

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878 Issue date: 11/24/2023 Revision date: 11/24/2023 Version: 1.0

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

1.1. Product identifier

Product form Mixture

Name Gre. Gleitmittel DX
Product code BU Direct Fastening

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

1.2.1. Relevant identified uses

Use of the substance/mixture Ceramic Paste

1.2.2. Uses advised against

de.kundenservice@hilti.com

Hilti Deutschland AG

No additional information available

1.3. Details of the supplier of the safety data sheet

Supplier Department issuing data specification sheet

Hilti AG

 Hiltistr. 2
 Feldkircherstraße 100

 DE- 86916 Kaufering
 FL- 9494 Schaan

 Deutschland
 Liechtenstein

 T +49 8191 90-0 - F +49 8191 90-1122
 T +423 234 2111

1.4. Emergency telephone number

Emergency number Emergency CONTACT (24-Hour-Number):

GBK GmbH Global Regulatory Compliance

df-hse@hilti.com

+49 (0)6132-84463

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Hazardous to the aquatic environment – Acute Hazard, Category 1 H400 Hazardous to the aquatic environment – Chronic Hazard, Category 1 H410

Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

Very toxic to aquatic life with long lasting effects.

2.2. Label elements

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

Hazard pictograms (CLP)

GHS09

Signal word (CLP) Warning
Contains zinc oxide

Hazard statements (CLP) H410 - Very toxic to aquatic life with long lasting effects.

Precautionary statements (CLP) P391 - Collect spillage.

P273 - Avoid release to the environment.



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P501 - Dispose of contents and container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards

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

Component	
zinc oxide (1314-13-2)	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	
	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

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]
zinc oxide	CAS-No.: 1314-13-2	≤ 30	Aquatic Acute 1, H400 Aquatic Chronic 1, H410

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 after inhalation Remove person to fresh air and keep comfortable for breathing.

First-aid measures after skin contact Wash skin with plenty of water.

First-aid measures after eye contact Rinse eyes with water as a precaution.

First-aid measures after ingestion Rinse mouth out with water. Call a poison center or a doctor if you feel unwell.

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

No additional information available

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Use extinguishing media appropriate for surrounding fire. Water spray. Dry powder. Foam.

Carbon dioxide.



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5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire Toxic fumes may be released. On burning: release of harmful/irritant gases/vapours (zinc

oxide).

5.3. Advice for firefighters

Protection during firefighting Do not attempt to take action without suitable protective equipment. Self-contained

breathing apparatus. Complete protective clothing.

Other information Collect contaminated extinguishing water separately and must not enter the sewage

system.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures Ventilate spillage area.

6.1.2. For emergency responders

Protective equipment Do not attempt to take action without suitable protective equipment. For further information

refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment Collect spillage.

Methods for cleaning up Take up liquid spill into absorbent material.

Other information Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling Ensure good ventilation of the work station. Wear personal protective equipment.

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

Storage conditions Store in a well-ventilated place. Keep container tightly closed. Keep cool.

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

No additional information available

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available



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8.1.4. DNEL and PNEC

zinc oxide (1314-13-2)		
PNEC (Water)		
PNEC aqua (freshwater)	14.4 μg/L	
PNEC aqua (marine water)	7.2 μg/L	
PNEC (Sediment)		
PNEC sediment (freshwater)	146.9 mg/kg dwt	
PNEC sediment (marine water)	162.2 mg/kg dwt	
PNEC (Soil)		
PNEC soil	83.1 mg/kg dwt	
PNEC (STP)		
PNEC sewage treatment plant	100 μg/L	

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:

Safety glasses

8.2.2.2. Skin protection

Skin and body protection:

Wear suitable protective clothing

Hand protection:

In case of repeated or prolonged contact wear gloves. Nitrile rubber

8.2.2.3. Respiratory protection

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment. Respiratory protection should only be used to control the residual risk during short-term activities if all practically feasible steps to reduce the hazard at the source have been followed, e.g. by restraint and/or local exhaust ventilation. For details on conditions of use and maximum concentrations of use, see DGUV Regulation 112-190 - Use of respiratory protective equipment.

8.2.2.4. Thermal hazards

No additional information available



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8.2.3. Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

No additional information available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state Liquid Colour white. Odour characteristic. Odour threshold Not available Melting point Not applicable Not available Freezing point Boiling point Not available Flammability Non flammable. Lower explosion limit Not available Upper explosion limit Not available Flash point > 260 °C Auto-ignition temperature Non oxidizing Decomposition temperature Not available Not available рΗ Not available Viscosity, kinematic Not available Solubility Partition coefficient n-octanol/water (Log Kow) Not available Not available Vapour pressure Vapour pressure at 50°C Not available 1.39 g/cm³ Density Not available Relative density Relative vapour density at 20°C Not available

9.2. Other information

Particle characteristics

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

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

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

Not applicable



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10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

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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)		
zinc oxide (1314-13-2)			
LD50 oral rat	> 5000 mg/kg bodyweight (OECD 401 method)		
LD50 dermal rat	> 2000 mg/kg bodyweight (OECD 402 method)		
LC50 Inhalation - Rat (Dust/Mist)	> 5.7 mg/l/4h (OECD 403 method)		
Skin corrosion/irritation	Not classified (Based on available data, the classification criteria are not met)		
Serious eye damage/irritation	Not classified (Based on available data, the classification criteria are not met)		
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)		
Reproductive toxicity	Not classified (Based on available data, the classification criteria are not met)		
STOT-single exposure	Not classified (Based on available data, the classification criteria are not met)		
STOT-repeated exposure	Not classified (Based on available data, the classification criteria are not met)		

Not classified (Based on available data, the classification criteria are not met)

11.2. Information on other hazards

No additional information available

SECTION 12: Ecological information

12.1.	Toxicity
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Aspiration hazard

Ecology - general Very toxic to aquatic life with long lasting effects.

(acute)

zinc oxide (1314-13-2)

LC50 - Fish [1]

1.55 mg/l (96 h; Danio rerio)

EC50 - Crustacea [1]

1 mg/l (48 h; Daphnia magna; (OECD 202 method))

EC50 72h - Algae [1]

0.136 mg/l (72 h; Pseudokirchneriella subcapitata; (OECD 201 method))

NOEC chronic fish

0.039 mg/l (30 d; Oncorhynchus mykiss; (OECD 215 method); Read-across)

NOEC chronic crustacea

0.04 mg/l (21 d; Daphnia magna; (OECD 211 method); Read-across)

NOEC chronic algae

0.01 mg/l (4 d; Dunaliella tertiolecta; IRSA-CNR; Read-across)

12.2. Persistence and degradability

zinc oxide (1314-13-2)	
Persistence and degradability	Not applicable for inorganic substances.



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12.3. Bioaccumulative potential

zinc oxide (1314-13-2)	
Bioaccumulative potential	Not applicable for inorganic substances.

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

Gre. Gleitmittel DX

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

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

Waste treatment methods

Product/Packaging disposal recommendations

Ecology - waste materials European List of Waste (LoW, EC 2150/2002)

HP Code

Dispose of contents/container in accordance with licensed collector's sorting instructions. Should not be landfilled with household waste. Do not discharge into the sewer. Dispose in a safe manner in accordance with local/national regulations. Refer to manufacturer/supplier

for information on recovery/recycling. Avoid release to the environment. 12 01 12* - spent waxes and fats

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 / ADN / RID

ADR	IMDG	IATA	ADN	RID	
14.1. UN number or ID number					
UN 3082	UN 3082	UN 3082	UN 3082	UN 3082	
14.2. UN proper shipping n	ame				
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.	Environmentally hazardous substance, liquid, n.o.s.	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.	
Transport document descr	iption				
UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., 9, III, (-)	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., 9, III, MARINE POLLUTANT	UN 3082 Environmentally hazardous substance, liquid, n.o.s., 9, III	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., 9, III	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., 9, III	



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ADR	IMDG	IATA	ADN	RID		
14.3. Transport hazard class(es)						
9	9	9	9	9		
**************************************	**************************************		**************************************	**************************************		
14.4. Packing group						
III	III	III	III	III		
14.5. Environmental hazard	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	Dangerous for the environment: Yes		
Environmentally hazardous substances derogation applies (quantity of liquids ≤ 5 litres or net mass of solids ≤ 5 kg), The environmentally hazardous substances mark is therefore not required according to ADR Special Provision 375, IATA-DGR A197 and IMDG-Code 2.10.2.7.						

14.6. Special precautions for user

Overland transport

Classification code (ADR) M6

274, 335, 375, 601 Special provisions (ADR)

Limited quantities (ADR) 51 Excepted quantities (ADR)

P001, IBC03, LP01, R001 Packing instructions (ADR)

PP1 Special packing provisions (ADR) Mixed packing provisions (ADR) MP19 Portable tank and bulk container instructions (ADR) T4 Portable tank and bulk container special provisions TP1, TP29

(ADR)

LGBV Tank code (ADR) Vehicle for tank carriage ΑT Transport category (ADR) Special provisions for carriage - Packages (ADR) V12 Special provisions for carriage - Loading, unloading CV13

and handling (ADR)

Hazard identification number (Kemler No.)

Orange plates



Tunnel restriction code (ADR)

Transport by sea

Special provisions (IMDG) 274, 335, 969 Limited quantities (IMDG) 5 L Excepted quantities (IMDG) E1 LP01, P001 Packing instructions (IMDG) Special packing provisions (IMDG) PP1 IBC packing instructions (IMDG) IBC03 Tank instructions (IMDG) T4 TP1, TP29 Tank special provisions (IMDG) EmS-No. (Fire) F-A EmS-No. (Spillage) S-F



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Stowage category (IMDG)

Air transport

PCA Excepted quantities (IATA) E1 PCA Limited quantities (IATA) Y964 PCA limited quantity max net quantity (IATA) 30kgG PCA packing instructions (IATA) 964 PCA max net quantity (IATA) 450L CAO packing instructions (IATA) 964 CAO max net quantity (IATA) 450L

Special provisions (IATA) A97, A158, A197, A215

ERG code (IATA)

Inland waterway transport

Classification code (ADN) M6

Special provisions (ADN) 274, 335, 375, 601

Limited quantities (ADN) 5 L Excepted quantities (ADN) E1 Carriage permitted (ADN) Equipment required (ADN) PP Number of blue cones/lights (ADN)

Rail transport

M6 Classification code (RID)

Special provisions (RID) 274, 335, 375, 601

Limited quantities (RID) Excepted quantities (RID) E1

Packing instructions (RID) P001, IBC03, LP01, R001

Special packing provisions (RID) PP1 Mixed packing provisions (RID) MP19 Portable tank and bulk container instructions (RID) TP1, TP29

Portable tank and bulk container special provisions

(RID)

LGBV Tank codes for RID tanks (RID) Transport category (RID) Special provisions for carriage – Packages (RID) W12 CW13, CW31

Special provisions for carriage - Loading, unloading

and handling (RID)

CE8 Colis express (express parcels) (RID) Hazard identification number (RID) 90

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

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(c)		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	



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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)

Seveso Directive (Disaster Risk Reduction)

Seveso III Part I (Categories of dangerous substances)	Qualifying quantity (tonnes)	
	Lower-tier	Upper-tier
E1 Hazardous to the Aquatic Environment in Category Acute 1 or Chronic 1	100	200

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

Germany

Employment restrictions Observe restrictions according Act on the Protection of Working Mothers (MuSchG).

Observe restrictions according Act on the Protection of Young People in Employment

(JArbSchG)

National Rules and Recommendations TRGS 510: Storage of hazardous substances in non-stationary containers.TRGS 510:

Storage of hazardous substances in non-stationary containers.

Water hazard class (WGK) WGK 2, Significantly hazardous to water (Classification according to AwSV, Annex 1).

Storage class (LGK, TRGS 510)

LGK 10 - Combustible liquids.

Hazardous Incident Ordinance (12. BImSchV)

Listed in the 12. BImSchV (Annex I) under: 1.3.1

- Quantity threshold for operational area under § 1 para. 1

- Sentence 1 :100000 kg - Sentence 2 :200000 kg

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Abbreviations and acronyms:		
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	
BCF	Bioconcentration factor	



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Abbreviations and acronyms:		
BLV	Biological limit value	
BOD	Biochemical oxygen demand (BOD)	
COD	Chemical oxygen demand (COD)	
DMEL	Derived Minimal Effect level	
DNEL	Derived-No Effect Level	
EC-No.	European Community number	
EC50	Median effective concentration	
EN	European Standard	
IARC	International Agency for Research on Cancer	
IATA	International Air Transport Association	
IMDG	International Maritime Dangerous Goods	
LC50	Median lethal concentration	
LD50	Median lethal dose	
LOAEL	Lowest Observed Adverse Effect Level	
NOAEC	No-Observed Adverse Effect Concentration	
NOAEL	No-Observed Adverse Effect Level	
NOEC	No-Observed Effect Concentration	
OECD	Organisation for Economic Co-operation and Development	
OEL	Occupational Exposure Limit	
PBT	Persistent Bioaccumulative Toxic	
PNEC	Predicted No-Effect Concentration	
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail	
SDS	Safety Data Sheet	
STP	Sewage treatment plant	
ThOD	Theoretical oxygen demand (ThOD)	
TLM	Median Tolerance Limit	
VOC	Volatile Organic Compounds	
CAS-No.	Chemical Abstract Service number	
N.O.S.	Not Otherwise Specified	
vPvB	Very Persistent and Very Bioaccumulative	
ED	Endocrine disrupting properties	

Data sources

Supplier's safety documents. European Chemicals Agency, http://echa.europa.eu/.

Full text of H- and EUH-statements:		
Aquatic Acute 1	Hazardous to the aquatic environment – Acute Hazard, Category 1	
Aquatic Chronic 1	Hazardous to the aquatic environment – Chronic Hazard, Category 1	



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Full text of H- and EUH-statements:		
H400	Very toxic to aquatic life.	
H410	Very toxic to aquatic life with long lasting effects.	

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.