



Cleaning Spray 500 ml

Safety Data Sheet

according to the United Nations GHS (Rev. 9, 2021)

Issue date: 30/10/2023

Revision date: 30/10/2023

Supersedes: 11/04/2017

Version: 3.1

SECTION 1: Identification

1.1. GHS Product identifier

Product form	Mixture
Name	Cleaning Spray 500 ml
UN-No. (ADR)	1950
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 India Private Limited
F-90/4, Okhla Industrial Area Phase 1
IN- 110 020 New Delhi
India
T +9111 4270 1111 - F +91 405 23318

Department issuing data specification sheet

Hilti AG
Feldkircherstraße 100
FL- 9494 Schaan
Liechtenstein
T +423 234 2111
df-hse@hilti.com

1.5. Emergency phone number

Emergency number
Emergency CONTACT (24-Hour-Number):
GBK GmbH Global Regulatory Compliance
+49 (0)6132-84463

+9111 4064 6500
+9111 4270 1122

Country	Organisation/Company	Address	Emergency number	Comment
India	National Poisons Information Centre (NPIC) All India Institute Of Medical Sciences, Department of Pharmacology	110029 New Delhi	+91 (0)11-2658 9391; +91 (0)11-2659 3677 +91 1800 116 117 (toll free)	

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

Classification according to the United Nations GHS

Aerosol, Category 1	H222;H229	On basis of test data
Skin corrosion/irritation, Category 2	H315	Calculation method
Specific target organ toxicity – Single exposure, Category 3, Narcosis	H336	Calculation method
Hazardous to the aquatic environment – Chronic Hazard, Category 2	H411	Calculation method

Full text of H-statements: see section 16

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2.2. GHS Label elements, including precautionary statements

Labelling according to the United Nations GHS

Hazard pictograms (GHS UN)



Signal word (GHS UN)

Danger

Hazardous ingredients

hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, < 5% n-hexane

Hazard statements (GHS UN)

H222 - Extremely flammable aerosol

H229 - Pressurised container: May burst if heated

H315 - Causes skin irritation

H336 - May cause drowsiness or dizziness

H411 - Toxic to aquatic life with long lasting effects

Precautionary statements (GHS UN)

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P251 - Do not pierce or burn, even after use.

P261 - Avoid breathing vapours, spray, mist.

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

2.3. Other hazards which do not result in classification

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to the United Nations GHS
hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, < 5% n-hexane	CAS-No.: 92128-66-0	50 – 75	Flam. Liq. 2, H225 Skin Irrit. 2, H315 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411
Propane	CAS-No.: 74-98-6	10 – 12.5	Flam. Gas 1A, H220 Press. Gas (Comp.), H280
Butane	CAS-No.: 106-97-8	5 – 10	Flam. Gas 1A, H220 Press. Gas (Comp.), H280
isobutane	CAS-No.: 75-28-5	5 – 10	Flam. Gas 1A, H220 Press. Gas (Comp.), H280
Carbon dioxide (Propellant gas (Aerosol))	CAS-No.: 124-38-9	< 2.5	Press. Gas (Liq.), H280

Full text of H-statements: see section 16

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.

First-aid measures after inhalation

Remove person to fresh air and keep comfortable for breathing.

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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/effects, acute and delayed

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

4.3. Indication of immediate medical attention and special treatment needed, if necessary

Treat symptomatically.

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.
Firefighting instructions	DO NOT fight fire when fire reaches explosives. Evacuate area.
Protection during firefighting	Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

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

6.2. Environmental precautions

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

6.3. Methods and materials for containment and cleaning up

Methods for cleaning up	Do not flush with water.
Other information	For further information refer to section 13. For further information refer to section 8: "Exposure controls/personal protection".

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SECTION 7: Handling and storage

7.1. Precautions for safe handling

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.
Additional hazards when processed	Hazardous waste due to potential risk of explosion. Do not pierce or burn, even after use.

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

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Butane (106-97-8)	
India - Occupational Exposure Limits	
Local name	Butane
PEL (OEL TWA)	1900 mg/m ³
PEL (OEL TWA) [ppm]	800 ppm
Regulatory reference	Factories Act 1948 [Act No. 63 of 1948] As amended by the Factories (Amendment) Act, 1987. The second shedule "Permissible levels of certain chemical substances in work environment"

Exposure limit values for the other components

8.2. Appropriate engineering controls

Appropriate engineering controls	Ensure good ventilation of the work station.
Environmental exposure controls	Avoid release to the environment.

8.3. Individual protection measures, such as personal protective equipment (PPE)

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 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

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Personal protective equipment symbol(s)



8.4. Exposure limit values for the other components

Butane (106-97-8)		
India	PEL (OEL TWA)	1900 mg/m ³
India	PEL (OEL TWA) [ppm]	800 ppm

SECTION 9: Physical and chemical properties

9.1. Basic physical and chemical properties

Physical state	Liquid
Appearance	Aerosol
Colour	clear.
Odour	solvent-like.
Odour threshold	Not available
Melting point	Not determined
Freezing point	Not available
Boiling point	Not available
Flammability	Extremely flammable aerosol.
Lower explosion limit	0.6 vol %
Upper explosion limit	10.9 vol %
Flash point	-12 °C (major component)
Auto-ignition temperature	> 200 °C (major component)
Decomposition temperature	Not determined
pH	Not determined
pH solution	Not available
Viscosity, kinematic (calculated value) (40 °C)	Not available
Partition coefficient n-octanol/water (Log Pow)	Not determined
Partition coefficient n-octanol/water (Log Kow)	Not available
Vapour pressure	5500 hPa (20°C)
Vapour pressure at 50°C	Not available
Density	0.7 g/cm ³ (20°C)
Relative density	Not determined
Relative vapour density at 20°C	Not available
Solubility	Practically not miscible.
Viscosity, dynamic	Not determined
Particle size	Not applicable

9.2. Data relevant with regard to physical hazard classes (supplemental)

Explosive properties	Product is not explosive. May form flammable/explosive vapour-air mixture
% of flammable ingredients	107.5 %
VOC content	663 g/l (97,90 %)

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

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10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

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

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Carbon dioxide. Carbon monoxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

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]	276798.8 ppm
isobutane (75-28-5)	
LC50 Inhalation - Rat [ppm]	> 18000 ppm
Skin corrosion/irritation	Causes skin irritation. pH: Not determined
Serious eye damage/irritation	Not classified (Based on available data, the classification criteria are not met) pH: Not determined
Respiratory or skin sensitisation	Not classified (Based on available data, the classification criteria are not met)
Germ cell mutagenicity	Not classified (Based on available data, the classification criteria are not met)
Carcinogenicity	Not classified (Based on available data, the classification criteria are not met)
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

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)
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Hazardous to the aquatic environment, long-term (chronic) Toxic to aquatic life with long lasting effects.

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), Read-across)
NOEC chronic fish	2.045 mg/l (Quantitative structure-activity relationship (QSAR))
NOEC chronic crustacea	0.17 mg/l (21 d; Daphnia magna; (OECD 211 method))
NOEC chronic algae	3 mg/l (72 h, Pseudokirchneriella subcapitata, (OECD 201 method))
Butane (106-97-8)	
LC50 - Fish [1]	24 – 148 mg/l (Quantitative structure-activity relationship (QSAR))
EC50 - Crustacea [1]	7 – 70 mg/l (Quantitative structure-activity relationship (QSAR))
EC50 72h - Algae [1]	7 – 17 mg/l (Quantitative structure-activity relationship (QSAR))
isobutane (75-28-5)	
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))
Carbon dioxide (124-38-9)	
LC50 - Fish [1]	35 mg/l (96 h; Salmo gairdneri; Literature data)
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.
Carbon dioxide (124-38-9)	
Not rapidly degradable	
Persistence and degradability	Not applicable.

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12.3. Bioaccumulative potential

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Partition coefficient n-octanol/water (Log Kow)	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 Kow)	1.09 – 2.8 (20 °C)
Bioaccumulative potential	Bioaccumulation unlikely.
Carbon dioxide (124-38-9)	
Partition coefficient n-octanol/water (Log Kow)	0.83 (Measured)

12.4. Mobility in soil

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Mobility in soil	No additional information available

12.5. Other adverse effects

Ozone	Not classified (Based on available data, the classification criteria are not met)
Other adverse effects	No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

Regional waste regulation	Disposal must be done according to official regulations.
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

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



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ADR	IMDG	IATA	RID
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 \leq 5 litres or net mass of solids \leq 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
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
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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

Regulatory reference Not listed on the United States TSCA (Toxic Substances Control Act) inventory.

SECTION 16: Other information

Issue date	30-10-2023
Revision date	30-10-2023
Supersedes	11-04-2017

Indication of changes:

General revision.

Section	Changed item	Change	Comments
3	Composition/information on ingredients	Modified	
8.2	Physical and chemical properties	Modified	
11	Toxicological information	Modified	
12.1	Ecotoxicological information	Modified	

Abbreviations and acronyms

CAS-No. - Chemical Abstract Service number
ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE - Acute Toxicity Estimate
CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
DNEL - Derived-No Effect Level
EC50 - Median effective concentration
ED - Endocrine disrupting properties
EC-No. - European Community number
EN - European Standard
IATA - International Air Transport Association
IMDG - International Maritime Dangerous Goods
IOELV - Indicative Occupational Exposure Limit Value
LC50 - Median lethal concentration



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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

Full text of H-statements:	
Asp. Tox. 1	Aspiration hazard, Category 1
Flam. Gas 1A	Flammable gases, Category 1A
Flam. Liq. 2	Flammable liquids, Category 2
Press. Gas (Comp.)	Gases under pressure : Compressed gas
Press. Gas (Liq.)	Gases under pressure : Liquefied gas
H220	Extremely flammable gas
H222	Extremely flammable aerosol
H225	Highly flammable liquid and vapour
H229	Pressurised container: May burst if heated
H280	Contains gas under pressure; may explode if heated
H304	May be fatal if swallowed and enters airways
H315	Causes skin irritation
H336	May cause drowsiness or dizziness
H411	Toxic to aquatic life with long lasting effects

SDS UN 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.