

Cleaning Spray 500 ml

Safety Data Sheet

according to SS 586 Part 3 (2014)
Issue date: 13.12.2022

Revision date: 13.12.2022

Supersedes: 11.04.2017

Version: 3.0

SECTION 1: Identification

1.1. Product identifier

Name Cleaning Spray 500 ml
Product code BU Direct Fastening

1.2. Other means of identification

No additional information available

1.3. Recommended use of the chemical and restrictions on use

Recommended use For professional use only

1.4. Supplier's details

Supplier

Hilti Far East Private Ltd.
No 20 Harbour Drive, #06-06/08 PSA Vista Singapore Singapur 117612
T +65 6777 7887 - F +65 6777 3057
sg-customerservice@hilti.com

Department issuing data specification sheet

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Hiltistrasse 6 Kaufering Deutschland 86916
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df-hse@hilti.com

1.5. Emergency phone number

Emergency number Schweizerisches Toxikologisches Informationszentrum – 24h Service
+41 44 251 51 51 (international)
+65 6777 7887

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Health hazards Skin corrosion/irritation, Category 2
Specific target organ toxicity – Single exposure, Category 3
Environmental hazards Hazardous to the aquatic environment – Chronic Hazard, Category 2

2.2. GHS label elements including precautionary statements

Hazard pictograms (GHS SG)



Signal word (GHS SG)

Danger

Hazard statements (GHS SG)

H222 : Extremely flammable aerosol.
H315 : Causes skin irritation.
H336 : May cause drowsiness or dizziness.
H411 : Toxic to aquatic life with long lasting effects.

Precautionary statements

Prevention

P251 : Do not pierce or burn, even after use.
P210 : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. heat, sparks, open flames, hot surfaces
P211 : Do not spray on an open flame or other ignition source.
P261 : Avoid breathing dust, fume, gas, mist, spray, vapours.

Response

P305+P351+P338 : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Storage

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

2.3. Other hazards which do not result in classification

No additional information available

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SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Synonyms	Concentration (%)	Formula	Product identifier
hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, < 5% n-hexane	-	50 – 75	-	CAS-No.: 92128-66-0 EC-No.: 921-024-6
propane	-	10 – 12.5	C3H8	CAS-No.: 74-98-6 EC-No.: 200-827-9 EC Index-No.: 601-003-00-5
Butane	-	5 – 10	C4H10	CAS-No.: 106-97-8 EC-No.: 203-448-7 EC Index-No.: 601-004-00-0
isobutane	-	5 – 10	C4H10	CAS-No.: 75-28-5 EC-No.: 200-857-2 EC Index-No.: 601-004-00-0

SECTION 4: First-aid measures

4.1. Description of necessary first aid measures

First-aid measures general	Take off immediately all contaminated clothing. Call a poison center or a doctor if you feel unwell.
Inhalation	Remove person to fresh air and keep comfortable for breathing.
Skin contact	Gently wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention.
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.
Ingestion	Get immediate medical advice/attention.

4.2. Most important symptoms/effects, acute and delayed

Symptoms/effects after inhalation	Shortness of breath.
Symptoms/effects after skin contact	Irritation.

4.3. Indication of immediate medical attention and special treatment needed

Other medical advice or treatment	Treat symptomatically.
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SECTION 5: Fire-fighting measures

5.1. Suitable 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. Specific hazards arising from the chemical

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. Special protective actions for fire fighters

Precautionary measures fire	Fight fire remotely due to the risk of explosion.
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Firefighting instructions
Protection during firefighting

DO NOT fight fire when fire reaches explosives. Evacuate area.
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 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

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	Heat sources. Direct sunlight.
Storage temperature	5 – 25 °C
Heat and ignition sources	Keep away from heat and direct sunlight.
Information on mixed storage	Do not store with DX powder cartridges.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters/Occupational exposure limits

Cleaning Spray 500 ml	
Singapore - Occupational Exposure Limits	
Local name	Carbon dioxide
PEL (OEL TWA)	9000 mg/m ³
PEL (OEL TWA) [ppm]	5000 ppm
OEL STEL	54000 mg/m ³

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OEL STEL [ppm]	30000 ppm
Regulatory reference	WSH (General Provision) Regulation 2014
Butane (106-97-8)	
Singapore - Occupational Exposure Limits	
Local name	Butane
PEL (OEL TWA)	1900 mg/m ³
PEL (OEL TWA) [ppm]	800 ppm
Regulatory reference	WSH (General Provision) Regulation 2014

8.2. Monitoring

No additional information available

8.3. Appropriate engineering control measures

Appropriate engineering controls Ensure good ventilation of the work station.

8.4. Personal protection

Hand protection In case of repeated or prolonged contact wear gloves

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

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

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

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

Personal protective equipment symbol(s)



SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid
Appearance	Aerosol.
Colour	clear
Odour	solvent-like
Odour threshold	No data available
pH	Not determined
Relative evaporation rate (butylacetate=1)	No data available
Melting point	Not determined
Freezing point	No data available
Boiling point	No data available
Flash point	-12 °C (major component)
Auto-ignition temperature	> 200 °C (major component)
Decomposition temperature	Not determined
Flammability	Extremely flammable aerosol.
Vapour pressure	5500 hPa (20°C)

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Relative vapour density at 20°C	No data available
Relative density	Not determined
Density	0.7 g/cm ³ (20°C)
Solubility	Practically not miscible.
Partition coefficient n-octanol/water (Log Pow)	Not determined
Partition coefficient n-octanol/water (Log Kow)	No data available
Viscosity, dynamic	Not determined
Explosive properties	Product is not explosive. May form flammable/explosive vapour-air mixture.
Oxidising properties	No data available
Explosive limits	0.6 – 10.9 vol %

9.2. Other information

VOC content	663 g/l (97,90 %)
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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

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. Acute toxicity

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 (92128-66-0)	
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

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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	May cause drowsiness or dizziness.

hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, < 5% n-hexane (92128-66-0)	
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
Density	0.7 g/cm ³ (20°C)

SECTION 12: Ecological information

12.1. Toxicity

Hazardous to the aquatic environment, short-term (acute)	Not classified (Based on available data, the classification criteria are not met)
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, cyclics, < 5% n-hexane (92128-66-0)	
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>)
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))
propane (74-98-6)	
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)	
LC50 - Fish [1]	24.11 – 147.54 mg/l (Quantitative structure-activity relationship (QSAR))
EC50 - Crustacea [1]	7.02 – 69.43 mg/l (Quantitative structure-activity relationship (QSAR))
ErC50 algae	7.71 – 16.5 mg/l (Quantitative structure-activity relationship (QSAR))
Partition coefficient n-octanol/water (Log Pow)	1.09 – 2.8 (20 °C)

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12.2. Persistence and degradability

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Persistence and degradability	No additional information available
hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, < 5% n-hexane (92128-66-0)	
Persistence and degradability	Readily biodegradable.
Biodegradation	98 % (28 d; (OECD 301F method))
propane (74-98-6)	
Not rapidly degradable	
Persistence and degradability	Readily biodegradable in water.
Butane (106-97-8)	
Not rapidly degradable	
isobutane (75-28-5)	
Not rapidly degradable	
Persistence and degradability	Readily biodegradable.

12.3. Bioaccumulative potential

Cleaning Spray 500 ml	
Partition coefficient n-octanol/water (Log Pow)	Not determined
Bioaccumulative potential	No additional information available
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.

12.4. Mobility in soil

Cleaning Spray 500 ml	
Mobility in soil	No additional information available
Partition coefficient n-octanol/water (Log Pow)	Not determined
isobutane (75-28-5)	
Partition coefficient n-octanol/water (Log Pow)	1.09 – 2.8 (20 °C)

12.5. Other adverse effects

Ozone	Not classified
Other adverse effects	No additional information available

SECTION 13: Disposal considerations

Waste treatment methods	Dispose of contents/container in accordance with licensed collector's sorting instructions.
Product/Packaging disposal recommendations	Container under pressure. Do not drill or burn even after use.
Additional information	Flammable vapours may accumulate in the container.

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / RID

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ADR	IMDG	IATA	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
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)	1I
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 and handling (ADR)	CV9, CV12
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

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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 and handling (RID) CW9, CW12
 Colis express (express parcels) (RID) CE2
 Hazard identification number (RID) 23

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations specific for the product in question

Regulation	Component / Mixture
Fire Safety Act/Fire Safety (Petroleum and Flammable Materials) Regulations	Petroleum and Flammable Materials Propane; Butane; Isobutane
Maritime and Port Authority of Singapore (Dangerous, Petroleum and Explosives) Regulations	Maritime and Port Authority-Dangerous Goods Propane; Butane; Isobutane

15.2. International regulations

No additional information available

15.3 Chemical inventory status

No additional information available

SECTION 16: Other information

Issue date 13/12/2022
 Revision date 13/12/2022
 Data sources Source: European Chemicals Agency, <http://echa.europa.eu/>. manufacturer.
 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

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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
IATA - International Air Transport Association
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
PBT - 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

Indication of changes			
Section	Changed item	Change	Comments
	General	Modified	
11	Toxicological information	Modified	
12	Ecotoxicological information	Modified	
15	Regulatory information	Added	
3	Composition/information on ingredients	Modified	
8	Personal protective equipment	Modified	
9	Physical and chemical properties	Modified	

SDS SG 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.