**

Emergency number

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

### **SECTION 2: Hazards identification**

#### 2.1. Classification of the hazardous chemical

Classification according to Industry Code of Practice on chemicals classification and hazard communication (2014)

| Flam. Aerosol 1   | H222 |
|-------------------|------|
| Aquatic Acute 1   | H400 |
| Aquatic Chronic 1 | H410 |

#### 2.2. Label elements

Hazard pictograms (GHS MY)

Labelling according to Industry Code of Practice on chemicals classification and hazard communication (2014)

**.** 

|                                   | GHS02 GHS09   |
|-----------------------------------|---|
| Signal word (GHS MY)              | Danger  |
| Hazard statements (GHS MY)        | H222 - Extremely flammable aerosol.<br>H410 - Very toxic to aquatic life with long lasting effects.   |
| Precautionary statements (GHS MY) | 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.   |

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P273 - Avoid release to the environment. P391 - Collect spillage. P410+P412 - Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

#### 2.3. Other hazards not contributing to the classification

No additional information available

#### SECTION 3: Composition and information of the ingredients of the hazardous chemical

#### 3.1. Substances

#### Not applicable

#### 3.2. Mixtures

| Name                                      | Product identifier   | %       | Classification according to<br>Industry Code of Practice on<br>chemicals classification and<br>hazard communication<br>(2014) |
|---|----------------------|---------|---|
| zinc powder - zinc dust (stabilised)      | (CAS-No.) 7440-66-6  | 25 – 40 | Aquatic Acute 1, H400 (M=10)<br>Aquatic Chronic 1, H410   |
| Xylene                                    | (CAS-No.) 1330-20-7  | 5 – 10  | Flam. Liq. 3, H226<br>Acute Tox. 4 (Dermal), H312<br>Acute Tox. 4 (Inhalation), H332<br>Skin Irrit. 2, H315                   |
| ethyl acetate                             | (CAS-No.) 141-78-6   | 5 – 10  | Flam. Liq. 2, H225<br>Eye Irrit. 2, H319<br>STOT SE 3, H336   |
| 1-methoxypropan-2-ol                      | (CAS-No.) 107-98-2   | 5 – 10  | Flam. Liq. 3, H226<br>STOT SE 3, H336   |
| Low boiling point naphtha, benzene < 0.1% | (CAS-No.) 64742-95-6 | 5 – 10  | Flam. Liq. 3, H226<br>Skin Irrit. 2, H315<br>STOT SE 3, H336<br>Asp. Tox. 1, H304<br>Aquatic Chronic 2, H411                  |
| zinc oxide                                | (CAS-No.) 1314-13-2  | 5 – 10  | Aquatic Acute 1, H400<br>Aquatic Chronic 1, H410  |
| Ethylbenzene                              | (CAS-No.) 100-41-4   | 2.5 – 5 | Flam. Liq. 2, H225<br>Acute Tox. 4 (Inhalation), H332<br>STOT RE 2, H373<br>Asp. Tox. 1, H304<br>Aquatic Chronic 3, H412      |

## **SECTION 4: First aid measures**

| 4.1. Description of first aid measures |  |
|--|--|
| First-aid measures general             | Take off immediately all contaminated clothing.  |
| 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 effects, both acute and delayed

Symptoms/effects after inhalation

May cause drowsiness or dizziness. Effects of skin contact may include: skin irritation.

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

No additional information available



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| SECTION 5: Firefighting measures                                    |  |  |  |  |
|---|--|--|--|--|
| 5.1. Extinguishing media  |  |  |  |  |
| Suitable extinguishing media  | Carbon dioxide. Foam. Dry powder.  |  |  |  |
| Unsuitable extinguishing media                                      | Do not use a heavy water stream.   |  |  |  |
| 5.2. Special hazards aris   | ing from the substance or mixture  |  |  |  |
| Fire hazard   | Extremely flammable aerosol.   |  |  |  |
| Explosion hazard  | Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of<br>burns and injuries.   |  |  |  |
| Hazardous decomposition products fire                               | s in case of Formation of toxic gases is possible during heating or in case of fire. Thermal decomposition generates : Carbon dioxide. Carbon monoxide. Nitrogen oxides. |  |  |  |
| 5.3. Special protective equipment and precautions for fire-fighters |  |  |  |  |
| 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 precautio                            | 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 p<br>Emergency procedures | ersonnel<br>Ventilate spillage area. Avoid breathing vapours. Evacuate unnecessary personnel. |  |  |  |  |
| 6.1.2. For emergency respo                         | nders   |  |  |  |  |
| Protective equipment                               | Do not attempt to take action without suitable protective equipment. Breathing apparatus.     |  |  |  |  |
| Emergency procedures                               | Ventilate area.   |  |  |  |  |
|  |   |  |  |  |  |

#### 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. Absorb and/or contain spill with inert material, then place in suitable container. This material and its container must be disposed of in a safe way, and as per local legislation.

| SECTION 7: Handling and storage   |  |  |  |
|-----------------------------------|--|--|--|
| 7.1. Precautions for safe handlin | ng la  |  |  |
| 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<br>skin, eyes and clothing. Keep away from heat, hot surfaces, sparks, open flames and other<br>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  |  |  |
| Technical measures                | Proper grounding procedures to avoid static electricity should be followed.  |  |  |
| Storage conditions                | Keep cool. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122 °F. Keep in fireproof place.  |  |  |
| Incompatible materials            | Oxidizing materials. Paper. Strong acids. Strong bases.  |  |  |
|                                   |  |  |  |



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Heat and ignition sources Storage temperature Keep away from heat and direct sunlight.  $5 - 25 \ ^{\circ}\text{C}$ 

## SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

| Hilti Zinc spray MZN-400                |   |  |  |
|---|---|--|--|
| Malaysia - Occupational Exposure Limits |   |  |  |
| Local name                              | Etil benzena # Ethyl benzene  |  |  |
| PEL TWA (mg/m³)                         | 434 mg/m <sup>3</sup>   |  |  |
| PEL TWA (ppm)                           | 100 ppm   |  |  |
| Xylene (1330-20-7)                      |   |  |  |
| Malaysia - Occupational Exposure Limits |   |  |  |
| Local name                              | Xilena (Dimetilbenzena) (isomer o-, m-, p) # Xylene (Dimethylbenzene) (o-, m-, p-isomers) |  |  |
| PEL TWA (mg/m³)                         | 434 mg/m <sup>3</sup>   |  |  |
| PEL TWA (ppm)                           | 100 ppm   |  |  |
| Ethylbenzene (100-41-4)                 |   |  |  |
| Malaysia - Occupational Exposure Limits |   |  |  |
| Local name                              | Etil benzena # Ethyl benzene  |  |  |
| PEL TWA (mg/m³)                         | 434 mg/m <sup>3</sup>   |  |  |
| PEL TWA (ppm)                           | 100 ppm   |  |  |

#### Exposure limit values for the other components

No additional information available

#### 8.2. Monitoring

No additional information available

#### 8.3. Appropriate engineering controls

Appropriate engineering controls

Ensure good ventilation of the work station.

#### 8.4. Personal protective equipment

#### Hand protection:

In case of repeated or prolonged contact wear gloves

| Туре              | Material             | Permeation        | Thickness (mm) | Penetration | Standard   |
|-------------------|----------------------|-------------------|----------------|-------------|------------|
| Disposable gloves | Nitrile rubber (NBR) | 6 (> 480 minutes) | 0,4            |             | EN ISO 374 |

#### Eye protection:

Chemical goggles or safety glasses. EN 166. EN 170

| Туре           | Use     | Characteristics | Standard       |
|----------------|---------|-----------------|----------------|
| Safety glasses | Droplet | clear           | EN 166, EN 170 |

#### **Respiratory protection:**

#### During spraying wear suitable respiratory equipment

| Device       | Filter type | Condition | Standard |
|--------------|-------------|-----------|----------|
| Aerosol mask |             |           |          |

#### Personal protective equipment symbol(s):



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#### **SECTION 9: Physical and chemical properties**

| AppearanceAerosol.ColourGreyOdourcharacteristicOdour thresholdNo data availablepHNo data availableMelting point, Freezing pointNo data availableBoiling point-42 °CFlash point-25 °C (DIN EN ISO 1523)Evaporation rateNo data availableFlammability (solid, gas)Extremely flammable aerosol.Explosive limits1 – 13.1 vol %Vapour pressureVapour pressure: 3.2 hPa (DIN EN 12)Relative vapour density at 20 °CNo data availableRelative censityNo data availableSolubilityNo data availablePartition coefficient n-octanol/water (Log Pow)No data availableAuto-ignition temperature273 °C (DIN 51794)Decomposition temperatureNo data availableViscosity, kinematic1.051 g/cm³ | Physical state                                  | Liquid                               |
|--|---|--------------------------------------|
| OdourCharacteristicOdour thresholdNo data availablepHNo data availableMelting point, Freezing pointNo data availableBoiling point-42 °CFlash point-25 °C (DIN EN ISO 1523)Evaporation rateNo data availableFlammability (solid, gas)Extremely flammable aerosol.Explosive limits1 – 13.1 vol %Vapour pressureVapour pressure: 3.2 hPa (DIN EN 12)Relative vapour density at 20 °CNo data availableRelative densityNo data availableSolubilityNo data availablePartition coefficient n-octanol/water (Log Pow)No data availableAuto-ignition temperature273 °C (DIN 51794)Decomposition temperatureNo data available  | Appearance                                      | Aerosol.                             |
| Odour thresholdNo data availablepHNo data availableMelting point, Freezing pointNo data availableBoiling point-42 °CFlash point-25 °C (DIN EN ISO 1523)Evaporation rateNo data availableFlammability (solid, gas)Extremely flammable aerosol.Explosive limits1 – 13.1 vol %Vapour pressureVapour pressure: 3.2 hPa (DIN EN 12)Relative vapour density at 20 °CNo data availableRelative densityNo data availableSolubilityNo data availablePartition coefficient n-octanol/water (Log Pow)No data availableAuto-ignition temperature273 °C (DIN 51794)Decomposition temperatureNo data available   | Colour  | Grey                                 |
| pHNo data availableMelting point, Freezing pointNo data availableBoiling point-42 °CFlash point-25 °C (DIN EN ISO 1523)Evaporation rateNo data availableFlammability (solid, gas)Extremely flammable aerosol.Explosive limits1 – 13.1 vol %Vapour pressureVapour pressure: 3.2 hPa (DIN EN 12)Relative vapour density at 20 °CNo data availableRelative densityNo data availableSolubilityNo data availablePartition coefficient n-octanol/water (Log Pow)No data availableAuto-ignition temperature273 °C (DIN 51794)Decomposition temperatureNo data available   | Odour   | characteristic                       |
| Melting point, Freezing pointNo data availableBoiling point-42 °CFlash point-25 °C (DIN EN ISO 1523)Evaporation rateNo data availableFlammability (solid, gas)Extremely flammable aerosol.Explosive limits1 – 13.1 vol %Vapour pressureVapour pressure: 3.2 hPa (DIN EN 12)Relative vapour density at 20 °CNo data availableRelative densityNo data availableSolubilityNo data availablePartition coefficient n-octanol/water (Log Pow)No data availablePartition temperature273 °C (DIN 51794)Decomposition temperatureNo data available  | Odour threshold                                 | No data available                    |
| Boiling point-42 °CFlash point-25 °C (DIN EN ISO 1523)Evaporation rateNo data availableFlammability (solid, gas)Extremely flammable aerosol.Explosive limits1 – 13.1 vol %Vapour pressureVapour pressure: 3.2 hPa (DIN EN 12)Relative vapour density at 20 °CNo data availableRelative densityNo data availableSolubilityNo data availablePartition coefficient n-octanol/water (Log Pow)No data availablePartition temperature273 °C (DIN 51794)Decomposition temperatureNo data available  | pH  | No data available                    |
| Flash point-25 °C (DIN EN ISO 1523)Evaporation rateNo data availableFlammability (solid, gas)Extremely flammable aerosol.Explosive limits1 – 13.1 vol %Vapour pressureVapour pressure: 3.2 hPa (DIN EN 12)Relative vapour density at 20 °CNo data availableRelative densityNo data availableSolubilityNo data availablePartition coefficient n-octanol/water (Log Pow)No data availablePartition temperature273 °C (DIN 51794)Decomposition temperatureNo data available   | Melting point, Freezing point                   | No data available                    |
| Evaporation rateNo data availableFlammability (solid, gas)Extremely flammable aerosol.Explosive limits1 – 13.1 vol %Vapour pressureVapour pressure: 3.2 hPa (DIN EN 12)Relative vapour density at 20 °CNo data availableRelative densityNo data availableSolubilityNo data availablePartition coefficient n-octanol/water (Log Pow)No data availablePartition temperature273 °C (DIN 51794)Decomposition temperatureNo data available  | Boiling point                                   | -42 °C                               |
| Flammability (solid, gas)Extremely flammable aerosol.Explosive limits1 – 13.1 vol %Vapour pressureVapour pressure: 3.2 hPa (DIN EN 12)Relative vapour density at 20 °CNo data availableRelative densityNo data availableSolubilityNo data availablePartition coefficient n-octanol/water (Log Pow)No data availablePartition coefficient n-octanol/water (Log Kow)No data availableAuto-ignition temperature273 °C (DIN 51794)Decomposition temperatureNo data available   | Flash point                                     | -25 °C (DIN EN ISO 1523)             |
| Explosive limits1 – 13.1 vol %Vapour pressureVapour pressure: 3.2 hPa (DIN EN 12)Relative vapour density at 20 °CNo data availableRelative densityNo data availableSolubilityNo data availablePartition coefficient n-octanol/water (Log Pow)No data availablePartition coefficient n-octanol/water (Log Kow)No data availableAuto-ignition temperature273 °C (DIN 51794)Decomposition temperatureNo data available  | Evaporation rate                                | No data available                    |
| Vapour pressureVapour pressure: 3.2 hPa (DIN EN 12)Relative vapour density at 20 °CNo data availableRelative densityNo data availableSolubilityNo data availablePartition coefficient n-octanol/water (Log Pow)No data availablePartition coefficient n-octanol/water (Log Kow)No data availablePartition coefficient n-octanol/water (Log Kow)No data availablePartition temperature273 °C (DIN 51794)Decomposition temperatureNo data available  | Flammability (solid, gas)                       | Extremely flammable aerosol.         |
| Relative vapour density at 20 °CNo data availableRelative densityNo data availableSolubilityNo data availablePartition coefficient n-octanol/water (Log Pow)No data availablePartition coefficient n-octanol/water (Log Kow)No data availablePartition coefficient n-octanol/water (Log Kow)No data availablePartition temperature273 °C (DIN 51794)Decomposition temperatureNo data available   | Explosive limits                                | 1 – 13.1 vol %                       |
| Relative densityNo data availableSolubilityNo data availablePartition coefficient n-octanol/water (Log Pow)No data availablePartition coefficient n-octanol/water (Log Kow)No data availableAuto-ignition temperature273 °C (DIN 51794)Decomposition temperatureNo data available  | Vapour pressure                                 | Vapour pressure: 3.2 hPa (DIN EN 12) |
| SolubilityNo data availablePartition coefficient n-octanol/water (Log Pow)No data availablePartition coefficient n-octanol/water (Log Kow)No data availableAuto-ignition temperature273 °C (DIN 51794)Decomposition temperatureNo data available   | Relative vapour density at 20 °C                | No data available                    |
| Partition coefficient n-octanol/water (Log Pow)No data availablePartition coefficient n-octanol/water (Log Kow)No data availableAuto-ignition temperature273 °C (DIN 51794)Decomposition temperatureNo data available  | Relative density                                | No data available                    |
| Partition coefficient n-octanol/water (Log Kow)No data availableAuto-ignition temperature273 °C (DIN 51794)Decomposition temperatureNo data available  | Solubility                                      | No data available                    |
| Auto-ignition temperature273 °C (DIN 51794)Decomposition temperatureNo data available  | Partition coefficient n-octanol/water (Log Pow) | No data available                    |
| Decomposition temperature No data available  | Partition coefficient n-octanol/water (Log Kow) | No data available                    |
|  | Auto-ignition temperature                       | 273 °C (DIN 51794)                   |
| Viscosity, kinematic 1.051 g/cm <sup>3</sup>   | Decomposition temperature                       | No data available                    |
|  | Viscosity, kinematic                            | 1.051 g/cm <sup>3</sup>              |
| Viscosity, dynamic No data available   | Viscosity, dynamic                              | No data available                    |
| Density 1.051 g/cm <sup>3</sup>  | Density   | 1.051 g/cm <sup>3</sup>              |

| SECTION 10: Stability and reactivity |   |  |
|--------------------------------------|---|--|
| Reactivity                           | The product is non-reactive under normal conditions of use, storage and transport |  |
| Chemical stability                   | No data available   |  |
| Possibility of hazardous reactions   | No data available   |  |
| Conditions to avoid                  | Heat,Sparks,Open flame,Direct sunlight,Overheating                                |  |
| Incompatible materials               | Oxidizing agents and bases  |  |
| Hazardous decomposition products     | Carbon dioxide,Carbon monoxide  |  |

## **SECTION 11: Toxicological information**

#### 11.1. Information on toxicological effects

Acute toxicity (oral) Acute toxicity (dermal) Acute toxicity (inhalation) Not classified Not classified Not classified



# Hilti Zinc spray MZN-400 Safety Data Sheet

According to ICOP 2014

| zinc powder - zinc dust (stabilised) (74 | 40-66-6)  |  |
|--|---|--|
| LD50 oral rat                            | > 2000 mg/kg bodyweight (OECD 401: Acute Oral Toxicity, Rat, Male / female, Experimental value, Oral, 14 day(s))                                      |  |
| ethyl acetate (141-78-6)                 |   |  |
| LD50 oral rat                            | 10200 mg/kg bodyweight (Equivalent or similar to OECD 401, Rat, Female, Experimental value, Oral, 14 day(s))  |  |
| LD50 dermal rabbit                       | > 20000 mg/kg bodyweight (24 hour cuff method, 24 h, Rabbit, Male, Experimental value,<br>Dermal, 14 day(s))  |  |
| 1-methoxypropan-2-ol (107-98-2)          |   |  |
| LD50 oral rat                            | 4016 mg/kg bodyweight (EU Method B.1 tris: Acute oral toxic – Acute toxic class method, Rat, Male / female, Experimental value, Oral, 14 day(s))      |  |
| LD50 dermal rat                          | > 2000 mg/kg bodyweight (Equivalent or similar to EU Method B.3, 24 h, Rat, Male / female,<br>Experimental value, Dermal, 14 day(s))                  |  |
| Xylene (1330-20-7)                       |   |  |
| LC50 Inhalation - Rat                    | 29.09 mg/l (Equivalent or similar to EU Method B.2: Acute Toxicity (Inhalation), 4 h, Rat, Male, Experimental value, Inhalation (vapours), 14 day(s)) |  |
| zinc oxide (1314-13-2)                   |   |  |
| LD50 oral rat                            | > 5000 mg/kg (Equivalent or similar to OECD 401, Rat, Male / female, Experimental value, Oral, 14 day(s))   |  |
| LD50 dermal rat                          | > 2000 mg/kg bodyweight (OECD 402: Acute Dermal Toxicity, 24 h, Rat, Male / female,<br>Experimental value, Dermal, 14 day(s))                         |  |
| LC50 Inhalation - Rat                    | > 5.7 mg/l (Equivalent or similar to OECD 403, 4 h, Rat, Male / female, Experimental value,<br>Inhalation (dust), 14 day(s))                          |  |
| Skin corrosion/irritation                | Not classified  |  |
| Serious eye damage/irritation            | Not classified  |  |
| Respiratory or skin sensitisation        | Not classified  |  |
| Germ cell mutagenicity                   | Not classified  |  |
| Carcinogenicity                          | Not classified  |  |
| Reproductive toxicity                    | Not classified  |  |
| STOT-single exposure                     | Not classified  |  |

| SECTION 12, Eaclagical informati                             | ion   |  |  |
|--|---|--|--|
| SECTION 12: Ecological informat                              |   |  |  |
| 12.1. Toxicity   |   |  |  |
| Hazardous to the aquatic environment, short-<br>term (acute) | Very toxic to aquatic life.   |  |  |
| Hazardous to the aquatic environment, long-term (chronic)    | Very toxic to aquatic life with long lasting effects.   |  |  |
| zinc powder - zinc dust (stabilised) (7440-66-6)             |   |  |  |
| BCF fish 1   | 0.002 (40 day(s), Danio rerio, Semi-static system, Fresh water, Read-across)  |  |  |
| ethyl acetate (141-78-6)                                     |   |  |  |
| LC50 fish 1  | 230 mg/l (US EPA, 96 h, Pimephales promelas, Flow-through system, Fresh water, Experimental value, Lethal)                              |  |  |
| BCF fish 1   | 30 (3 day(s), Leuciscus idus, Static renewal, Experimental value)   |  |  |
| Partition coefficient n-octanol/water (Log Pow)              | 0.68 (Experimental value, EPA OPPTS 830.7560, 25 °C)  |  |  |
| 1-methoxypropan-2-ol (107-98-2)                              |   |  |  |
| LC50 fish 1  | ≥ 1000 mg/l (Equivalent or similar to OECD 203, 96 h, Oncorhynchus mykiss, Semi-static system, Fresh water, Experimental value, Lethal) |  |  |

Not classified Not classified

STOT-repeated exposure

Aspiration hazard



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| 1-methoxypropan-2-ol (107-98-2)                 |  |  |  |
|---|--|--|--|
| ErC50 (algae)                                   | > 1000 mg/l (7 day(s), Pseudokirchneriella subcapitata, Static system, Fresh water,<br>Experimental value, Nominal concentration)              |  |  |
| Partition coefficient n-octanol/water (Log Pow) | < 1 (Experimental value, Equivalent or similar to OECD 117, 20 °C)   |  |  |
| Partition coefficient n-octanol/water (Log Koc) | 0.152 (log Koc, SRC PCKOCWIN v2.0, Calculated value)   |  |  |
| Xylene (1330-20-7)                              |  |  |  |
| LC50 fish 1                                     | 2.6 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Oncorhynchus mykiss, Static renewal, Fresh water, Read-across, Lethal)                    |  |  |
| ErC50 (algae)                                   | 4.36 mg/l (OECD 201: Alga, Growth Inhibition Test, 73 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, GLP) |  |  |
| BCF fish 1                                      | 7.2 – 25.9 (56 day(s), Oncorhynchus mykiss, Flow-through system, Fresh water, Read-across)   |  |  |
| Partition coefficient n-octanol/water (Log Pow) | 3.2 (Read-across, 20 °C)   |  |  |
| Partition coefficient n-octanol/water (Log Koc) | 2.73 (log Koc, Equivalent or similar to OECD 121, Read-across)   |  |  |
| Ethylbenzene (100-41-4)                         |  |  |  |
| LC50 fish 1                                     | 5.1 mg/l (ASTM, 96 h, Menidia menidia, Flow-through system, Salt water, Experimental value, Lethal)  |  |  |
| LC50 fish 2                                     | 4.2 mg/l 96 h; Salmo gairdneri (Oncorhynchus mykiss)   |  |  |
| EC50 Daphnia 1                                  | 1.8 – 2.4 mg/l (US EPA, 48 h, Daphnia magna, Static system, Fresh water, Experimental value)   |  |  |
| EC50 Daphnia 2                                  | 75 mg/l (48 h; Daphnia magna)  |  |  |
| EC50 other aquatic organisms 1                  | 48 mg/l (72 h; Scenedesmus subspicatus)  |  |  |
| EC50 72h algae (1)                              | 5.4 mg/l (US EPA, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, Cell numbers)                               |  |  |
| BCF fish 1                                      | 1 (6 week(s), Oncorhynchus kisutch, Flow-through system, Salt water, Experimental value)   |  |  |
| BCF fish 2                                      | 15 – 79 (Carassius auratus)  |  |  |
| BCF other aquatic organisms 1                   | 4.68 (Lamellibranchiata)   |  |  |
| Partition coefficient n-octanol/water (Log Pow) | 3.6 (Experimental value, EU Method A.8: Partition Coefficient, 20 °C)  |  |  |
| Partition coefficient n-octanol/water (Log Koc) | 2.71 (log Koc, PCKOCWIN v1.66, QSAR)   |  |  |
| TLM fish 1                                      | 29 ppm (96 h; Lepomis macrochirus; Hard water)   |  |  |
| TLM fish 2                                      | 42.3 mg/l (96 h; Pimephales promelas)  |  |  |
| TLM other aquatic organisms 1                   | 10 - 100,96 h  |  |  |
| Threshold limit algae 1                         | > 160 mg/l (192 h; Scenedesmus quadricauda; Toxicity test)   |  |  |
| Threshold limit algae 2                         | 33 mg/l (192 h; Microcystis aeruginosa; Toxicity test)   |  |  |
| zinc oxide (1314-13-2)                          |  |  |  |
| LC50 fish 1                                     | 1.55 mg/l (96 h, Danio rerio, Static system, Fresh water, Experimental value, Lethal)  |  |  |
| EC50 Daphnia 1                                  | 1 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, Zinc ion)        |  |  |
| Partition coefficient n-octanol/water (Log Pow) | 1.53 (Estimated value)   |  |  |
| Partition coefficient n-octanol/water (Log Koc) | 2.2 (log Koc, Literature study)  |  |  |

#### 12.2. Persistence and degradability 11:14: 7:.

| Hilti Zinc spray MZN-400                       |  |  |  |
|--|--|--|--|
| Persistence and degradability                  | No additional information available                        |  |  |
| zinc powder - zinc dust (stabilised) (7440-66- | zinc powder - zinc dust (stabilised) (7440-66-6)           |  |  |
| Not rapidly degradable                         |  |  |  |
| Persistence and degradability                  | Biodegradability: not applicable.                          |  |  |
| Chemical oxygen demand (COD)                   | Not applicable   |  |  |
| ThOD   | Not applicable   |  |  |
| BOD (% of ThOD)                                | Not applicable   |  |  |
| ethyl acetate (141-78-6)                       |  |  |  |
| Persistence and degradability                  | Biodegradable in the soil. Readily biodegradable in water. |  |  |
| Biochemical oxygen demand (BOD)                | 0.293 g O <sub>2</sub> /g substance                        |  |  |
| Chemical oxygen demand (COD)                   | 1.69 g O <sub>2</sub> /g substance                         |  |  |
| ThOD   | 1.82 g O <sub>2</sub> /g substance                         |  |  |



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| 1-methoxypropan-2-ol (107-98-2) |   |  |  |
|---------------------------------|---|--|--|
| Persistence and degradability   | Readily biodegradable in the soil. Readily biodegradable in water.          |  |  |
| ThOD                            | 1.95 g O <sub>2</sub> /g substance  |  |  |
| Xylene (1330-20-7)              |   |  |  |
| Persistence and degradability   | Biodegradable in the soil. Readily biodegradable in water.                  |  |  |
| Ethylbenzene (100-41-4)         |   |  |  |
| Persistence and degradability   | Biodegradable in the soil. Readily biodegradable in water.                  |  |  |
| Biochemical oxygen demand (BOD) | 1.44 g O <sub>2</sub> /g substance  |  |  |
| Chemical oxygen demand (COD)    | 2.1 g O <sub>2</sub> /g substance   |  |  |
| ThOD                            | 3.17 g O <sub>2</sub> /g substance  |  |  |
| BOD (% of ThOD)                 | (20 day(s)) 45.4  |  |  |
| zinc oxide (1314-13-2)          |   |  |  |
| Persistence and degradability   | Biodegradability in soil: not applicable. Biodegradability: not applicable. |  |  |
| Chemical oxygen demand (COD)    | Not applicable (inorganic)  |  |  |
| ThOD                            | Not applicable (inorganic)  |  |  |

#### 12.3. **Bioaccumulative potential**

| Hilti Zinc spray MZN-400                         |  |  |  |
|--|--|--|--|
| Bioaccumulative potential                        | No additional information available  |  |  |
| zinc powder - zinc dust (stabilised) (7440-66-6) |  |  |  |
| BCF fish 1                                       | 0.002 (40 day(s), Danio rerio, Semi-static system, Fresh water, Read-across)               |  |  |
| Bioaccumulative potential                        | Bioaccumulation: not applicable.   |  |  |
| ethyl acetate (141-78-6)                         |  |  |  |
| BCF fish 1                                       | 30 (3 day(s), Leuciscus idus, Static renewal, Experimental value)                          |  |  |
| Partition coefficient n-octanol/water (Log Pow)  | 0.68 (Experimental value, EPA OPPTS 830.7560, 25 °C)                                       |  |  |
| Bioaccumulative potential                        | Low potential for bioaccumulation (BCF < 500).   |  |  |
| 1-methoxypropan-2-ol (107-98-2)                  |  |  |  |
| Partition coefficient n-octanol/water (Log Pow)  | < 1 (Experimental value, Equivalent or similar to OECD 117, 20 °C)                         |  |  |
| Partition coefficient n-octanol/water (Log Koc)  | 0.152 (log Koc, SRC PCKOCWIN v2.0, Calculated value)                                       |  |  |
| Bioaccumulative potential                        | Low potential for bioaccumulation (Log Kow < 4).   |  |  |
| Xylene (1330-20-7)                               |  |  |  |
| BCF fish 1                                       | 7.2 – 25.9 (56 day(s), Oncorhynchus mykiss, Flow-through system, Fresh water, Read-across) |  |  |
| Partition coefficient n-octanol/water (Log Pow)  | 3.2 (Read-across, 20 °C)   |  |  |
| Partition coefficient n-octanol/water (Log Koc)  | 2.73 (log Koc, Equivalent or similar to OECD 121, Read-across)                             |  |  |
| Bioaccumulative potential                        | Low potential for bioaccumulation (BCF < 500).   |  |  |
| Ethylbenzene (100-41-4)                          |  |  |  |
| BCF fish 1                                       | 1 (6 week(s), Oncorhynchus kisutch, Flow-through system, Salt water, Experimental value)   |  |  |
| BCF fish 2                                       | 15 – 79 (Carassius auratus)  |  |  |
| BCF other aquatic organisms 1                    | 4.68 (Lamellibranchiata)   |  |  |
| Partition coefficient n-octanol/water (Log Pow)  | 3.6 (Experimental value, EU Method A.8: Partition Coefficient, 20 °C)                      |  |  |
| Partition coefficient n-octanol/water (Log Koc)  | 2.71 (log Koc, PCKOCWIN v1.66, QSAR)   |  |  |
| Bioaccumulative potential                        | Low potential for bioaccumulation (BCF < 500).   |  |  |
| zinc oxide (1314-13-2)                           |  |  |  |
| Partition coefficient n-octanol/water (Log Pow)  | 1.53 (Estimated value)   |  |  |
| Partition coefficient n-octanol/water (Log Koc)  | 2.2 (log Koc, Literature study)  |  |  |
| Bioaccumulative potential                        | Not bioaccumulative.   |  |  |

#### 12.4. Mobility in soil

| Hilti Zinc spray MZN-400 |                                     |
|--------------------------|-------------------------------------|
| Mobility in soil         | No additional information available |



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According to ICOP 2014

| zinc powder - zinc dust (stabilised) (7440-66-6) |   |  |  |  |
|--|---|--|--|--|
| Ecology - soil                                   | Adsorbs into the soil.  |  |  |  |
| ethyl acetate (141-78-6)                         | ethyl acetate (141-78-6)  |  |  |  |
| Surface tension                                  | No data available in the literature   |  |  |  |
| Partition coefficient n-octanol/water (Log Pow)  | 0.68 (Experimental value, EPA OPPTS 830.7560, 25 °C)  |  |  |  |
| Ecology - soil                                   | Low potential for adsorption in soil.   |  |  |  |
| 1-methoxypropan-2-ol (107-98-2)                  |   |  |  |  |
| Surface tension                                  | 0.0707 N/m (20 °C, 1 g/l, OECD 115: Surface Tension of Aqueous Solutions)                           |  |  |  |
| Partition coefficient n-octanol/water (Log Pow)  | < 1 (Experimental value, Equivalent or similar to OECD 117, 20 °C)                                  |  |  |  |
| Partition coefficient n-octanol/water (Log Koc)  | 0.152 (log Koc, SRC PCKOCWIN v2.0, Calculated value)  |  |  |  |
| Ecology - soil                                   | Highly mobile in soil.  |  |  |  |
| Xylene (1330-20-7)                               | Xylene (1330-20-7)  |  |  |  |
| Surface tension                                  | 28.01 – 29.76 mN/m (25 °C)  |  |  |  |
| Partition coefficient n-octanol/water (Log Pow)  | 3.2 (Read-across, 20 °C)  |  |  |  |
| Partition coefficient n-octanol/water (Log Koc)  | 2.73 (log Koc, Equivalent or similar to OECD 121, Read-across)                                      |  |  |  |
| Ecology - soil                                   | Low potential for adsorption in soil. May be harmful to plant growth, blooming and fruit formation. |  |  |  |
| Ethylbenzene (100-41-4)                          |   |  |  |  |
| Surface tension                                  | 71.2 mN/m (23 °C, 0.058 g/l, EU Method A.5: Surface tension)  |  |  |  |
| Partition coefficient n-octanol/water (Log Pow)  | 3.6 (Experimental value, EU Method A.8: Partition Coefficient, 20 °C)                               |  |  |  |
| Partition coefficient n-octanol/water (Log Koc)  | 2.71 (log Koc, PCKOCWIN v1.66, QSAR)  |  |  |  |
| Ecology - soil                                   | Low potential for adsorption in soil. Toxic to soil organisms.                                      |  |  |  |
| zinc oxide (1314-13-2)                           |   |  |  |  |
| Surface tension                                  | Not applicable (solid)  |  |  |  |
| Partition coefficient n-octanol/water (Log Pow)  | 1.53 (Estimated value)  |  |  |  |
| Partition coefficient n-octanol/water (Log Koc)  | 2.2 (log Koc, Literature study)   |  |  |  |
| Ecology - soil                                   | Low potential for adsorption in soil.   |  |  |  |

#### 12.5. Other adverse effects

Ozone

ne

Other adverse effects

Not classified No additional information available

### **SECTION 13: Disposal information**

#### 13.1. Disposal methods

Waste treatment methods Product/Packaging disposal recommendations Additional information 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.

## **SECTION 14: Transport information**

#### In accordance with ADR / IATA / IMDG / RID

| ADR                            | IMDG                          | ΙΑΤΑ                         | RID                   |  |  |
|--------------------------------|-------------------------------|------------------------------|-----------------------|--|--|
| 14.1. UN number                |                               |                              |                       |  |  |
| UN 1950                        | UN 1950                       | UN 1950                      | UN 1950               |  |  |
| 14.2. UN proper shipping nam   | 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, | UN 1950 AEROSOLS, 2.1 |  |  |
|                                |                               | 2.1                          |                       |  |  |



Safety Data Sheet

According to ICOP 2014

| 44.2 Transport barand alage/   |                                 |                                 |                                 |  |  |  |  |
|--|---------------------------------|---------------------------------|---------------------------------|--|--|--|--|
| 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 :  | Dangerous for the environment : | Dangerous for the environment : | Dangerous for the environment : |  |  |  |  |
| Yes  | Yes                             | Yes                             | Yes                             |  |  |  |  |
|  | Marine pollutant : Yes          |                                 |                                 |  |  |  |  |
| Environmentally hazardous substances derogation applies (quantity of liquids ≤ 5 litres or net mass of solids ≤ 5 kg). The environmentally hazardous substance mark is therefore not required, as stated in the ADR regulation, section 5.2.1.8.1. |                                 |                                 |                                 |  |  |  |  |
| No supplementary information available   |                                 |                                 |                                 |  |  |  |  |

#### 14.6. Special precautions for user

| Overland transport              |                             |  |  |
|---------------------------------|-----------------------------|--|--|
| Classification code (ADR)       | 5F                          |  |  |
| Special provisions (ADR)        | 190, 327, 344, 625          |  |  |
| Limited quantities (ADR)        | 11                          |  |  |
| Packing instructions (ADR)      | P207, LP02                  |  |  |
| Transport category (ADR)        | 2                           |  |  |
| Tunnel restriction code (ADR)   | D                           |  |  |
| Transport by sea                |                             |  |  |
| Special provisions (IMDG)       | 63, 190, 277, 327, 344, 959 |  |  |
| Limited quantities (IMDG)       | SP277                       |  |  |
| Packing instructions (IMDG)     | P207, LP02                  |  |  |
| EmS-No. (Fire)                  | F-D                         |  |  |
| EmS-No. (Spillage)              | S-U                         |  |  |
| Stowage category (IMDG)         | None                        |  |  |
| Air transport                   |                             |  |  |
| PCA packing instructions (IATA) | 203                         |  |  |
| PCA max net quantity (IATA)     | 75kg                        |  |  |
| CAO packing instructions (IATA) | 203                         |  |  |
| Special provisions (IATA)       | A145, A167                  |  |  |
| Rail transport                  |                             |  |  |
| Special provisions (RID)        | 190, 327, 344, 625          |  |  |
| Limited quantities (RID)        | 1L                          |  |  |
| Packing instructions (RID)      | P207, LP02                  |  |  |
|                                 |                             |  |  |

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

#### 14.8. 14.8. Hazchem or Emergency Action Code

Not applicable

#### SECTION 15: Regulatory information

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

No additional information available



Safety Data Sheet

According to ICOP 2014

#### 15.2. Chemical safety assessment

No additional information available

| SECTION 16: Other          | information             |                               |                      |          |
|----------------------------|-------------------------|-------------------------------|----------------------|----------|
| Version                    | 1.1                     | 1                             |                      |          |
| Issue date                 |                         | 5/1/2021                      |                      |          |
| Revision date              |                         | /01/2021                      |                      |          |
|                            |                         |                               |                      |          |
| Supersedes                 | 17                      | /12/2018                      |                      |          |
| Indication of changes:     |                         |                               |                      |          |
| Section                    | Changed item            | Change                        | 0                    | Comments |
| 1.3                        | Department issuing data | Added                         |                      |          |
|                            | specification sheet     |                               |                      |          |
| Full text of H-statements: |                         |                               |                      |          |
| Acute Tox. 4 (Dermal)      | Acute toxicity (derma   | l), Category 4                |                      | 7        |
| Acute Tox. 4 (Inhalatio    |                         |                               |                      | _        |
| Aquatic Acute 1            | Hazardous to the aqu    | uatic environment — Acute Ha  | azard, Category 1    |          |
| Aquatic Chronic 1          |                         | uatic environment — Chronic   |                      |          |
| Aquatic Chronic 2          | Hazardous to the aq     | uatic environment — Chronic   | Hazard, Category 2   |          |
| Aquatic Chronic 3          | Hazardous to the aq     | uatic environment — Chronic   | Hazard, Category 3   |          |
| Asp. Tox. 1                | Aspiration hazard, C    | ategory 1                     |                      |          |
| Eye Irrit. 2               | Serious eye damage      | /eye irritation, Category 2   |                      |          |
| Flam. Aerosol 1            | Flammable aerosols,     | Category 1                    |                      |          |
| Flam. Liq. 2               | Flammable liquids, C    | ategory 2                     |                      |          |
| Flam. Liq. 3               | Flammable liquids, C    | ategory 3                     |                      |          |
| Skin Irrit. 2              | Skin corrosion/irritati | on, Category 2                |                      |          |
| STOT RE 2                  | Specific target organ   | toxicity - Repeated exposure  | e, Category 2        |          |
| STOT SE 3                  | 1 0 0                   | toxicity — Single exposure, C | Category 3, Narcosis |          |
| H222                       | Extremely flammable     |                               |                      |          |
| H225                       | Highly flammable liqu   |                               |                      |          |
| H226                       | Flammable liquid and    | •                             |                      |          |
| H304                       |                         | wed and enters airways.       |                      |          |
| H312                       | Harmful in contact wi   |                               |                      |          |
| H315                       | Causes skin irritation  |                               |                      |          |

| H315 | Causes skin irritation.  |
|------|--|
| H319 | Causes serious eye irritation.                                     |
| H332 | Harmful if inhaled.  |
| H336 | May cause drowsiness or dizziness.                                 |
| H373 | May cause damage to organs through prolonged or repeated exposure. |
| H400 | Very toxic to aquatic life.  |
| H410 | Very toxic to aquatic life with long lasting effects.              |
| H411 | Toxic to aquatic life with long lasting effects.                   |
| H412 | Harmful to aquatic life with long lasting effects.                 |

SDS\_MY\_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.