

KaVo Spray 2112

Safety Data Sheet

according to Regulation (EC) No 1907/2006

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Revision date: 29.11.2019

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

1.1. Product identifier

KaVo Spray 2112

Product code:

0.411.9630

0.411.9640

1.013.5234

Further trade names

KaVo Spray, KaVo Spray 2112 A

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

Use of the substance/mixture

Lubricating agent

1.3. Details of the supplier of the safety data sheet

Company name:	KaVo Dental GmbH	
Street:	Bismarckring 39	
Place:	D-88400 Biberach	
Telephone:	+49 (0) 7351 56 0	Telefax: + 49 (0) 7351 56 1488
e-mail:	sdb@kavo.com	
e-mail (Contact person):	support@gefahrstoff.com	
Internet:	www.kavo.com	

1.4. Emergency telephone number:

+49 (0) 7351 56 4000 (24 h)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No. 1272/2008

Hazard categories:

Aerosol: Aerosol 1

Aspiration hazard: Asp. Tox. 1

Hazard Statements:

Extremely flammable aerosol.

Pressurised container: May burst if heated.

May be fatal if swallowed and enters airways.

2.2. Label elements

Regulation (EC) No. 1272/2008

Signal word: Danger

Pictograms:



Hazard statements

H222

Extremely flammable aerosol.

H229

Pressurised container: May burst if heated.

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Precautionary statements

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.
P410+P412	Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

2.3. Other hazards

In case of insufficient ventilation and/or through use, explosive/highly flammable mixtures may develop.
The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	GHS Classification			
75-28-5	isobutane			50 - 100 %
	200-857-2	601-004-00-0	01-2119485395-27	
	Flam. Gas 1, Liquefied gas; H220 H280			
8042-47-5	White mineral oil (petroleum)			20 - < 25 %
	232-455-8		01-2119487078-27	
	Asp. Tox. 1; H304			
74-98-6	propane			5 - < 10 %
	200-827-9	601-003-00-5	01-2119486944-21	
	Flam. Gas 1, Liquefied gas; H220 H280			
106-97-8	butane			1 - < 3 %
	203-448-7	601-004-00-0	01-2119474691-32	
	Flam. Gas 1, Liquefied gas; H220 H280			

Full text of H and EUH statements: see section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

First aider: Pay attention to self-protection! Remove persons to safety. Never give anything by mouth to an unconscious person or a person with cramps.

After inhalation

Remove person to fresh air and keep comfortable for breathing. In all cases of doubt, or when symptoms persist, seek medical advice.

After contact with skin

Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse. When in doubt or if symptoms are observed, get medical advice.

After contact with eyes

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue

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rinsing. In case of troubles or persistent symptoms, consult an ophthalmologist.

After ingestion

Rinse mouth immediately and drink plenty of water. Do NOT induce vomiting. Observe risk of aspiration if vomiting occurs. Call a physician in any case!

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

Headache, Nausea, Dizziness. May cause drowsiness or dizziness. Frequently or prolonged contact with skin may cause dermal irritation.

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

Treat symptomatically. Symptoms can occur only after several hours.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Carbon dioxide (CO₂), Foam, Extinguishing powder. Water mist.
Co-ordinate fire-fighting measures to the fire surroundings.

Unsuitable extinguishing media

Full water jet.

5.2. Special hazards arising from the substance or mixture

Extremely flammable aerosol. Vapours can form explosive mixtures with air. Heating causes rise in pressure with risk of bursting.

In case of fire may be liberated: Gases/vapours, toxic (Carbon dioxide (CO₂), Carbon monoxide, aldehydes, carbon black)

5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus. Full protective suit. In case of fire and/or explosion do not breathe fumes. Move undamaged containers from immediate hazard area if it can be done safely.

Additional information

Use water spray jet to protect personnel and to cool endangered containers. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Remove all sources of ignition. Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray. Remove persons to safety. Evacuate area. Avoid contact with skin, eyes and clothes. Wear breathing apparatus if exposed to vapours/dusts/aerosols. Wear personal protection equipment.

6.2. Environmental precautions

Do not allow uncontrolled discharge of product into the environment. Explosion risk. Do not allow to enter into surface water or drains. Prevent spread over a wide area (e.g. by containment or oil barriers). Ensure all waste water is collected and treated via a waste water treatment plant.

6.3. Methods and material for containment and cleaning up

Ventilate affected area. Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal. Clean contaminated articles and floor according to the environmental legislation.

6.4. Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

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SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Observe instructions for use. Do not pierce or burn, even after use. Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Wear breathing apparatus if exposed to vapours/dusts/aerosols. Wear personal protection equipment.

Advice on protection against fire and explosion

Do not spray on naked flames or any incandescent material. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. Keep away from sources of ignition - No smoking. Take precautionary measures against static discharges. Vapours can form explosive mixtures with air. Heating causes rise in pressure with risk of bursting.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed. Keep in a cool, well-ventilated place. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Hints on joint storage

Do not store together with: Oxidizing agent. Pyrophoric or self-heating substances. Food and feedingstuffs.

Further information on storage conditions

Protect against: frost. Protect against direct sunlight. Protect from sunlight.

7.3. Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

CAS No	Substance	ppm	mg/m ³	fib/cm ³	Category	Origin
106-97-8	Aliphatic hydrocarbon gases, Alkanes (C1-C4), Butane	1000	-		TWA (8 h)	
74-98-6	Aliphatic hydrocarbon gases, Alkanes (C1-C4), Propane	1000	-		TWA (8 h)	
-	Mineral Oil pure, highly & severely refined (Inhalable)	-	5		TWA (8 h)	

8.2. Exposure controls



Appropriate engineering controls

Provide adequate ventilation as well as local exhaust at critical locations.

Protective and hygiene measures

Take off contaminated clothing. Draw up and observe skin protection programme. Wash hands before breaks and after work. When using do not eat, drink, smoke, sniff. Avoid contact with skin, eyes and clothes. Do not breathe gas/fumes/vapour/spray.

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Eye/face protection

Suitable eye protection: Tightly sealed safety glasses. DIN EN 166

Hand protection

Wear suitable gloves. EN ISO 374

Protect skin by using skin protective cream.

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. Protect skin by using skin protective cream.

Suitable material: NBR (Nitrile rubber)

Breakthrough time (maximum wearing time) 480 min. Thickness of the glove material: 0,45 mm

Skin protection

Wear suitable gloves. Flame-retardant protective clothing. Wear anti-static footwear and clothing. Wear suitable protective clothing.

Respiratory protection

In case of inadequate ventilation wear respiratory protection. Wear breathing apparatus if exposed to vapours/dusts/aerosols. Respiratory protection necessary at: exceeding exposure limit values.

Suitable respiratory protection apparatus: Combination filtering device (EN 14387)

Filtering device with filter or ventilator filtering device of type: AX

Observe the wear time limits as specified by the manufacturer.

Environmental exposure controls

Do not allow uncontrolled discharge of product into the environment. Explosion risk. Do not allow to enter into surface water or drains. Prevent spread over a wide area (e.g. by containment or oil barriers). Ensure all waste water is collected and treated via a waste water treatment plant.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Aerosol
Colour:	light yellow
Odour:	characteristic

pH-Value:	not determined	Test method	DIN 19261
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Changes in the physical state

Melting point:	not determined
Initial boiling point and boiling range:	-40 °C
Flash point:	-80 °C

Flammability

Solid:	not applicable
Gas:	not applicable

Explosive properties

Heating may cause an explosion. Vapours can form explosive mixtures with air.

Lower explosion limits:	0,9 vol. %
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Upper explosion limits:	9,4 vol. %
Ignition temperature:	not determined
Auto-ignition temperature	
Solid:	not applicable
Gas:	not applicable
Decomposition temperature:	not determined
Oxidizing properties	
Not oxidising.	
Vapour pressure:	not determined
Density (at 20 °C):	0,853 g/cm ³ DIN 51757
Water solubility:	The study does not need to be conducted because the substance is known to be insoluble in water.
Solubility in other solvents	
not determined	
Partition coefficient:	not determined
Viscosity / dynamic:	not determined
Viscosity / kinematic:	15,5 mm ² /s
Vapour density:	not determined
Evaporation rate:	not determined

9.2. Other information

Odour threshold: not determined.

Relative density, Colour, Odour, Viscosity, pH : Data apply to the technically active substance.

SECTION 10: Stability and reactivity

10.1. Reactivity

Extremely flammable aerosol.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

Vapours can form explosive mixtures with air. Heating causes rise in pressure with risk of bursting.

10.4. Conditions to avoid

Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. Protect against direct sunlight.
Protect against: Frost. Take precautionary measures against static discharges.

10.5. Incompatible materials

Oxidizing agent. Pyrophoric or self-heating substances.

10.6. Hazardous decomposition products

In case of fire may be liberated: Gases/vapours, toxic (Carbon dioxide (CO₂), Carbon monoxide, aldehydes, carbon black)

Further information

Do not mix with other chemicals.

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SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity

Based on available data, the classification criteria are not met.

CAS No	Chemical name					
	Exposure route	Dose		Species	Source	Method
8042-47-5	White mineral oil (petroleum)					
	oral	LD50 > 5000 mg/kg		Rat	Manufacturer	
	dermal	LD50 > 2000 mg/kg		Rabbit	Manufacturer	
	inhalation (4 h) aerosol	LC50 > 5000 mg/l		Rat	Manufacturer	

Irritation and corrosivity

Based on available data, the classification criteria are not met.

Sensitising effects

Based on available data, the classification criteria are not met.

Carcinogenic/mutagenic/toxic effects for reproduction

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

May be fatal if swallowed and enters airways.

SECTION 12: Ecological information

12.1. Toxicity

The product is not: Ecotoxic.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
8042-47-5	White mineral oil (petroleum)					
	Acute fish toxicity	LC50 > 100 mg/l	96 h	Brachydanio rerio (zebra-fish)	Manufacturer	
	Acute algae toxicity	ErC50 > 100 mg/l	72 h	Desmodesmus subspicatus	Manufacturer	
	Acute crustacea toxicity	EC50 > 100 mg/l	48 h	Daphnia magna (Big water flea)	Manufacturer	

12.2. Persistence and degradability

The product has not been tested.

12.3. Bioaccumulative potential

The product has not been tested.

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Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
75-28-5	isobutane	1,09
8042-47-5	White mineral oil (petroleum)	> 3,5
74-98-6	propane	1,09
106-97-8	butane	1,09

12.4. Mobility in soil

The product has not been tested.

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

12.6. Other adverse effects

No information available.

Further information

Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Advice on disposal

Do not allow to enter into surface water or drains. Dispose of waste according to applicable legislation.

List of Wastes Code - residues/unused products

160504 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; gases in pressure containers (including halons) containing hazardous substances; hazardous waste

List of Wastes Code - used product

160504 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; gases in pressure containers (including halons) containing hazardous substances; hazardous waste

List of Wastes Code - contaminated packaging

150104 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); metallic packaging

Contaminated packaging

Dispose of waste according to applicable legislation.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number:	UN 1950
14.2. UN proper shipping name:	AEROSOLS
14.3. Transport hazard class(es):	2
14.4. Packing group:	-
Hazard label:	2.1



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Classification code: 5F
 Special Provisions: 190 327 344 625
 Limited quantity: 1 L
 Excepted quantity: E0
 Transport category: 2
 Tunnel restriction code: D

Inland waterways transport (ADN)

14.1. UN number: UN 1950
14.2. UN proper shipping name: AEROSOLS
14.3. Transport hazard class(es): 2
14.4. Packing group: -
 Hazard label: 2.1



Classification code: 5F
 Special Provisions: 190 327 344 625
 Limited quantity: 1 L
 Excepted quantity: E0

Marine transport (IMDG)

14.1. UN number: UN 1950
14.2. UN proper shipping name: AEROSOLS
14.3. Transport hazard class(es): 2.1
14.4. Packing group: -
 Hazard label: 2.1



Special Provisions: 63, 190, 277, 327, 344, 381, 959
 Limited quantity: 1000 mL
 Excepted quantity: E0
 EmS: F-D, S-U

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number: UN 1950
14.2. UN proper shipping name: AEROSOLS, FLAMMABLE
14.3. Transport hazard class(es): 2.1
14.4. Packing group: -
 Hazard label: 2.1



Special Provisions: A145 A167 A802
 Limited quantity Passenger: 30 kg G
 Passenger LQ: Y203
 Excepted quantity: E0

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IATA-packing instructions - Passenger:	203
IATA-max. quantity - Passenger:	75 kg
IATA-packing instructions - Cargo:	203
IATA-max. quantity - Cargo:	150 kg

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: no

14.6. Special precautions for user

Warning: Flammable gases.

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

not applicable

SECTION 15: Regulatory information

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

EU regulatory information

Restrictions on use (REACH, annex XVII):

Entry 3: White mineral oil (petroleum)

Entry 40: isobutane; propane; butane

2010/75/EU (VOC): 75 - 80 %

Information according to 2012/18/EU (SEVESO III): P3a FLAMMABLE AEROSOLS

Additional information

Aerosol directive (75/324/EEC).

National regulatory information

Employment restrictions: Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC).

Water contaminating class (D): 1 - slightly water contaminating

15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

Changes

This data sheet contains changes from the previous version in section(s):

1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16.

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 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

LC50: Lethal concentration, 50%

LD50: Lethal dose, 50%

CLP: Classification, labelling and Packaging

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REACH: Registration, Evaluation and Authorization of Chemicals
 GHS: Globally Harmonised System of Classification, Labelling and Packaging of Chemicals
 UN: United Nations
 DNEL: Derived No Effect Level
 DMEL: Derived Minimal Effect Level
 PNEC: Predicted No Effect Concentration
 ATE: Acute toxicity estimate
 LL50: Lethal loading, 50%
 EL50: Effect loading, 50%
 EC50: Effective Concentration 50%
 ErC50: Effective Concentration 50%, growth rate
 NOEC: No Observed Effect Concentration
 BCF: Bio-concentration factor
 PBT: persistent, bioaccumulative, toxic
 vPvB: very persistent, very bioaccumulative
 RID: Regulations concerning the international carriage of dangerous goods by rail
 ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
 (Accord européen relatif au transport international des marchandises dangereuses par voies de navigation
 intérieures)
 EmS: Emergency Schedules
 MFAG: Medical First Aid Guide
 ICAO: International Civil Aviation Organization
 MARPOL: International Convention for the Prevention of Marine Pollution from Ships
 IBC: Intermediate Bulk Container
 VOC: Volatile Organic Compounds
 SVHC: Substance of Very High Concern
 For abbreviations and acronyms, see table at <http://abbrev.esdscom.eu>

Classification for mixtures and used evaluation method according to Regulation (EC) No. 1272/2008 [CLP]

Classification	Classification procedure
Aerosol 1; H222-H229	On basis of test data
Asp. Tox. 1; H304	Calculation method

Relevant H and EUH statements (number and full text)

H220	Extremely flammable gas.
H222	Extremely flammable aerosol.
H229	Pressurised container: May burst if heated.
H280	Contains gas under pressure; may explode if heated.
H304	May be fatal if swallowed and enters airways.

Further Information

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)