

1 EC safety data sheet in accordance with Directive 2001/58/EC



Version date: 18.09.08

1. MATERIAL, PREPARATION AND COMPANY ID

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|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.1. Name of the material or preparation |
| KaVo Spray 2112 Mat. no. 0.411.9630 or Mat. no. 0.411.9640 |
| Versions: <ul style="list-style-type: none"> ▪ KaVo Spray 2112 – Single 500 ml can ▪ KaVo Spray 2112 A – Package with 6 individual 500 ml cans |
| 1.2. Use of the material or preparation |
| Maintenance spray for KaVo instrument products without spray heads for instruments, pneumatic motors and the Multiflex system. |
| See also: KaVo product care instructions |
| 1.3. Company name |
| Kaltenbach & Voigt GmbH Bismarckring 39 D-88400 Biberach Tel.: + 49 7351 56-0 Fax: + 49 7351 56-1488 Contact for information: Safety supervisor for medical devices |
| 1.4. Emergency number |
| Fire department - national emergency number, Germany: 112 |
| Emergency information: +49 5825-88-0 (Monday through Thursday 7-16, Fr. 7-13) |
| Emergency poison control: +49 761 19240 |

2. COMPOSITION/INFORMATION ON COMPONENTS

- Fatty acid ester oil, mineral oil with active ingredients
- Propellant gas:
 - Propane (CAS No. 74-98-6, EINECS No. 200-827-9)
 - Butane (CAS No. 106-97-8, EINECS No. 203-448-7)
 - Isobutane (CAS No. 75-28-5, EINECS No. 200-857-2)

| Identification-requiring Component | CAS No. | EINECS No. | Mass fraction | Symbol | R phrases |
|------------------------------------|---------|------------|---------------|--------|-----------|
| none | – | – | – | – | – |

3. POSSIBLE HAZARDS

Risk phrase:

- Highly flammable

- Preparation is rated hazardous according to Directive 1999/45/EC.

Additional hazard instructions for people and the environment:

- The formation of explosive, easily flammable vapour/air mixtures is possible during use.
- May explode when heated.

4. FIRST AID

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| After inhalation | <ul style="list-style-type: none"> ▶ Supply fresh air. ▶ If discomfort persists, consult a doctor and keep the safety data sheet/label to hand. ▶ In case of unconsciousness: Check for consciousness. |
| After skin contact | <ul style="list-style-type: none"> ▶ Wash immediately with soap and water and rinse thoroughly. ▶ Remove any clothing that has been splashed. |
| After eye contact | <ul style="list-style-type: none"> ▶ Keep eyes open and rinse them for several minutes with running water. ▶ Remove any contact lenses. ▶ If discomfort persists, consult a doctor and keep the safety data sheet/label to hand. |
| After swallowing | <ul style="list-style-type: none"> ▶ Do not induce vomiting. ▶ If discomfort persists, consult a doctor and keep the safety data sheet/label to hand. |

5. FIREFIGHTING MEASURES

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| Suitable extinguishing agents | <ul style="list-style-type: none"> ▪ Carbon dioxide ▪ Water fog ▪ Foam ▪ Extinguishing agent |
| Unsuitable extinguishing agents | <ul style="list-style-type: none"> ▶ Do not use full water jet. |
| Special hazards | Can form explosive gas/air mixtures. Explosion hazard! |
| Special protective equipment | <ul style="list-style-type: none"> ▶ Supply fresh air. |



Note

Container must be removed from the area threatened by fire if this is possible without endangerment. Otherwise cool with water. Do not inhale vapours and smoke fumes. Ensure a fresh air supply.

6. MEASURES FOR UNINTENTIONAL RELEASE

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| Personal precautionary measures | ▶ Keep away from sources of ignition – do not smoke. |
| Environmental measures | ▶ May not enter the sewer system, surface water and/or ground water; e.g. install oil booms made of universal bonding agent |
| Cleaning procedure | ▶ Absorb leaked product using hygroscopic material (sand, silica earth, universal binder, sawdust, wipes), as described in item 13. |

7. HANDLING AND STORAGE

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| 7.1. Handling | |
| ▶ | Keep away from sources of ignition – do not smoke. |
| ▶ | Only use in well-ventilated areas. |
| ▶ | Ensure extractor unit at the workplace, if natural ventilation is not sufficient. |

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| 7.2. Storage | |
| ▶ | Protect from heat and sun. Eating increases pressure and creates a bursting hazard. |
| ▶ | Store in a cool and dry place. |
| ▶ | Observe official regulations for the storage of compressed gas containers. In Germany: TRG 300 (Industrial compressed gases). |
| ▶ | Observe storage time according to pressure on can. |
| Storage class according to VCI: 2B | |

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| 7.3. Specified use | |
| ▶ | Use only for intended purpose. |
| See also: Processing instructions | |

8. RESTRICT EXPOSURE AND WEAR PERSONAL PROTECTIVE GEAR

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|--------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 8.1. Exposure threshold | |
| Workplace threshold: | <ul style="list-style-type: none"> ▪ Butane: 2400 mg/m³, 1000 ppm ▪ Propane: 1,800 mg/m³, 1000 ppm ▪ Isobutane: 2400 mg/m³, 1000 ppm |



Note

The above limits are taken from TRGS 900 (EH40/2002 Occupational Exposure Limits) and may be checked using measurements which ensure compliance with health and safety requirements. Proper use will limit exposure and should prevent prescribed limits for the workplace from being reached.

| 8.2. Limiting and monitoring exposure | |
|----------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 8.2.1. Limiting and monitoring exposure at the workplace | <ul style="list-style-type: none"> ▶ Wash hands before breaks and at the end of the working day. |
| 8.2.1.1. Respiratory protection | Not necessary if the room ventilation is sufficient. <ul style="list-style-type: none"> ▶ If necessary, use a respiratory device (breathing apparatus) such as EN 137 or EN 138. |
| 8.2.1.2. Gloves | <ul style="list-style-type: none"> ▶ Wear protective gloves made of nitrile rubber/nitrile latex NBR (DIN EN 374) to avoid direct skin contact. |
| 8.2.1.3. Safety goggles | <ul style="list-style-type: none"> ▶ Wear safety glasses with closable side flaps (DIN EN 166). |
| 8.2.1.4. Personal protective equipment | Not necessary if used properly. |
| 8.2.2. Limiting and monitoring environmental exposure | Not necessary if used properly. |

9. PHYSICAL AND CHEMICAL PROPERTIES

| 9.1. General information | |
|--------------------------|-------------------------------------|
| Appearance | Shape: aerosol Colour: yellowish |
| Odour | odourless |

| 9.2. Important information on health, environmental protection and safety | |
|---------------------------------------------------------------------------|----------------------------------------------------------------|
| pH | Not applicable |
| Boiling point | Not applicable |
| Flashpoint | -80°C |
| Ignition temperature | > 350 °C |
| Explosion thresholds | 1.8 - 11.2% v/v |
| Fire-promoting properties: | not determined |
| Vapour pressure | 4.2 bar at 20 °C |
| Explosion hazard | non-explosive. Explosive vapour/air mixtures may form. |
| Density | 0.853 g/ml at 20°C |
| Solubility | in water: slightly, emulsifiable in alcohol: not determined |
| Distribution coefficient | not determined |
| Viscosity | Not applicable |
| Vapour density | not determined |
| Evaporation speed | not determined |

| 9.3. Other information |
|------------------------|
| No data known |

10. STABILITY AND REACTIVITY

| 10.1. Conditions to be avoided |
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| <ul style="list-style-type: none"> ▪ Ignition sources ▪ Open flame ▪ Heating above 50°C (122°F) Explosion hazard! ▪ Explosion hazard from increased pressure. |

10.2. Substances to be avoided

- Other chemicals

10.3. Hazardous decomposition products

None when used properly.

11. TOXICOLOGICAL INFORMATION**Note**

Contains propellant gas (butane, propane).
The toxicological properties of the overall product are unknown.
LD50: > 2000 mg/day

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| Inhalation | <ul style="list-style-type: none"> ▪ Vapours can cause drowsiness and dazedness. ▪ Harmful to health after long, repeated exposure. |
| Swallowing | No data known |
| Skin contact | The skin loses its oils upon intense contact. This can cause changes in skin appearance if repeated numerous times. |
| Eye contact | Eye irritant. |

12. ECOLOGICAL INFORMATION**12.1. Ecotoxicity**

No data known

12.2. Mobility

No data known

12.3. Persistence and biodegradability

No data known

12.4. Bioaccumulation potential

No data known

12.5. Other harmful effects

Contains no AOX according to recipe.
Water pollution class 1, slightly polluting
▶ Do not allow to enter the sewerage system, surface water or surface waterways.

13. DISPOSAL INSTRUCTIONS**Note**

Observe local and national regulations.

**Note**

Use up all the spray in the can (including propellant gas).

Waste code according to the European waste catalog (national: Ordinance on the list of wastes AVV):

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| Product | 16 05 05 Gases in pressurised containers with the exception of those that fall under 16 05 04. |
| Empty can | 15 01 04 Packages made of metal, or 20 01 06 Other metals (depressurised) |
| Packaging cardboard | 15 01 01 Paper and cardboard packaging |
| Leaked product that was bound with liquid-binding material | 15 02 02 Absorbent and filter materials (including oil filters not otherwise specified), wipe cloths and protective clothing soiled from hazardous substances. |

14. INFORMATION ON TRANSPORTING

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| Maritime traffic (IMDG) | <ul style="list-style-type: none"> ▪ UN number: 1950 ▪ Class: 2.1 ▪ Technical name: Aerosols (maximum 1l) ▪ Additional hazard: - ▪ Packaging group: - ▪ Ocean pollutant: no ▪ Limited amount: SV 277: 1000 ml ▪ EmS: F-D, S-U ▪ Shipped "packaged in a small amount" according to Section 3.4 IMDG Code. |
| Surface and rail traffic (ADR/RID) | <ul style="list-style-type: none"> ▪ UN number: 1950 ▪ Class: 2.1 ▪ Name: Compressed gas containers, flammable ▪ Classification code: 5F ▪ Packaging group: - ▪ Hazard label: 2.1 ▪ Limited amount: LQ 2 ▪ Released by the ADR (GGVS/E) since some is packaged according to section 3.4 ADR – LQ2. |
| Air traffic (ICAO/IATA) | <ul style="list-style-type: none"> ▪ UN number: 1950 ▪ Class: 2.1 ▪ Correct shipping ID: Aerosols, flammable ▪ Additional hazard: - ▪ Packaging group: - ▪ Hazard symbol: Flamm. gas ▪ Packaging regulation 203 applies: The box (external packaging) must correspond to packaging group II. These shipped items may be repackaged. |

15. REGULATIONS

The product is classified and identified according to the EC Directives and the Ge-StoffV (Hazardous Substance Ordinance).

| 15.1. EU regulations | |
|---------------------------|----------------------------------------------------------------------------|
| Hazard symbol / hazard ID | F+, highly flammable |
| R phrases | <ul style="list-style-type: none"> ▪ R12 – Highly flammable |

| 15.1. EU regulations | |
|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| S phrases | <ul style="list-style-type: none"> ▪ S2 – Keep out of the reach of children. ▪ S16 – Keep away from sources of ignition - no smoking. ▪ S23 – Do not inhale aerosol. ▪ S51 – Only use in well-ventilated areas. |
| Special ID | <p>Additional identification because it is an aerosol:</p> <ul style="list-style-type: none"> ▪ Container under pressure. ▪ Protect from sunlight and temperatures above 50°C (122°F) ▪ Do not forcefully open or burn after use. ▪ Do no spray toward flame or glowing objects. ▪ Without sufficient ventilation, explosive vapour/air mixtures may occur. |

| 15.2. National regulations | |
|-------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|
| TRGS 905 | CAS No.: not applicable |
| Major Accidents Ordinance | not applicable |
| Hazardous Materials Ordinance | not applicable |
| Water pollution class | WGK 1 (VwVwS): slightly water polluting |
| Technical Instructions on Air Quality | Class: III Amount in %: 50 - 100 |
| Information on Directive 1999/13/EC on the restriction of emissions of volatile organic compounds (VOC Directive) | 70 % w/w |
| Restriction and prohibitions | not applicable |
| Workplace identifications according to BGV A8 | P02 – Fire, exposed light and smoking prohibited. |

16. OTHER INFORMATION

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|-----------------------|---|
| R phrases | - |
| Training instructions | - |

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| Additional information | Test pressure of the utilised cans: 12 bar Does not contain any fluorochlorohydrocarbons (FCHC) or chlorohydrocarbons (CHC), does not contain any AOX. |
| Revision of the safety data sheet | <ul style="list-style-type: none"> ▪ 2008-08-29: Revision according to Directive 2001/58/EC. |



Note

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Note

Only for use in conjunction with the corresponding KaVo products according the instructions for use. Not to be used in homes or for other purposes. In case of contact or mixture with other products, check if other hazards may arise. The presented information does not free the user of the product from observing all guidelines regarding safety, hygiene, health and environmental protection.