



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 QUATTROrOclean® 2139

REACH Registration Number -

Synonyms 1,008,6856 (Flasche), 1,008,6838 (Packung mit 4 Flaschen)

Issue date 12-November-2012

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Revision date 12-November-2012

Product use professional use

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

Identified uses cleaning agents

1.3. Details of the supplier of the safety data sheet

Company name Kaltenbach & Voigt GmbH

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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 Xi;R41

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

Hazard summary

Physical hazards Not classified for physical hazards.

Health hazards Risk of serious damage to eyes.

Environmental hazards Not classified for hazards to the environment.

Specific hazards Prolonged exposure may cause chronic effects. Do not breathe dust/fume/gas/mist/vapors/spray.

Main symptoms Irritation of eyes and mucous membranes. Permanent eye damage including blindness could result.

2.2. Label elements

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

EC number -

EC label



Irritant

R-phrases

R41 Risk of serious damage to eyes.

S-phrases	S23 Do not breathe gas/fumes/vapour/spray. S25 Avoid contact with eyes. S39 Wear eye/face protection. 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
2,2'-Iminodiethanol	5 - <10	111-42-2 203-868-0	-	603-071-00-1	
Classification:	DSD:	Xn;R22-48/22, Xi;R38-41			
	CLP:	Acute Tox. 4;H302, Skin Irrit. 2;H315, Eye Dam. 1;H318, STOT RE 2;H373			
Alcohols, C10-16, Ethoxylated Propoxylated	5 - <10	69227-22-1	-	-	
Classification:	DSD:	Xn;R22, Xi;R41			
	CLP:	Acute Tox. 4;H302, Eye Dam. 1;H318			

CLP: Regulation No. 1272/2008.

DSD: Directive 67/548/EEC.

PBT: persistent, bioaccumulative and toxic substance.

vPvB: very persistent and very bioaccumulative substance.

#: This substance has been assigned Community workplace exposure limit(s).

Composition comments	The full text for all R- and H-phrases is displayed in section 16. The full text for all R-phrases is displayed in Section 16.
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SECTION 4: First aid measures

General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation.
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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 Rinse skin with water/shower. Get medical attention if irritation develops and persists.

Eye contact Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Get medical attention immediately.

Ingestion Get medical advice/attention if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed	Irritation of eyes and mucous membranes. Permanent eye damage including blindness could result.
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4.3. Indication of any immediate medical attention and special treatment needed	Keep victim warm. Keep victim under observation. Symptoms may be delayed.
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SECTION 5: Firefighting measures

General fire hazards	Not available.
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5.1. Extinguishing media

Suitable extinguishing media Water spray, carbon dioxide, dry powder or polar resistant foam.

Unsuitable extinguishing media Do not use water jet.

Hazardous combustion products	Fire may produce irritating, corrosive and/or toxic gases.
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5.3. Advice for firefighters

Special protective equipment for firefighters Firefighters should wear full protective clothing including self contained breathing apparatus.

Special fire fighting procedures

In the event of fire, cool tanks with water spray. Water runoff can cause environmental damage.

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.

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

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. 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.

Never return spills in original containers for re-use. For waste disposal, see section 13.

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

Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact with eyes. Avoid prolonged exposure. When using, do not eat, drink or smoke. Avoid release to the environment.

7.2. Conditions for safe storage, including any incompatibilities

Keep out of the reach of children. Keep separate from food, feedstuffs, fertilisers and other sensitive material. Keep in original container. Avoid temperatures above°F (25°C).

7.3. Specific end use(s)

Not available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters**Occupational exposure limits**

No exposure limits noted for ingredient(s).

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**General information**

Eye wash fountain is recommended.

Eye/face protection

Avoid contact with eyes. Wear approved safety goggles.

Skin protection**- Hand protection**

Butyl rubber or Viton gloves are recommended.

- Other

Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment. Avoid contact with the skin. Wear eye/face protection.

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 eat, drink or smoke. Wash hands after handling.

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	Liquid.
Colour	Light yellow.
Odour	Characteristic.
Odour threshold	Not available.
pH	12
Melting point/freezing point	Not available.
Initial boiling point and boiling range	Not available.
Flash point	100.00 °C (212.00 °F) Closed cup
Evaporation rate	Not applicable.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Vapour pressure	Not applicable.
Vapour density	Not applicable.
Relative density	Not available.
Solubility(ies)	soluble
Partition coefficient (n-octanol/water)	Not available.
Decomposition temperature	Not available.
Viscosity	Not applicable.
Explosive properties	Not available.
Oxidizing properties	Not available.

9.2. Other information

Density	1.04 g/cm ³ @ 20 °C
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SECTION 10: Stability and reactivity

10.2. Chemical stability	Material is stable under normal conditions.
10.3. Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
10.4. Conditions to avoid	None under normal conditions.
10.5. Incompatible materials	Strong acids.
10.6. Hazardous decomposition products	Fire may produce irritating, corrosive and/or toxic gases.

SECTION 11: Toxicological information

General information	Not available.
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Information on likely routes of exposure

Ingestion	Not available.
Inhalation	Not available.
Skin contact	Not available.
Eye contact	Risk of serious damage to eyes.
Symptoms	Irritation of eyes and mucous membranes. Permanent eye damage including blindness could result.

11.1. Information on toxicological effects

Components	Species	Test results
2,2'-Iminodiethanol (111-42-2)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	11.9 ml/kg
<i>Oral</i>		
LD50	Rat	710 mg/kg

Components	Species	Test results
Other		1.82 g/kg
LD50	Mouse	2300 mg/kg
Skin corrosion/irritation	Not available.	
Serious eye damage/irritation	Risk of serious damage to 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	Expected to be harmful to aquatic organisms. Large amounts of the product may affect the acidity (pH-factor) in water with possible risk of harmful effects to aquatic organisms. Avoid discharge into drains, water courses or onto the ground.
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Components	Species	Test results
2,2'-Iminodiethanol (111-42-2)		
Aquatic		
Fish	LC50	Fathead minnow (Pimephales promelas) > 100 mg/l, 96 hours
12.2. Persistence and degradability	Expected to be readily biodegradable. This surfactant complies with the biodegradability criteria as laid down in Regulation (EC) No.648/2004 on detergents. Data to support this assertion are held at the disposal of the competent authorities of the Member States and will be made available to them, at their direct request or at the request of a detergent manufacturer.	
12.3. Bioaccumulative potential	Not available.	
Partition coefficient n-octanol/water (log Kow)	2,2'-Iminodiethanol	-1.43
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.
EU waste code	EWC-code: 200129
Disposal methods/information	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. Do not discharge into drains, water courses or onto the ground. Dispose in accordance with all applicable regulations.

SECTION 14: Transport information

ADR

Not regulated as dangerous goods.

RID

Not regulated as dangerous goods.

ADN

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

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

2,2'-Iminodiethanol (CAS 111-42-2)

Directive 94/33/EC on the protection of young people at work

2,2'-Iminodiethanol (CAS 111-42-2)

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

Not available.

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	<p>R22 Harmful if swallowed. R38 Irritating to skin. R41 Risk of serious damage to eyes. R48/22 Harmful: danger of serious damage to health by prolonged exposure if swallowed. H302 - Harmful if swallowed. H315 - Causes skin irritation. H318 - Causes serious eye damage. H373 - May cause damage to organs through prolonged or repeated exposure.</p>
Revision information	Product and company identification: Synonyms
Training information	Not available.
Disclaimer	The information in the sheet was written based on the best knowledge and experience currently available.