

# Safety Data Sheet (SDS)

according to Regulation (EC) No 1907/2006, article 31\*

## 1. Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifier

Trade name: **Plurasol Kältespray**

Product type: cold spray

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

**Use of the substance or mixture:** Cold mixture with peppermint for pulp testing of teeth in the dental practice.

**Uses advised against:** No further relevant information available.

### 1.3\* Details of the supplier of the safety data sheet

**Company name:** Pluradent AG & Co KG  
**Street/Mailbox:** Kaiserleistr. 3  
**Place:** D-63067 Offenbach a.M.  
**Contact for technical information:** Pluradent Vertrieb  
**Phone / Telefax / E-Mail:**  
+49 (0)69-82983-0 / +49 (0)69-82983-271 / regulatory.affairs@pluradent.de

### 1.4\* Emergency telephone number

Germany: Giftnotruf Mainz - 24 Hour Service - Tel.: +49 (0) 6131/19240

## 2. Hazards identification

### 2.1 Classification of the substance or mixture

**Classification according to Regulation (EC) No 1272/2008:**



GHS02 flame

Flam. Aerosol 1 → H222-H229 - Extremely flammable aerosol. Pressurised container: May burst if heated.

**Classification according to Directive 67/548/EEC or 1999/45/EC:**



F<sup>+</sup>; Extremely flammable

R12 - Extremely flammable.

#### Information concerning particular hazards for human and environment:

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version. Warning! Pressurized container.

#### Classification system:

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

### 2.2 Label elements

#### Labelling according to Regulation (EC) No 1272/2008:

The product is classified and labelled according to the CLP regulation.

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Trade name: **Plurasol Kältespray**

## Hazard pictograms:



**GHS02**

**Signal word :** Danger

## Hazard statements

H222-229 Extremely flammable aerosol. Pressurised container: May burst if heated.

## Precautionary statements

P101 If medical advice is needed, have product container or label at hand.  
P102 Keep out of reach of children.  
P103 Read label before use.  
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.  
P211 Do not spray on an open flame or other ignition source.  
P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

## Additional information:

Contact with the liquid may cause frost damage and serious eye injuries. Contains Minzöl. May produce an allergic reaction. Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. Do not spray on a naked flame or any incandescent material. Keep away from sources of ignition – No smoking. Buildup of explosive mixtures possible without sufficient ventilation.  
Keep out of the reach of children

## 2.3 Other hazards

Results of PBT and vPvB assessment:

PBT: Not applicable.  
vPvB: Not applicable.

## 3. Composition/information on ingredients

### 3.2 Mixtures

Description: Mixture of substances listed below with non-hazardous additions.

#### Dangerous components:

Chemical Name	CAS-No. EC-No. Index-No. Registr. No.	Classification according (67/548/EEC)	Classification according to Regulation EC No. 1272/2008)	Concentration (%)
butane	CAS: 106-97-8 EINECS: 203-448-7 Index number: 601-004-00-0	F <sup>+</sup> – R12	Flam.Gas 1 – H220 Press. Gas – H280	50-100 %
propane	CAS: 74-98-6 EINECS: 200-827-9 Index number: 601-003-00-5	F <sup>+</sup> – R12	Flam.Gas 1 – H220 Press. Gas – H280	10-25 %

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Chemical Name	CAS-No. EC-No. Index-No. Registr. No.	Classification according (67/548/EEC)	Classification according to Regulation EC No. 1272/2008)	Concentration (%)
isobutane	CAS: 75-28-5 EINECS: 200-857-2 Index number: 601-004-00-0	F <sup>+</sup> – R12	Flam.Gas 1 – H220 Press. Gas – H280	2,5-10 %
Mint oil	CAS: 68917-18-0	Xi – R38; R43 N – R51/53	Aquatic Chronic 2 – H411 Skin Irrit. 2 – H315 Skin Sens. 1 – H317	0,1 - < 1 %

**Additional information:** For the wording of the listed risk phrases refer to section 16.

## 4. First aid measures



### 4.1 Description of first aid measures

#### General information

No further relevant information available.

#### After inhalation

Supply fresh air; consult doctor in case of complaints.

#### After skin contact

Generally the product does not irritate the skin.

#### After eye contact

Rinse opened eye for several minutes under running water.

#### After swallowing

If symptoms persist, consult a doctor.

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

No further relevant information available.

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

No further relevant information available.

## 5. Firefighting measures

### 5.1 Extinguishing media

Suitable extinguishing agents: CO<sub>2</sub>, sand, extinguishing powder. Do not use water.

Unsuitable extinguishing media: Water with full jet

### 5.2 Special hazards arising from the substance or mixture

No further relevant information available.

### 5.3 Advice for firefighters

**Protective equipment:** No special measures required.

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## 6. Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

### 6.2 Environmental precautions

Do not allow product to reach sewage system or any water course.  
Inform respective authorities in case of seepage into water course or sewage system.  
Do not allow to enter sewers/ surface or ground water.

### 6.3 Methods and material for containment and cleaning up

Ensure adequate ventilation.  
Do not flush with water or aqueous cleansing agents.

### 6.4 Reference to other sections

See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

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## 7. Handling and storage

### 7.1 Precautions for safe handling

Open and handle receptacle with care.

#### Information about fire- and explosion-protection:

Do not spray onto a naked flame or any incandescent material.  
Keep ignition sources away - Do not smoke.  
Protect against electrostatic charges.  
Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50 °C, i.e. electric lights. Do not pierce or burn, even after use.

### 7.2 Conditions for safe storage, including any incompatibilities

**Storage:** -

#### Requirements for storage rooms and vessels:

Store in a cool location.  
Observe official regulations on storing packagings with pressurized containers.

**Advice on storage compatibility:** Not required.

#### Further information about storage conditions:

Keep container tightly sealed.  
Do not seal receptacle gas tight.  
Store in cool, dry conditions in well sealed receptacles.  
Protect from heat and direct sunlight.

### 7.3 Specific end use(s)

No further relevant information available.

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## 8. Exposure controls/personal protection

### 8.1 Control parameters

#### 8.1.1 Ingredients with limit values that require monitoring at the workplace:

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

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**Additional information:** The lists that were valid during the making were used as basis.

**8.1.2. DNEL/PNEC-values**

No further relevant information available.

**8.1.3. Control-Banding**

No further relevant information available.

**8.2 Exposure controls**

**8.2.1 Appropriate engineering controls**

No further relevant information available.

**8.2.2 Individual protection measures - Personal protective equipment**

**General protective and hygienic measures:**

The usual precautionary measures are to be adhered to when handling chemicals.

**Respiratory protection:**



Use suitable respiratory protective device in case of insufficient ventilation.

**Protection of hands**

Not required

**Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

**Penetration time of glove material**

The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

**Eye protection**



**Tightly sealed goggles**

**8.2.3 Environmental exposure controls:**

No further relevant information available.

**9. Physical and chemical properties**

**9.1 Information on basic physical and chemical properties**

Appearance:	
- Form :	Aerosol
- Colour :	Colourless
Odour :	Mint
Odour threshold :	Not determined
pH-value at 20 °C :	Not determined
Change in condition	

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Melting point/ freezing point : Boiling point/Boiling range :	Undetermined - 44°C
Flash point : Flammability (solid, gaseous) : Evaporation rate : Ignition temperature : Auto-ignition temperature : Danger of explosion :	~ -80°C (closed cup) Not applicable Not applicable 365°C Product is not self igniting. Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
Explosion limits - lower : - upper :	1,5 Vol % 10,9 Vol %
Vapour pressure at 20°C : Vapour density :	~ 2100 hPa Not determined
Density at 20 °C :	0,56 g/cm <sup>3</sup>
Relative density :	Not determined
Solubility in / Miscibility with water :	Not miscible or difficult to mix.
Viscosity : Dynamic : Kinematic :	Not determined Not determined
Partition coefficient (n-octanol/water) :	Not determined
Solvent content : Organic solvents : VOC (EC) :	99,12 % 99,12 %
Solids content :	Not determined

## 9.2 Other information

No further relevant information available.

## 10. Stability and reactivity

### 10.1 Reactivity

No hazardous reactions known when used according to instructions.

### 10.2 Chemical Stability

No further relevant information available.

#### Thermal decomposition / conditions to be avoided:

No decomposition if used according to specifications.

### 10.3 Possibility of hazardous reactions

No dangerous reactions known.

### 10.4 Conditions to avoid

No further relevant information available.

### 10.5 Incompatible materials

No further relevant information available.

### 10.6 Hazardous decomposition products

No dangerous decomposition products known.

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## 11. Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

##### Primary irritant effect:

**On the skin:** No irritant effect.

**On the eye:** No irritant effect.

**Sensitization:** No sensitizing effects known.

#### Germ cell mutagenicity

No further relevant information available.

#### Carcinogenicity

No further relevant information available.

#### Reproductive toxicity

No further relevant information available.

#### Specific target organ toxicity - single exposure

No further relevant information available.

#### Specific target organ toxicity - repeated exposure

No further relevant information available.

#### Severe effects after repeated or prolonged exposure

No further relevant information available.

#### Aspiration hazard

No further relevant information available.

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## 12. Ecological information

### 12.1 Toxicity

No further relevant information available.

### 12.2 Persistence and degradability

No further relevant information available.

### 12.3 Bioaccumulative potential

No further relevant information available.

### 12.4 Mobility in soil

No further relevant information available.

#### General notes:

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water  
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

### 12.5 Results of PBT and vPvB assessment

**PBT:** Not applicable.

**vPvB:** Not applicable.

This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.

### 12.6 Other adverse effects

No further relevant information available.

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### 13. Disposal considerations

#### 13.1 Waste treatment methods

**Recommendation:**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

**Contaminated packaging:**

**Recommendation:**

Disposal must be made according to official regulations.

**Waste codes / waste designations according to EWC / AVV:**

**European waste catalogue**

14 06 03\* other solvents and solvent mixtures  
15 01 04 metallic packaging

**Packaging:**

Disposal must be made according to official regulations.

### 14. Transport information

#### 14.1 UN-Number

ADR, ADN, IMDG, IATA UN1950

#### 14.2 UN proper shipping name

ADR 1950 AEROSOLS  
IMDG AEROSOLS  
IATA AEROSOLS; flammable

#### 14.3 Transport hazard class(es)

ADR, ADN



· Class 2.5F Gases.  
· Label 2.1

IMDG, IATA



· Class 2.1

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· Label 2.1

## 14.4 Packing group

ADR,IMDG,IATA Void

## 14.5 Transport/Additional information:

### ADR, IMDG

· Excepted quantities (EQ): E0 - Not permitted as Excepted Quantity  
· Limited quantities (LQ) 1L  
· Transport category 2  
· Tunnel restriction code D

## 14.6 Environmental hazards:

Marine Pollutant:  yes /  no

## 14.7 Special precautions for user

Warning: Gases.  
Danger code (Kemler): -  
EMS Number: F-D,S-U

## 14.8 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable.

## 14.9 UN "Model Regulation"

UN1950, AEROSOLS, 2.1.

## 15. Regulatory information

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

#### EU regulations:

The product is classified and labelled according to the CLP regulation. See Chapter 2.

#### National regulations:

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

### 15.2 Chemical safety assessment:

A Chemical Safety Assessment has not been carried out.

## 16. Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship. The receiver of our product is solely responsible for adhering to existing laws and regulations.

### Changes compared to the previous version

\* Data changed compared to the previous version are marked with \*.

### Abbreviations and acronyms:

ADR Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)  
RID Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)  
IATA-DGR Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

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ICAO	International Civil Aviation Organization
ICAO-TI	Technical Instructions by the "International Civil Aviation Organization" (ICAO)
IMDG	International Maritime Code for Dangerous Goods
IATA	International Air Transport Association
GHS	Globally Harmonized System of Classification and Labelling of Chemicals
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
CAS	Chemical Abstracts Service (division of the American Chemical Society)
GefStoffV	Gefährstoffverordnung (Ordinance on Hazardous Substances, Germany)
LC <sub>50</sub>	Lethal concentration, 50 percent
LD <sub>50</sub>	Lethal dose, 50 percent
EC <sub>50</sub>	half maximal effective concentration
NOEC	No Observed Effect Concentration

Flam. Liq.	Flammable liquids
Flam. Gas.	Flammable gases
Press.Gas	Pressurised gases
Skin Corr.	Skin corrosion/irritation
Skin Sens.	Skin corrosion/irritation
Aquatic Chronic	Chronical aquatic toxicity
Eye Dam.	Serious eye damage/eye irritation
Eye Irit.	Serious eye damage/eye irritation
Repr.	Reproductive toxicity
STOT SE	Specific target organ toxicity - single exposure

## Relevant phrases

H222-229	Extremely flammable aerosol. Pressurised container: May burst if heated.
H220	Extremely flammable gas.
H280	Contains gas under pressure; may explode if heated.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H411	Toxic to aquatic life with long lasting effects.

R12	Extremely flammable.
R38	Irritating to skin.
R43	May cause sensitisation by skin contact.
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

## Further information

Department issuing MSDS: Regulatory Affairs

The information contained in this security data sheet is based on our best knowledge and conscience on topically available information about the correct use of the product under normal conditions. The user is solely responsible for any other usage of this product in connection with other processes / procedures which is not described in this data sheet. This document does not show any explicit or implicit guarantee with regard to product quality or suitability for a certain purpose.

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