



KaVo. Dental Excellence.

SAFETY DATA SHEET

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

1.1. Product identifier

Trade name or designation of the mixture KaVo QUATTROcare plus Spray

REACH Registration Number -

Product code 1,005,3843-45;1,005,4523/24

Issue date 09-November-2011

Version number 1.0

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Supersedes date 09-November-2011

Product use professional use

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

Identified uses Not available.

Uses advised against None known

1.3. Details of the supplier of the safety data sheet

Company name Kaltenbach & Voigt GmbH

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D-88400 Biberach
Germany

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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

The mixture has been assessed and/or tested for its physical, health and environmental hazards and the following classification applies.

Classification according to Directive 67/548/EEC or 1999/45/EC as amended

Classification F+;R12

The full text for all R-phrases is displayed in section 16.

Hazard summary

Physical hazards Extremely flammable.

Health hazards Not classified for health hazards.

Environmental hazards Not classified for hazards to the environment.

Specific hazards Extremely flammable. Do not breathe dust/fume/gas/mist/vapors/spray.

Main symptoms Not available.

2.2. Label elements

Label according to Directive 67/548/EEC or 1999/45/EC as amended

Contains: Butane (< 0,1 % Butadiene), Isobutane (< 0,1% Butadiene), PROPANE

EC number -

EC label



Extremely flammable

R-phrases	R12 Extremely flammable.
S-phrases	S9 Keep container in a well-ventilated place. S16 Keep away from sources of ignition - No smoking. S23 Do not breathe gas/fumes/vapour/spray. S60 This material and its container must be disposed of as hazardous waste.
Authorisation number	Not available.
Supplemental label information	Not applicable.
2.3. Other hazards	Not assigned.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

General information

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	INDEX No.	Notes
Butane (< 0,1 % Butadiene)		106-97-8 203-448-7	-	601-004-00-0	
Classification:	DSD: F+;R12 CLP: Flam. Gas 1;H220				
Isobutane (< 0,1% Butadiene)		75-28-5 200-857-2	-	601-004-00-0	
Classification:	DSD: F+;R12 CLP: Flam. Gas 1;H220, Press. Gas;H280				
PROPANE		74-98-6 200-827-9	-	601-003-00-5	
Classification:	DSD: F+;R12 CLP: Flam. Gas 1;H220				

#: This substance has workplace exposure limit(s).
PBT: persistent, bioaccumulative and toxic substance.
vPvB: very persistent and very bioaccumulative substance.

Composition comments The full text for all R-phrases is displayed in Section 16.

SECTION 4: First aid measures

General information Not available.

4.1. Description of first aid measures

Inhalation	Move to fresh air. For breathing difficulties, oxygen may be necessary. Call a physician if symptoms develop or persist.
Skin contact	Take off immediately all contaminated clothing. Rinse skin with water/shower.
Eye contact	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.
Ingestion	Clean mouth with water and drink afterwards plenty of water. Get medical attention if irritation develops and persists.

4.2. Most important symptoms and effects, both acute and delayed Not available.

4.3. Indication of any immediate medical attention and special treatment needed Not available.

SECTION 5: Firefighting measures

General fire hazards Not available.

5.1. Extinguishing media

Suitable extinguishing media	Water spray, foam, dry powder or carbon dioxide.
Unsuitable extinguishing media	Do not use water jet.

5.3. Advice for firefighters

Special protective equipment for firefighters

Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

Special fire fighting procedures

Containers close to fire should be removed immediately or cooled with water. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Keep unnecessary personnel away. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep upwind. Keep out of low areas. Ventilate closed spaces before entering them.

For emergency responders

Keep unnecessary personnel away. Use personal protection recommended in Section 8 of the MSDS.

6.2. Environmental precautions

Prevent further leakage or spillage if safe to do so. Contact local authorities in case of spillage to drain/aquatic environment. Avoid discharge into drains, water courses or onto the ground.

6.3. Methods and material for containment and cleaning up

Refer to attached safety data sheets and/or instructions for use. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Keep combustibles (wood, paper, oil etc) away from spilled material. Stop leak if you can do so without risk. Move the cylinder to a safe and open area if the leak is irreparable. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

6.4. Reference to other sections

For personal protection, see section 8. For waste disposal, see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Pressurised container: Do not pierce or burn, even after use. Do not spray on a naked flame or any other incandescent material. Do not smoke while using or until sprayed surface is thoroughly dry. May be ignited by open flame. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. Ground and bond containers when transferring material. Do not use if spray button is missing or defective. Do not re-use empty containers. Do not breathe dust/fume/gas/mist/vapors/spray. Use only in well-ventilated areas. Avoid prolonged exposure.

7.2. Conditions for safe storage, including any incompatibilities

Level 1 Aerosol.

Contents under pressure. Do not puncture, incinerate or crush. Do not handle or store near an open flame, heat or other sources of ignition. Avoid exposure to long periods of sunlight. Refrigeration recommended. Store in a well-ventilated place. Keep out of the reach of children.

7.3. Specific end use(s)

Not available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

UK. EH40 Workplace Exposure Limits (WELs)

Components	Type	Value
Butane (< 0,1 % Butadiene) (106-97-8)	STEL	1810 mg/m3
		750 ppm
	TWA	1450 mg/m3 600 ppm

Biological limit values

No biological exposure limits noted for the ingredient(s).

Recommended monitoring procedures

Follow standard monitoring procedures.

8.2. Exposure controls

Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide adequate general and local exhaust ventilation.

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear safety glasses with side shields.

Skin protection

- Hand protection

Wear protective gloves. Nitrile rubber. Latex gloves.

- Other	Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.
Respiratory protection	Use a positive-pressure air-supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air-purifying respirators may not provide adequate protection.
Thermal hazards	Not available.
Hygiene measures	When using do not smoke. Handle in accordance with good industrial hygiene and safety practices.
Environmental exposure controls	Environmental manager must be informed of all major releases.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Physical state	Liquid.
Form	Aerosol
Colour	Light yellow.
Odour	Odourless.
Odour threshold	Not available.
pH	Not applicable.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	Not available.
Flash point	-80.00 °C (-112.00 °F)
Evaporation rate	Not applicable.
Flammability (solid, gas)	Not applicable.

Upper/lower flammability or explosive limits

Flammability limit - lower (%)	1.8 %
Flammability limit - upper (%)	11.2 %
Vapour pressure	4.2 bar @ 20 °C
Vapour density	Not applicable.
Relative density	Not available.
Solubility(ies)	slight emulsifiable
Partition coefficient (n-octanol/water)	Not available.
Ignition temperature	> 350 °C (> 662 °F)
Decomposition temperature	Not available.
Viscosity	Not applicable.
Explosive properties	Not available.
Oxidizing properties	Not available.

9.2. Other information

Density	0.85 g/ml @ 20 °C
VOC (Weight %)	84.46 %

SECTION 10: Stability and reactivity

10.2. Chemical stability	Risk of ignition.
10.3. Possibility of hazardous reactions	Not available.
10.4. Conditions to avoid	Heat, flames and sparks. Aerosol containers are unstable at temperatures above 50°C.
10.5. Incompatible materials	Do not mix with other chemicals.
10.6. Hazardous decomposition products	No dangerous reaction known under conditions of normal use.

SECTION 11: Toxicological information

General information	Not available.
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Information on likely routes of exposure

Ingestion	Not available.
Inhalation	Vapours may cause drowsiness and dizziness.
Skin contact	Not available.
Eye contact	Not available.
Symptoms	Not available.

11.1. Information on toxicological effects

Components	Species	Test results
Butane (< 0,1 % Butadiene) (106-97-8)		
Acute		
<i>Inhalation</i>		
LC50	Mouse	680 mg/l, 2 Hours
	Rat	658 mg/l, 4 Hours
Isobutane (< 0,1% Butadiene) (75-28-5)		
Acute		
<i>Inhalation</i>		
LC50	Mouse	52 mg/l, 1 Hours
PROPANE (74-98-6)		
Acute		
<i>Inhalation</i>		
LC50	Rat	> 1442.847 mg/l, 15 Minutes
Skin corrosion/irritation	Prolonged or repeated contact may cause drying, cracking, or irritation.	
Serious eye damage/irritation	May irritate eyes.	
Respiratory sensitisation	Not available.	
Skin sensitisation	Not available.	
Germ cell mutagenicity	Not available.	
Carcinogenicity	Not available.	
Reproductive toxicity	Not available.	
Specific target organ toxicity - single exposure	Not available.	
Specific target organ toxicity - repeated exposure	Not available.	
Aspiration hazard	Not available.	
Mixture versus substance information	Not available.	
Other information	Not available.	

SECTION 12: Ecological information

12.1. Toxicity	There are no data on the ecotoxicity of this product.
12.2. Persistence and degradability	No data is available on the degradability of this product.
12.3. Bioaccumulative potential	Not available.
Partition coefficient	
n-octanol/water (log Kow)	
PROPANE	2.36
Isobutane (< 0,1% Butadiene)	2.76
Butane (< 0,1 % Butadiene)	2.89
Bioconcentration factor (BCF)	Not available.
12.4. Mobility in soil	Not available.
12.5. Results of PBT and vPvB assessment	Not a PBT or vPvB substance or mixture.
12.6. Other adverse effects	Not available.

SECTION 13: Disposal considerations**13.1. Waste treatment methods**

Residual waste	Dispose of in accordance with local regulations. Avoid discharge into water courses or onto the ground.
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.
EU waste code	The Waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Disposal methods/information	Contents under pressure. Do not puncture, incinerate or crush. This material and its container must be disposed of as hazardous waste. Must be incinerated in a suitable incineration plant holding a permit delivered by the competent authorities. Do not discharge into drains, water courses or onto the ground. Dispose in accordance with all applicable regulations.

SECTION 14: Transport information

ADR

14.1. UN number	UN1950
14.2. UN proper shipping name	Aerosols, flammable
14.3. Transport hazard class(es)	2.1
Subsidiary class(es)	-
14.4. Packing group	Not available.
14.5. Environmental hazards	No
Tunnel restriction code	Not available.
Labels required	2.1
14.6. Special precautions for user	Not available.

IATA

14.1. UN number	UN1950
14.2. UN proper shipping name	Aerosols, flammable
14.3. Transport hazard class(es)	2.1
Subsidiary class(es)	6.1 (PGIII)
14.4. Packing group	Not available.
14.5. Environmental hazards	Not available.
Labels required	2.1
ERG Code	Not available.
14.6. Special precautions for user	Not available.

IMDG

14.1. UN number	UN1950
14.2. UN proper shipping name	Aerosols, flammable
14.3. Transport hazard class(es)	2
Subsidiary class(es)	-
14.4. Packing group	Not available.
14.5. Environmental hazards	
Marine pollutant	No
Labels required	Not available.
14.6. Special precautions for user	Not available.
14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	This substance/mixture is not intended to be transported in bulk.

SECTION 15: Regulatory information

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

EU regulations

- Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I**
Not listed.
- Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex II**
Not listed.
- Regulation (EC) No. 850/2004 on persistent organic pollutants, Annex I as amended**
Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 1 as amended
Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 2 as amended
Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 3 as amended
Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex V as amended
Not listed.

Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry
Not listed.

Regulation (EC) No. 1907/2006, REACH Article 59(1) Candidate List as currently published by ECHA
Not listed.

Authorisations

Regulation (EC) No. 143/2011 Annex XIV Substances Subject to Authorisation
Not listed.

Restrictions on use

Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended
Not listed.

Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work
Not regulated.

Directive 92/85/EEC: on the safety and health of pregnant workers and workers who have recently given birth or are breastfeeding
Not regulated.

Other EU regulations

Directive 96/82/EC (Seveso II) on the control of major-accident hazards involving dangerous substances
Not regulated.

Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work
PROPANE (CAS 74-98-6)

Directive 94/33/EC on the protection of young people at work
Not regulated.

Other regulations

The product is classified and labelled in accordance with EC directives or respective national laws. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006.

National regulations

Pressurised container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use.

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out.

SECTION 16: Other information

List of abbreviations Not available.

References Not available.

Information on evaluation method leading to the classification of mixture Not available.

Full text of any statements or R-phrases and H-statements under Sections 2 to 15 R12 Extremely flammable.

H220 - Extremely flammable gas.
H280 - Contains gas under pressure; may explode if heated.

Revision information Not available.

Training information Not available.

Disclaimer The information in the sheet was written based on the best knowledge and experience currently available.