

PROTHO´SHINE SPRAY

SAFETY DATA SHEET

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

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English Translation Of German SDS

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

1.1. Product identifier

Product form : Mixture
Trade name : Protho´shine spray
Product code : -
SDS Number : 6057
Vaporizer : Aerosol
Product use : Professional use

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 : Dental laboratories and dental practices

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Dentaco GmbH & Co.KG
Max-Keith-Str. 46
45136 Essen
Deutschland
Tel.: + 49 (0) 201/ 8098290
Fax: + 49 (0) 201/ 80982999
Internet: www.dentaco.de ; info@dentaco.de
E-Mail: HSE@rle.de

1.4. Emergency telephone number

+ 49 (0) 201/ 8098290 (Mo. - Fr. 09:00 - 17:00)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Physical hazards	Aerosol, Category 1	H222;H229	Extremely flammable aerosol. Pressurised container: May burst if heated.
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Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

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

Hazard pictograms



Signal word

Danger

Hazard statements

H222	Extremely flammable aerosol.
H229	Pressurised container: May burst if heated.

Precautionary statements

Prevention

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.

Storage

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

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 %

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical name	CAS- No EC- No Index No RRN	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Notes
butane	106-97-8 203-448-7 601-004-00-0 01-2119474691-32-XXXX	60 - 80	Flam. Gas 1A, H220 Press. Gas (Comp.), H280	(Note C)(Note U)
Propane	74-98-6 200-827-9 601-003-00-5 01-2119486944-21-XXXX	15 - 25	Flam. Gas 1A, H220 Press. Gas (Comp.), H280	(Note U)
isobutane	75-28-5 200-857-2 601-004-00-0 01-2119485395-27-XXXX	1 - 5	Flam. Gas 1A, H220 Press. Gas (Comp.), H280	(Note C)(Note U)

Note C - Some organic substances may be marketed either in a specific isomeric form or as a mixture of several isomers. In this case the supplier must state on the label whether the substance is a specific isomer or a mixture of isomers.

Note U - When put on the market gases have to be classified as 'Gases under pressure', in one of the groups compressed gas, liquefied gas, refrigerated liquefied gas or dissolved gas. The group depends on the physical state in which the gas is packaged and therefore has to be assigned case by case. The following codes are assigned: Press. Gas (Comp.), Press. Gas (Liq.), Press. Gas (Ref. Liq.), Press. Gas (Diss.). Aerosols shall not be classified as gases under pressure (See Annex I, Part 2, Section 2.3.2.1, Note 2).

Product subject to CLP Article 1.1.3.7. The disclosure rules of the components is modified in this case.

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

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: Wash skin with plenty of water. If skin irritation or rash occurs: Get medical advice/attention.
First-aid measures after eye contact	: Rinse eyes with water as a precaution.
First-aid measures after ingestion	: Call a poison center or a doctor if you feel unwell.

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

Symptoms/effects after skin contact	: May cause an allergic skin reaction.
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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 : Water spray. Dry powder. Foam.
Unsuitable extinguishing media : Do not use a water jet since it may cause the fire to spread.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Extremely flammable aerosol.
Explosion hazard : Pressurised container: May burst if heated.
Hazardous decomposition products in case of fire : Toxic fumes may be released.

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.

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. No open flames, no sparks, and no smoking.

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. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

6.3. Methods and material for containment and cleaning up

For containment : Stop leak without risks if possible. Move containers from fire area if it can be done without personal risk. No open flame; Fire, open sources of ignition and smoking are prohibited.
Methods for cleaning up : Mechanically recover the product. Cover spill with non combustible material, e.g.: sand/earth.
Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection". 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. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not spray on an open flame or other ignition source. Do not pierce or burn, even after use.
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 : Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122 °F. Store in a well-ventilated place. Keep cool.
Heat and ignition sources : Do not handle, store or open near an open flame, sources of heat or sources of ignition.
Storage class (LGK, TRGS 510) : LGK 2B - Aerosol dispensers and lighters

7.3. Specific end use(s)

Dental laboratories and dental practices.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1. National occupational exposure and biological limit values

butane (106-97-8)

Germany - Occupational Exposure Limits (TRGS 900)

Local name	Butan
AGW (OEL TWA) [1]	2400 mg/m ³
AGW (OEL TWA) [2]	1000 ppm
AGW (OEL C)	9600 mg/m ³
AGW (OEL C) [ppm]	4000 ppm
Remark	DFG
Regulatory reference	TRGS900

Propane (74-98-6)

Germany - Occupational Exposure Limits (TRGS 900)

Local name	Propan
AGW (OEL TWA) [1]	1800 mg/m ³
AGW (OEL TWA) [2]	1000 ppm
AGW (OEL C)	4000 mg/m ³
AGW (OEL C) [ppm]	7200 ppm
Peak exposure limitation factor	4(II)
Remark	DFG - Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe der DFG (MAK-Kommission)
Regulatory reference	TRGS900

Germany - Occupational Exposure Limits (Generic OEL data)

DFG-MAK Liste (empfohlene Arbeitsplatzgrenzwerte)	1800 mg/m ³ (8-Stunden); 7200 mg/m ³ (15-Minuten)
Propan (CAS 74-98-6)	

isobutane (75-28-5)

Germany - Occupational Exposure Limits (TRGS 900)

Local name	Isobutan
AGW (OEL TWA) [1]	2400 mg/m ³
AGW (OEL TWA) [2]	1000 ppm
AGW (OEL C)	9600 mg/m ³
AGW (OEL C) [ppm]	4000 ppm
Peak exposure limitation factor	4(II)
Remark	DFG - Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe der DFG (MAK-Kommission)
Regulatory reference	TRGS900

Germany - Occupational Exposure Limits (Generic OEL data)

DFG-MAK Liste (empfohlene Arbeitsplatzgrenzwerte)	2400 mg/m ³ (8-Stunden); 9600 mg/m ³ (15-Minuten)
iso-Butan (CAS 75-28-5)	

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Personal protective equipment should be chosen according to the CEN standards and in discussion with the supplier of the protective equipment.

8.2.2. Personal protection equipment

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:

The recommendation is only valid for the supplied product and the stated application. Special working conditions, like heat or mechanical strain, which deviate from the test conditions, can reduce the protective effect provided by the recommended glove. Chemical resistant gloves (according to European standard NF EN 374 or equivalent). Polyvinylchloride (PVC). Nitrile rubber gloves

Other skin protection

Materials for protective clothing:

Wear suitable protective clothing.

8.2.2.3. Respiratory protection

Respiratory protection:

No respiratory protection needed under normal use conditions. If the occupational exposure limit is exceeded: Filter AX (brown)

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Gas
Colour	: Colourless.
Appearance	: Aerosol.
Odour	: Characteristic.
Odour threshold	: Not available
Melting point	: Not applicable
Freezing point	: Not applicable
Boiling point	: -42 °C
Flammability	: Extremely flammable aerosol
Explosive properties	: Pressurised container: May burst if heated.
Explosive limits	: Not available
Lower explosive limit (LEL)	: 1.8 vol %
Upper explosive limit (UEL)	: 9.5 vol %
Flash point	: Not applicable

Auto-ignition temperature	: 365 °C
Decomposition temperature	: Not available
pH	: Not applicable
Viscosity, kinematic	: Not applicable
Solubility	: Not available
Log Kow	: Not available
Vapour pressure	: 3.7 bar @ 20°C
Vapour pressure at 50°C	: Not available
Density	: 0.96 g/m ³
Relative density	: Not applicable
Relative vapour density at 20°C	: Not available
Particle size	: Not applicable
Particle size distribution	: Not applicable
Particle shape	: Not applicable
Particle aspect ratio	: Not applicable
Particle aggregation state	: Not applicable
Particle agglomeration state	: Not applicable
Particle specific surface area	: Not applicable
Particle dustiness	: Not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

VOC (EU) : Not applicable

SECTION 10: Stability and reactivity

10.1. Reactivity

Extremely flammable aerosol. Pressurised container: May burst if heated.

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

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

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

SECTION 11: Toxicological information

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

Acute toxicity (oral)	: Based on available data, the classification criteria are not met
Acute toxicity (dermal)	: Based on available data, the classification criteria are not met
Acute toxicity (inhalation)	: Based on available data, the classification criteria are not met
Skin corrosion/irritation	: Based on available data, the classification criteria are not met
Serious eye damage/irritation	: Based on available data, the classification criteria are not met
Respiratory or skin sensitisation	: Based on available data, the classification criteria are not met
Germ cell mutagenicity	: Based on available data, the classification criteria are not met
Carcinogenicity	: Based on available data, the classification criteria are not met
Reproductive toxicity	: Based on available data, the classification criteria are not met
STOT-single exposure	: Based on available data, the classification criteria are not met
STOT-repeated exposure	: Based on available data, the classification criteria are not met

Aspiration hazard : Based on available data, the classification criteria are not met

Protho´shine spray	
Vaporizer	Aerosol

11.2. Information on other hazards

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

- Ecology - general : The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
- Hazardous to the aquatic environment, short-term (acute) : Based on available data, the classification criteria are not met
- Hazardous to the aquatic environment, long-term (chronic) : Based on available data, the classification criteria are not met

12.2. Persistence and degradability

butane (106-97-8)

Persistence and degradability Readily biodegradable.

Propane (74-98-6)

Persistence and degradability Readily biodegradable.

12.3. Bioaccumulative potential

butane (106-97-8)

Log Pow 1.09 – 2.8 @ 20 °C, pH 7

Propane (74-98-6)

Log Pow 1.09 – 2.8 @ 20 °C, pH 7

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

Protho´shine spray

- 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 : Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with licensed collector's sorting instructions.
- Product/Packaging disposal recommendations : Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
- Additional information : Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. Flammable vapours may accumulate in the container. Dispose in accordance with all applicable regulations.

European List of Waste (LoW) code : The Waste code should be assigned in discussion between the user, the producer and the waste disposal company.
15 01 10* - packaging containing residues of or contaminated by dangerous substances
16 05 00 - gases in pressure containers and discarded chemicals

SECTION 14: Transport information

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

14.1. UN number or ID number

UN-No. (ADR) : UN 1950
UN-No. (IMDG) : UN 1950
UN-No. (IATA) : UN 1950
UN-No. (ADN) : UN 1950
UN-No. (RID) : UN 1950

14.2. UN proper shipping name

Proper Shipping Name (ADR) : AEROSOLS
Proper Shipping Name (IMDG) : AEROSOLS
Proper Shipping Name (IATA) : Aerosols, flammable
Proper Shipping Name (ADN) : AEROSOLS
Proper Shipping Name (RID) : AEROSOLS

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR) : 2.1
Danger labels (ADR) : 2.1

IMDG

Transport hazard class(es) (IMDG) : 2.1
Danger labels (IMDG) : 2.1

IATA

Transport hazard class(es) (IATA) : 2.1
Hazard labels (IATA) : 2.1

ADN

Transport hazard class(es) (ADN) : 2.1
Danger labels (ADN) : 2.1

RID

Transport hazard class(es) (RID) : 2.1
Danger labels (RID) : 2.1

14.4. Packing group

Packing group (ADR) : Not applicable
Packing group (IMDG) : Not applicable
Packing group (IATA) : Not applicable
Packing group (ADN) : Not applicable
Packing group (RID) : Not applicable

14.5. Environmental hazards

Dangerous for the environment : No
Marine pollutant : No
Other information : 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

Packing instructions (ADR) : P207
Tunnel restriction code (ADR) : D

Transport by sea

Special provisions (IMDG) : 63, 190, 277, 327, 344, 381, 959
Packing instructions (IMDG) : P207, LP200
EmS-No. (Fire) : F-D
EmS-No. (Spillage) : S-U
Stowage category (IMDG) : None

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

Inland waterway transport

Classification code (ADN) : 5F
Special provisions (ADN) : 190, 327, 344, 625
Limited quantities (ADN) : 1 L

Rail transport

Classification code (RID) : 5F
Special provisions (RID) : 190, 327, 344, 625
Limited quantities (RID) : 1L
Packing instructions (RID) : P207, LP200
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/legislation specific for the substance or mixture

15.1.1. EU-Regulations

EU restriction list (REACH Annex XVII)

Reference code	Applicable on
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40.	butane ; Propane ; isobutane
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Contains no substance(s) listed on the REACH Candidate List

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

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

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

VOC content : Not applicable

Other information, restriction and prohibition regulations : Directive 94/33/EC on the protection of young people at work, as amended. Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work, as amended. Directive 92/85/EEC on the safety and health of pregnant workers and workers who have recently given birth or are breastfeeding as amended. For details, refer to section 3 and 8.

15.1.2. National regulations

Germany

Employment restrictions : Observe restrictions according Act on the Protection of Young People in Employment (JArbSchG)
Observe restrictions according Act on the Protection of Working Mothers (MuSchG)
Observe restrictions according Prohibition of Chemicals Ordinance (ChemVerbotsV)

Water hazard class (WGK) : WGK 1, Slightly hazardous to water (Classification according to AwSV, Annex 1)

Hazardous Incident Ordinance (12. BImSchV) : Is not subject of the Hazardous Incident Ordinance (12. BImSchV)

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Indication of changes:

Section 1 - Section 16. ANNEX II.

Full text of H- and EUH-statements

Aerosol 1	Aerosol, Category 1
Flam. Gas 1A	Flammable gases, Category 1A
H220	Extremely flammable gas.
H222	Extremely flammable aerosol.
H229	Pressurised container: May burst if heated.
H280	Contains gas under pressure; may explode if heated.
Press. Gas (Comp.)	Gases under pressure : Compressed gas

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]

Aerosol 1 H222;H229 On the basis of test data

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.