

## Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 23.02.2017

Version number 1

Revision: 23.02.2017

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

- **1.1 Product identifier**
- **Trade name:** KKD Ice-Kältespray
- **Article number:** according to Catalog
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
- **Sector of Use** SU20 Health services
- **Environmental release category** ERC2 Formulation into mixture
- **Application of the substance / the mixture** Dental material
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Kentzler-Kaschner Dental GmbH  
Mühlgraben 36  
D-73479 Ellwangen  
Tel: +49/7961/90730  
Fax: +49/7961/52031  
E-Mail: info@kkd-topdent.de
- **Further information obtainable from:**  
während üblicher Geschäftszeiten  
Montag-Donnerstag 8.30-12.30 Uhr und 13.00-16.30 Uhr  
Freitag 8.30-12.30 Uhr und 13.00-15.00 Uhr
- **1.4 Emergency telephone number:** Vergiftungs-Informations-Zentrale Freiburg, Tel. +49 761 19240

### SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS02 flame

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

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**  
The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



GHS02

- **Signal word** Danger
- **Hazard statements**  
H222-H229 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.

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- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

### SECTION 3: Composition/information on ingredients

- **3.2 Chemical characterisation: Mixtures**
- **Description:** Dental material

- **Dangerous components:**

CAS: 106-97-8 EINECS: 203-448-7	butane Flam. Gas 1, H220; Press. Gas C, H280	50-70%
CAS: 74-98-6 EINECS: 200-827-9	propane Flam. Gas 1, H220; Press. Gas C, H280	10-20%
CAS: 75-28-5 EINECS: 200-857-2	isobutane Flam. Gas 1, H220; Press. Gas C, H280	10-20%
CAS: 67-63-0 EINECS: 200-661-7	propan-2-ol Flam. Liq. 2, H225; Eye Irrit. 2, H319; STOT SE 3, H336	1-10%

- **Additional information:**

REACH Reg.-Nr. (n-Butan)01-2119474691-32-xxxx  
 REACH Reg.-Nr. (Propan)01-2119486944-21-xxxx  
 REACH Reg.-Nr. (Isobutan)01-2119485395-27-xxxx  
 REACH Reg. Nr. (Propan-2-ol) 01-2119457558-25  
 For the wording of the listed hazard phrases refer to section 16.

### SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **General information:**  
 Take affected persons out of danger area and lay down.  
 Do not leave affected persons unattended.  
 Take affected persons out into the fresh air.
- **After inhalation:** Take affected persons into fresh air and keep quiet.
- **After skin contact:** If skin irritation continues, consult a doctor.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** Inform doctor. Do not give milk or fatty oils.
- **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.

### SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**  
 CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **5.2 Special hazards arising from the substance or mixture** Carbon dioxide (CO<sub>2</sub>)
- **5.3 Advice for firefighters**
- **Protective equipment:** No special measures required.

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- **Additional information**  
Collect contaminated fire fighting water separately. It must not enter the sewage system.

#### SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures** Not required.
- **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**  
Absorb liquid components with liquid-binding material.
- **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.

#### SECTION 7: Handling and storage

- **7.1 Precautions for safe handling** No special precautions are necessary if used correctly.
- **Information about fire - and explosion protection:**  
Do not spray onto a naked flame or any incandescent material.  
Pressurised 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 to be met by storerooms and receptacles:**  
Store only in the original receptacle.  
Observe official regulations on storing packagings with pressurised containers.
- **Information about storage in one common storage facility:** Store away from foodstuffs.
- **Further information about storage conditions:** None.
- **Storage class:** VCI: 2 B
- **7.3 Specific end use(s)** No further relevant information available.

#### SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.

- **8.1 Control parameters**

- **Ingredients with limit values that require monitoring at the workplace:**

##### 106-97-8 butane

WEL	Short-term value: 1810 mg/m <sup>3</sup> , 750 ppm Long-term value: 1450 mg/m <sup>3</sup> , 600 ppm Carc (if more than 0.1% of buta-1.3-diene)
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##### 67-63-0 propan-2-ol

WEL	Short-term value: 1250 mg/m <sup>3</sup> , 500 ppm Long-term value: 999 mg/m <sup>3</sup> , 400 ppm
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- **Additional information:** The lists valid during the making were used as basis.

- **8.2 Exposure controls**

- **Personal protective equipment:**
- **General protective and hygienic measures:** Wash hands before breaks and at the end of work.
- **Respiratory protection:**  
DGUV 112-190 Breathing apparatus

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*Particle filter P2**Use suitable respiratory protective device only when aerosol or mist is formed.**In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.***· Protection of hands:***The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.**Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation***· Material of gloves***Fluorocarbon rubber (Viton)**Butyl rubber, BR**Recommended material thickness:**Butylkautschuk: 0,50 mm +/- 0,10 mm**Fluorkautschuk: 0,75 mm +/- 0,10 mm**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***Basis: DGUV 212-007**Permeation (Fluorkautschuk): + Level 6 (> 240 min)**Permeation (Butylkautschuk): + Level 6 (> 480 min)**The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.**The determined penetration times according to EN 374 part III are not performed under practical conditions.**Therefore a maximum wearing time, which corresponds to 50% of the penetration time, is recommended.***· For the permanent contact gloves made of the following materials are suitable:***Fluorocarbon rubber (Viton)**Butyl rubber, BR***· Not suitable are gloves made of the following materials: PVC gloves****· Eye protection: Safety glasses**

### SECTION 9: Physical and chemical properties

**· 9.1 Information on basic physical and chemical properties****· General Information****· Appearance:****Form:** Aerosol**Colour:** Transparent**· Odour:** Characteristic**· Odour threshold:** Not determined.**· pH-value:** Not determined.**· Change in condition****Melting point/freezing point:** Undetermined.**Initial boiling point and boiling range:** Not applicable, as aerosol.**· Flash point:** -60 °C**· Flammability (solid, gas):** Not applicable.**· Ignition temperature:** 365 °C**· Decomposition temperature:** Not determined.

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· <b>Auto-ignition temperature:</b>	Product is not selfigniting.
· <b>Explosive properties:</b>	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
· <b>Explosion limits:</b>	
<b>Lower:</b>	1.5 Vol %
<b>Upper:</b>	10.9 Vol %
· <b>Vapour pressure at 20 °C:</b>	4600 hPa
· <b>Density at 20 °C:</b>	0.56 g/cm <sup>3</sup>
· <b>Relative density</b>	Not determined.
· <b>Vapour density</b>	Not determined.
· <b>Evaporation rate</b>	Not applicable.
· <b>Solubility in / Miscibility with water:</b>	Fully miscible.
· <b>Partition coefficient: n-octanol/water:</b>	Not determined.
· <b>Viscosity:</b>	
<b>Dynamic:</b>	Not determined.
<b>Kinematic:</b>	Not determined.
· <b>9.2 Other information</b>	No further relevant information available.

### SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **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** Open fire, hot surfaces, high temperatures
- **10.5 Incompatible materials:** oxidants, acids, bases
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

### SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.
- **Primary irritant effect:**
- **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.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **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.

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### SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic 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.
- **Additional ecological information:**
- **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.
- **12.6 Other adverse effects** No further relevant information available.

### SECTION 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.
- **European waste catalogue**
- 16 05 04\* | gases in pressure containers (including halons) containing hazardous substances
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

### SECTION 14: Transport information

- |   |                     |
|---|---------------------|
| · <b>14.1 UN-Number</b>   |                     |
| · <b>ADR, IMDG, IATA</b>  | UN1950              |
| · <b>14.2 UN proper shipping name</b>   |                     |
| · <b>ADR</b>  | 1950 AEROSOLS       |
| · <b>IMDG</b>   | AEROSOLS            |
| · <b>IATA</b>   | Aerosols, flammable |
| · <b>14.3 Transport hazard class(es)</b>  |                     |
| · <b>ADR</b>  |                     |
|  |                     |
| · <b>Class</b>  | 2.1                 |

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· **IMDG, IATA**

- **Class** 2.1
- **Label** 2.1

- **14.4 Packing group** --

- **14.5 Environmental hazards:** Not applicable.

- **14.6 Special precautions for user** Not applicable.
- **Danger code (Kemler):** 2.1
- **EMS Number:** F-D,S-U
- **Stowage Code** SW1 Protected from sources of heat.  
SW22 For AEROSOLS with a maximum capacity of 1 litre:  
Category A. For AEROSOLS with a capacity above 1 litre:  
Category B. For WASTE AEROSOLS: Category C, Clear  
of living quarters.
- **Segregation Code** SG69 For AEROSOLS with a maximum capacity of 1 litre:  
Segregation as for class 9. Stow "separated from" class 1  
except for division 1.4. For AEROSOLS with a capacity  
above 1 litre: Segregation as for the appropriate  
subdivision of class 2. For WASTE AEROSOLS:  
Segregation as for the appropriate subdivision of class 2.

- **14.7 Transport in bulk according to Annex II of  
Marpol and the IBC Code** Not applicable.

· **Transport/Additional information:**

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

- **IMDG**
- **Limited quantities (LQ)** 1 L
- **Excepted quantities (EQ)** Code: E0  
Not permitted as Excepted Quantity

- **UN "Model Regulation":** UN 1950 AEROSOLS, 2.1

### SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **Seveso category**  
FLAMMABLE AEROSOLS  
P3a FLAMMABLE AEROSOLS
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 150 t

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- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 500 t
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

**SECTION 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.*

**· Relevant phrases**

- H220 Extremely flammable gas.*
- H225 Highly flammable liquid and vapour.*
- H280 Contains gas under pressure; may explode if heated.*
- H319 Causes serious eye irritation.*
- H336 May cause drowsiness or dizziness.*

**· Department issuing SDS:**

*LOGAR Günther Hasel e.K.  
Baden-Airpark, Airport Boulevard B 210  
D-77836 Rheinmünster  
Tel: +49(0)7229-1868-163  
Fax: +49(0)7229-1868-165*

**· Contact:** *info@logar.de***· 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)*  
*IMDG: International Maritime Code for Dangerous Goods*  
*IATA: International Air Transport Association*  
*GHS: Globally Harmonised 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)*  
*PBT: Persistent, Bioaccumulative and Toxic*  
*vPvB: very Persistent and very Bioaccumulative*  
*Flam. Gas 1: Flammable gases – Category 1*  
*Aerosol 1: Aerosols – Category 1*  
*Press. Gas C: Gases under pressure – Compressed gas*  
*Flam. Liq. 2: Flammable liquids – Category 2*  
*Eye Irrit. 2: Serious eye damage/eye irritation – Category 2*  
*STOT SE 3: Specific target organ toxicity (single exposure) – Category 3*