

**Material Safety Data Sheet 91/155/EWG****According to law Ordinance on Hazardous Substances (GefStoffV)**

Revision of 2005-09-22

**1. Product and company identification****Product name:****LiWa Cool** (Cooling Spray)**Manufacturer:**

**Willmann & Pein GmbH** (W + P Dental)  
Schusterring 35, 25355 Barmstedt, Tel.: +49 (0) 41 23 / 92 28 0

**2. Composition / Information on Ingredients****Cooling Spray:** Preparation of solvent mixture and compression gas Propan-Butan

<b>Ingredients</b>	<b>CAS-No.</b>	<b>Index-No.</b>	<b>Classification</b>	<b>Indication</b>
- Propan ( < 20 % )	74-98-6	601-003-00-5	F+, R 12 R 12	F+ R 12 S (2)-9-16
-Butan ( < 80 % )	106-97-8	601-004-00-0	F+ R 12	F+ R 12 S (2)-9-16
- Ethanol ( < 5 % )	64-17-5	603-002-00-5	F R 11	F R 11 S (2)-7-16

**3. Hazard Identification****- Hazard denotation**

F+

Extremely flammable

**- Special Hazards information for human and environment:**

R 12 Extremely flammable

If sprayed on hot devices, it could inflame – Danger of Burning.  
The filled spray tin can burst by temperatures over 50°C. – Risk of injury caused by bursting of tin or parts of it which are flying away.

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**4. First-Aid-Measures****General information:**

If the liquid gas will be setted free the room must be well ventilated with plenty of fresh air.  
Take injured person out of danger zone. Bring the person in a stable side position

**In case of skin contact:**

Take off contaminated clothes immediately (also underwear and shoes).  
If contacted with skin wash immediately with water and soap and rinse plenty.  
Contact a physician if symptomes are obviously showing influence of the product to skin.

**In case of eye contact:**

It could cause redness and irritation. Rinse eyes with open eyelid with plenty of water for a long period (15 minutes) and contact ophthalmologist if the irritation is longer termed.

**In case of inhalation:**

Breathing of higher concentrations could cause irritations at the respiratory system.  
Carry affected person to fresh air, keep person warm and rested in relaxed position.  
If shortness of breath -oxygen therapy. In case of continueing disorders contact a physician.

**In case of ingestion:**

Do not attain vomitting. Immediately contact a physician. Show the Material Safety Sheet to doctor.

**Information for physician:**

The following symptoms could incident: doziness, frostbite, unconsciousness.

**5. Fire-Fighting measures****Suitable extinguishing media:**

Waterspray-stream, alcohol resistant foam, Extinguishing powder, CO<sub>2</sub>, Waterfog – Sand oder earth only if the fire is small.–

**For safety reasons unsuitable extinguishing media:**

Full water jet.

**Special hazard through the product or the preparation, its burning products or growing gases**

A fire can set free: CO and CO<sub>2</sub>

**Special protective equipment:**

Self-contained breathing apparatus

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**6. Accidental release measures****Personal precautions:**

Take note of adequate aeration.  
Keep away from source of ignition.  
Wear personal protective clothing.  
Take note of explosion-control.  
Keep away from open fire.

**Environmental precautions:**

Do not allow to enter drains, surface water or ground-water. By water pollution inform the local authorities.

**Methods for cleaning/absorption:**

Let it evaporate. Pick up the remainder with liquid-binding material (for example: sawdust or universal-binding material)  
Dispose of contaminated material as waste according to point 13.

**Additional information:**

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**7. Handling and Storage****Handling:**

Safe handling advice:

Use in well ventilated rooms. Do not breath aerosol. Keep away from fire – Do not smoke.  
Measures against electrostatical charging.

Advices about protection against explosion and fire:

Storage over 50°C could causes higher pressure and could cause bursting of the aerosol tin.

**Storage:**

Conditions of storage rooms and container

Keep container (tin) closed and store at a cool and dry place. Keep container away from heat and direct sunlight. Take care of the storage regulations to the rules of TRG 300.

Take care of storage regulations for flammable fluids.

Further informations for storage:

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**8. Exposure controls and personal protection**

Components with critical values that require work place monitoring:

CAS-No.	Description	Toplimit	Method	Value	Unit
74-98-6	Propan	exceeding factor 4	MAK	1800 1000 ppm	mg/m <sup>3</sup>
106-97-8	Butan	exceeding factor 4	MAK	2350 1000 ppm	mg/m <sup>3</sup>
64-17-5	Ethanol	exceeding factor 4	MAK	1900 1000 ppm	mg/m <sup>3</sup>

**Restriction and control of exposition**

Restriction and control of exposition at workplace  
Not necessary if applicated appropriate.

**General protection and hygiene measures**

Clean hands and face after work and bevor having a break. Contaminated cloth must be changed and cleaned. Don't eat, drink, smoke and snooth while work.

**Breathing-protection**

Not necessary if applicated appropriate.

**Eye-protection**

Not necessary if applicated appropriate.

**Hand-protection**

Gloves (heat-isolating)

**Skin- and Body-protection**

Not necessary if applicated appropriate.

**Restriction and control of environmental exposition**

The local current rules for the handling with chemical products have to be noticed.

**9. Physikalische und chemische Eigenschaften**

Appearance:	Aerosol
Colour:	white
Odour:	peppermint
pH-Value:	not applicable
Boiling-point	< 20 °C
Inflammation-point:	< 20°C
Danger of explosion	

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The product is not explosion-dangerous, but the formation of explosive steam-/airmixtures is possible.

<b>Explosion-limit</b>	<b>lower</b>	1,5 Vol.-%	
	<b>upper</b>	10,5 Vol.-%	
<b>Vapour-pressure</b> (at 20°C)		3,2 bar	pressure inside tin
<b>Vapour-pressure:</b> (at 50°C)		7,3 bar	pressure inside tin
<b>Relative density:</b> (at 20°C)		0,62 g/cm <sup>3</sup>	calculated
<b>Solubility/miscibility in Water</b> (at 20°C)		insoluble	

**10. Stability and reactivity****Conditions to avoid:**

Warming up, open flames, source of Ignition, electrostatical charging

**Danger:** Pressure increase in the container until burst.

**Materials to avoid:**

Product can corrode solvent sensitive surfaces.

**Hazardous decomposition products:**

None if handled conventional.

Formation of flammable, explosive mixtures with air possible. Formation of CO und CO<sub>2</sub> in case of fire.

**11. Toxicological information****Acute Toxicity:**

The components of the aerosol spray are not classified as toxic.

**Other details:**

The experience shows that the product is not dangerous for the health. There is no toxicological data for the preparation.

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**12. Ecological information****General advices:**

The preparation was not proofed.

**Ecotoxic effects:**

The product was not proofed.

**Mobility**

The product was not proofed.

**Persistence and degradability**

The product was not proofed.

**Bioakkumulationspotential**

The product is completely biodegradable.

**13. Disposal Considerations****Recommendation**

The waste keys are recommendations cause of the probable application of the product. Cause of the special utilization and disposal circumstances at application could possibly other disposal keys classed with. The classification of the waste-key-number is than to be done from the person who is in charge of the disposal (with the EWG decree).

**Disposal key product: 160504**

Waste, which is not listed in other parts of the register:

Gases in pressure containers and used chemicals; Gases containing dangerous substances in pressure containers (including halogen).

Classificated as disposal which must be special controlled.

**Waste key product remainder: 160 504**

Waste, which is not listed in other parts of the register:

Gases in pressure containers and used chemicals; Gases containing dangerous substances in pressure containers (including halogen).

Classificated as disposal which must be special controlled.

**Waste key uncleaned package: 160 110**

**Package waste, Absorbing material, Wiping sheets, Filter material and Protective cloth**

Packages, which contains dangerous substances or which are wasted through dangerous substances.

Classificated as disposal which must be special controlled.

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**Disposal of uncleaned packages and recommended cleaning agents**

Under accordance with local regulations.

**14. Angaben zum Transport****Road transport/ADR, RID und GGVS/GGVE (cross-border/national):****ADR/RID-GGVS/GGVE-class:** 2 number 5F**Warning sign:****Substance number:** 1950**Danger note :** 2.1**Declaration of the good:** Packages of Pressure gas**Other information about road transport:**

Limitid Quantities

**Sea transport:****IMDG/GGVSee-class:** 2.1**UN-No.** 1950**EMS:** 2-13**Declaration of the good:** Aerosol, flammable n.o.g.**Other information about seatransport:** Limited Quantities**Air transport****ICAO/IATA-class:** 2.1**UNID-No.:** 1950**Declaration of the good:** Aerosols flammable n.o.g.**Other information about air transport:** Limited Quantities**15. Rules****Marking according to EWG-Rules**

The product has to be labelled and marked according to the EC-rules/GefStoffV.

Special hazards warning for human and environment:



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**Marking:****R-Phrases:**

R 12                   Extremely flammable

**S-Phrases:**

09                   Keep container in a well-ventilated place.  
16                   Keep away from sources of ignition – No smoking.  
23                   Do not breathe gas/fumes/vapour/spray (appropriate wording to be specified by the manufacturer).  
  
29                   Do not empty into drains.  
33                   Take precautionary measures against static discharges.  
51                   Use only in well-ventilated areas.

**Special marking of special preparations:**

Container is under pressure. Keep away from sunlight and beware of temperatures over 50°C. Do not open with violence, do not burn the container.  
Do not spray into flames or on hot things. Keep away from sources of ignition. –Do not smoke. Keep out of the reach of children. Without adequate ventilation the formation of explosive mixtures is possible. Utilization only for intended purpose.

Classification with VbF :           Not be subject to the regulation of flammable liquids.

Water-hazardous-class:           WGK 1           slightly water hazardous to water  
(Classification according VwVws of 1999-05-17Annex 4 No. 3)**16. Other Information**

All above mentioned data are based on contemporary knowledge, but they don't convert any product-characteristics and don't cause a contractual legal relationship.  
These information should give you clues for safety exposure with the herein (MSDS) mentioned product for storage, processing and disposal. If the in this Safety data sheet mentioned product would be admixed, mixed or processed together materials as designated or another treatment would be subjected the in this safety data sheet mentioned data could not be assigned to the new material.

**Safety data sheet certifying division:**

Technical department

**Contact person:**

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