

SAFETY DATA SHEET

Compiled in accordance with REACH Regulation (EC) No 1907/2006, as retained and amended in UK law

ISSUE DATE: 18.01.2024

REVISION DATE: 18.01.2024

VERSION: 1.0

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

1.1. Product identifier

Product form : Mixture
Trade name : EndoPlus Cold Spray
Product code : -
SDS Number : 8152
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

Function or use category : Cold spray for testing vitality, Aerosol

1.2.2. Uses advised against

Restrictions on use : Intraoral use

1.3. Details of the supplier of the safety data sheet

Supplier

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

Distributor

Perfection Plus Ltd
6 Westwood Court
Brunel Road
Totton
Hampshire, SO40 3WX, UK
Tel: 44 (0) 2380866677
Internet: www.perfectionplus.co.uk
E-Mail : regulatory@perfectionplus.com

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 The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use) (Amendment etc.) (EU Exit) Regulations

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 The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use) (Amendment etc.) (EU Exit) Regulations

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 122 °F, 50 °C.
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Extra phrases	Keep out of the reach of children. For professional users only.
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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 substance(s) are 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
isobutane	75-28-5 200-857-2 601-004-00-0 01-2119485395-27-XXXX	< 95	Flam. Gas 1A, H220 Press. Gas (Comp.), H280	(Note C)(Note U)
butane	106-97-8 203-448-7 601-004-00-0 01-2119474691-32-XXXX	< 95	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	< 95	Flam. Gas 1A, H220 Press. Gas (Comp.), H280	(Note U)
Ethane	74-84-0 200-814-8 601-002-00-X 01-2119486765-21-XXXX	1-< 2	Flam. Gas 1, H220 Press. Gas (Comp.), H280	

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 general : Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.
- First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.
- 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 immediately and thoroughly, pulling the eyelids well away from the eye (15 minutes minimum). Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
- First-aid measures after ingestion : Immediately call a POISON CENTER/doctor. Rinse mouth. Do not induce vomiting.

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

- Symptoms/effects: : May cause drowsiness or dizziness. Headache.
- Symptoms/effects after inhalation : Inhalation may cause irritation (cough, short breathing, difficulty in breathing).
- Symptoms/effects after skin contact : Burns. Irritation.

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

Provide general supportive measures and treat symptomatically. Symptoms may be delayed. Keep victim under observation.

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Dry chemical, CO₂, dry sand, or alcohol-resistant foam.
- Unsuitable extinguishing media : Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

- Fire hazard : Extremely flammable aerosol.
- Explosion hazard : Pressurised container: May burst if heated.
- Reactivity in case of fire : In the event of fire hazardous gases may occur.
- Hazardous decomposition products in case of fire : Carbon dioxide. Carbon monoxide.

5.3. Advice for firefighters

- Firefighting instructions : Move container from fire area if it can be done without risk. Use water spray or fog for cooling exposed containers.
- Protection during firefighting : Self-contained breathing apparatus and full protective clothing must be worn in case of fire. Wear fire/flame resistant/retardant clothing.
- Other information : Use standard firefighting procedures and consider the hazards of other involved materials.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Do not handle until all safety precautions have been read and understood. Eliminate every possible source of ignition. During fire, gases hazardous to health may be formed. Carbon monoxide. Carbon dioxide.

6.1.1. For non-emergency personnel

- Protective equipment : Use personal protective equipment as required. Wear appropriate protective equipment and clothing during clean-up.
- Emergency procedures : Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

6.1.2. For emergency responders

- Protective equipment : Wear recommended personal protective equipment.
- Emergency procedures : Keep unnecessary personnel away. Use personal protection recommended in Section 8 of the MSDS.

6.2. Environmental precautions

Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. 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

Methods for cleaning up : Remove all sources of ignition. Keep away from combustible material. Stop the leak.
Other information : Prevent entry into waterways, sewer, basements or confined areas.

6.4. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection". For disposal of residues refer to section 13 : " Disposal considerations".

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Keep away from sources of ignition - No smoking. Do not pierce or burn, even after use. Use only outdoors or in a well-ventilated area. Ground/bond container and receiving equipment. Avoid prolonged exposure. Avoid contact with eyes. Observe good industrial hygiene practices. Do not eat, drink or smoke when using this product. Wear appropriate personal protective equipment. Keep only in original container. Avoid release to the environment.

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 locked up. Store in a well-ventilated place. Keep container tightly closed. Keep away from ignition sources.
Incompatible materials : combustible materials. Direct sunlight. Heat sources. Sources of ignition.

7.3. Specific end use(s)

Cold spray for testing vitality.

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

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.

8.2.2. Personal protection equipment

8.2.2.1. Eye and face protection

Eye protection:

Wear tight-fitting goggles or face shield

8.2.2.2. Skin protection

Skin and body protection:

Wear suitable protective clothing.

Hand protection:

Wear protective gloves

Other skin protection**Materials for protective clothing:**

Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment

8.2.2.3. Respiratory protection**Respiratory protection:**

Wear respiratory protection.

8.2.2.4. Thermal hazards**Thermal hazard protection:**

Wear appropriate thermal protective clothing, when necessary.

8.2.3. Environmental exposure controls**Environmental exposure controls:**

Inform appropriate managerial or supervisory personnel of all environmental releases.

Other information:

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

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	: -188 – -138 °C @1013 hPa
Freezing point	: Not applicable
Boiling point	: -42 °C @1013 hPa
Flammability	: Extremely flammable aerosol, Flammable gas
Oxidising properties	: None.
Explosive limits	: Not available
Lower explosive limit (LEL)	: 1.5 vol %
Upper explosive limit (UEL)	: 10.9 vol %
Flash point	: -80 °C Aerosol Not applicable
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
pH	: Not applicable
Viscosity, kinematic	: Not applicable
Solubility	: Not available
Log Kow	: Not available
Vapour pressure	: 5 bar @ 20°C
Vapour pressure at 50°C	: Not available
Density	: 0.535 g/cm 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 content : 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 of use.

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

Strong oxidizing agents.

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

Cold' spray

Vaporizer	Aerosol
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11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

11.2.2. Other information

Potential adverse human health effects and symptoms : Occupational exposure to the substance or mixture may cause adverse effects

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

Cold' 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

Other adverse effects : No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this product

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional waste regulation : Dispose of in accordance with local regulations. 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).

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 should be taken to an approved waste handling site for recycling or disposal.

Additional information : Dispose in accordance with all applicable regulations.

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 (Propane ; isobutane)
Proper Shipping Name (IMDG) : AEROSOLS (Propane ; isobutane)
Proper Shipping Name (IATA) : Aerosols, flammable (Propane ; isobutane)

Proper Shipping Name (ADN) : AEROSOLS (Propane ; isobutane)
Proper Shipping Name (RID) : AEROSOLS (Propane ; isobutane)

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
40.	isobutane ; butane ; Propane ; Ethane
	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
Directive 2012/18/EU (SEVESO III)	
Seveso Additional information	: Not applicable

Seveso III Part I (Categories of dangerous substances)

	Qualifying quantity (tonnes)	
	Lower-tier	Upper-tier
P3a FLAMMABLE AEROSOLS	150	500
'Flammable' aerosols Category 1 or 2, containing flammable gases Category 1 or 2 or flammable liquids Category 1		

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Indication of changes:

None.

Data sources : Classification according to Regulation (EC) No. 1272/2008 [CLP], as amended for UK law.

Full text of H- and EUH-statements

Aerosol 1	Aerosol, Category 1
Flam. Gas 1	Flammable gases, 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.

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

Aerosol 1

H222;H229

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.

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