Safety Data Sheet

according to UK REACH Regulation

Blutoxol

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

1.1. Product identifier

Blutoxol

UFI: H940-G08W-700G-WJ1N

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

Use of the substance/mixture

Product for professional disinfection

1.3. Details of the supplier of the safety data sheet

Company name: JOHANNES KIEHL KG
Street: Robert-Bosch-Str. 9
Place: D-85235 Odelzhausen
Telephone: +49 8134 9305-0 Telefax: +49 8134 6466
E-mail: info@kiehl-group.com
Contact person: Laboratory department
Internet: www.kiehl-group.com

Responsible Department: Notrufnummer für deutsch- und englischsprachige Länder: +49/89/19240
Vergiftungsinformationszentrale (VIZ) Österreich: +43 1 406 43 43
Nationale Notrufnummer für die Schweiz (Tox-Zentrum Zürich): 145
Numéro d'urgence France: INRS: +33 (0) 1 45 42 59 59
Numero d' emergenza Italia: Centro Antiveleni - 20162 Milano: 02/66101029
ETTSZ /Egészségügyi Toxikológiai Tájékoztató Szolgálat/, 1096 Budapest, Nagyvárad tér 2. Ügyeleti telefonszám: +36 80 201-199
Eesti: Häirekeskuse number: 112 / Mürgistusteabekeskuse number: 16662
Emergency telephone number for all other countries: +49/8134/9305-169

KIEHL Austria GmbH	Perfektastr. 57;	A-1230 Wien	Tel. +43 (0) 1 / 604 99 93
KIEHL FRANCE S.A.R.L.	5, rue de Londres;	F-67670 Mommenheim	Tél. +33 (0) 3.88.59.52.25
KIEHL Italia s.r.l.	Via San Rocco, 101;	I-16036 Recco (GE)	Tel. +39 / 0185 730 008
KIEHL Schweiz AG	St. Dionys-Str. 33;	CH-8645 Jona	Tel. +41 (0) 55 / 254 74 74
KIEHL Hungary Kft.	Felsöipari körút 3/ D	HU-2142 Nagytarcsa	Tel. +36 (0) 1 / 348-08 41
KIEHL Middle East LLC	A8-LIU 48/49 - KIZAD	Abu Dhabi, U.A.E.	Tel. +971 2 550 33 96

1.4. Emergency telephone number:

+49/89/19240 (germanophone and anglophone)
For Belgium: +32 70 245 245 (free, 24/7) or +32 2 264 96 30 (normal rate)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GB CLP Regulation

Skin Corr. 1B; H314
Aquatic Acute 1; H400
Aquatic Chronic 3; H412

Full text of hazard statements: see SECTION 16.

2.2. Label elements

GB CLP Regulation

Hazard components for labelling

Potassium Silicate / Benzalkonium Chloride

Signal word: Danger

Pictograms:

Hazard statements

H314	Causes severe skin burns and eye damage.
H400	Very toxic to aquatic life.
H412	Harmful to aquatic life with long lasting effects.

Precautionary statements

P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313	IF exposed or concerned: Get medical advice/attention.

2.3. Other hazards

None known.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical characterization

according to 648/2004/CE: nonionic surfactants <5%, organic salts, inorganic salts, biocides, dyes

Relevant ingredients

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (GB CLP Regulation)			
69011-36-5	i-C13-Fatty alcohol polyglycol ethers 5-12 EO			1 - < 5 %
	931-138-8			
	Acute Tox. 4, Eye Dam. 1; H302 H318			
7173-51-5	didecyldimethylammonium chloride			1 - < 5 %
	230-525-2	612-131-00-6	01-2119945987-15	
	Acute Tox. 4, Skin Corr. 1B, Eye Dam. 1, Aquatic Acute 1, Aquatic Chronic 2; H302 H314 H318 H400 H411			
1312-76-1	Potassium silicate			1 - < 5 %
	215-199-1		01-2119456888-17	
	Met. Corr. 1, Skin Corr. 1B; H290 H314			
68391-01-5	C12-C18-Dimethylbenzyl ammonium chloride			1 - < 5 %
	269-919-4			
	Acute Tox. 4, Skin Corr. 1B, Aquatic Acute 1, Aquatic Chronic 1; H302 H314 H400 H410			

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

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
	Specific Conc. Limits, M-factors and ATE		
69011-36-5	931-138-8	i-C13-Fatty alcohol polyglycol ethers 5-12 EO	1 - < 5 %
	oral: ATE = 500 mg/kg Eye Dam. 1; H318: >= 10 - 100 Eye Irrit. 2; H319: >= 6 - < 10		
7173-51-5	230-525-2	didecyldimethylammonium chloride	1 - < 5 %
	dermal: LD50 = >2000 mg/kg; oral: LD50 = 329 mg/kg Aquatic Acute 1; H400: M=10		
68391-01-5	269-919-4	C12-C18-Dimethylbenzyl ammonium chloride	1 - < 5 %
	oral: ATE = 500 mg/kg Aquatic Acute 1; H400: M=10 Aquatic Chronic 1; H410: M=1		

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

Avoid contact with skin and eyes.

After inhalation

not hazardous by inhalation

After contact with skin

Wash off immediately with soap and plenty of water. Take off all contaminated clothing immediately.

After contact with eyes

Rinse thoroughly with plenty of water, also under the eyelids.
If eye irritation persists, consult a specialist.

After ingestion

Clean mouth with water and drink afterwards plenty of water. Prevent vomiting if possible.
Consult a physician.

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

This information is not available.

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

If you feel unwell, seek medical advice (show the label where possible).
Show this safety data sheet to the doctor in attendance.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Any extinguishing means and measures are acceptable.

5.2. Special hazards arising from the substance or mixture

This information is not available.

5.3. Advice for firefighters

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. The product itself does not burn.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General advice

Avoid contact with skin, eyes and clothing.

For non-emergency personnel

Use personal protection equipment.

For emergency responders

Use personal protection equipment.

6.2. Environmental precautions

Do not flush into surface water.

6.3. Methods and material for containment and cleaning up

For containment

Stop leak if safe to do so. Cover drains.
Prevent spread over a wide area (e.g. by containment or oil barriers).

For cleaning up

Wipe up with absorbent material (e.g. cloth, fleece).
Clean contaminated articles and floor according to the environmental legislation.

Other information

Wipe up with absorbent material (e.g. cloth, fleece). After cleaning, flush away traces with water.
Never return spills in original containers for re-use.

6.4. Reference to other sections

Refer to protective measures listed in sections 7 and 8.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Avoid contact with skin and eyes.
Smoking, eating and drinking should be prohibited in the application area.
Wash hands after handling.

Advice on protection against fire and explosion

No special protective measures against fire required.

Advice on general occupational hygiene

Handle in accordance with good industrial hygiene and safety practice.
Use protective skin cream before handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Store at room temperature in the original container. Store in a place accessible by authorized persons only.

Hints on joint storage

Keep away from food, drink and animal feedingstuffs.
Do not store near acids.

Further information on storage conditions

Keep container tightly closed.
Never return unused material to storage receptacle.
Protect from frost. Keep away from direct sunlight.

7.3. Specific end use(s)

This information is not available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Additional advice on limit values

To date, no national critical limit values exist.

8.2. Exposure controls

Appropriate engineering controls

Not required.

Individual protection measures, such as personal protective equipment

Eye/face protection

Safety glasses with side-shields conforming to EN166

Hand protection

Protective gloves
Recommendation: Nature latex gloves with parts of polychloropren latex and a coating thickness of 0.6 mm which protect at least 8 hours (corresponds to the permeability level 6 of the European norm DIN/EN 374) and provide a resistance to swelling of < 15%.

Skin protection

Wear suitable protective clothing.

Respiratory protection

Not required

Environmental exposure controls

Handle in accordance with good industrial hygiene and safety practice.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	liquid
Colour:	light red
Odour:	characteristic

		Test method
Melting point/freezing point:	<0 °C	
Boiling point or initial boiling point and boiling range:	>98 °C	
Flammability:	not applicable	
Lower explosion limits:	not applicable	
Upper explosion limits:	not applicable	
Flash point:	>100 °C	
Auto-ignition temperature:	>300 °C	
Decomposition temperature:	not determined	
pH-Value (at 20 °C):	approx. 13,0	K-QP1012C
Viscosity / kinematic:	not determined	
Water solubility: (at 20 °C)	completely miscible	
Solubility in other solvents		
not determined		
Partition coefficient n-octanol/water:	not determined	
Vapour pressure:	not determined	
Density (at 20 °C):	1,02 g/cm³	K-QP1012E
Relative vapour density:	not determined	
Particle characteristics:	not applicable	

9.2. Other information

Information with regard to physical hazard classes

Explosive properties

Not explosive

Self-ignition temperature

Solid:	not applicable
Gas:	not applicable

Oxidizing properties

Not relevant

Other safety characteristics

Evaporation rate:	not determined
Solid content:	not determined
Sublimation point:	not applicable
Softening point:	not applicable
Pour point:	not applicable
Viscosity / dynamic:	not determined
Flow time:	not determined

SECTION 10: Stability and reactivity

10.1. Reactivity

This information is not available.

10.2. Chemical stability

This information is not available.

10.3. Possibility of hazardous reactions

This information is not available.

10.4. Conditions to avoid

Do not expose to temperatures above 35 °C.

10.5. Incompatible materials

This information is not available.

10.6. Hazardous decomposition products

No decomposition if stored and applied as directed.

Further information

Do not mix with other detergents or chemicals.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in GB CLP Regulation

Acute toxicity

Based on available data, the classification criteria are not met.
Acute oral toxicity (LD50): 14760 mg/kg (rat)
Acute dermal toxicity (LD50): 133680 mg/kg (rabbit)

ATEmix calculated

ATE (oral) > 2000 mg/kg; ATE (dermal) > 2000 mg/kg; ATE (inhalation vapour) > 20 mg/l; ATE (inhalation dust/mist) > 5 mg/l

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
69011-36-5	i-C13-Fatty alcohol polyglycol ethers 5-12 EO				
	oral	ATE 500 mg/kg			
7173-51-5	didecyldimethylammonium chloride				
	oral	LD50 329 mg/kg	rat		OECD Test Guideline 401
	dermal	LD50 >2000 mg/kg	rat		
68391-01-5	C12-C18-Dimethylbenzyl ammonium chloride				
	oral	ATE 500 mg/kg			

Irritation and corrosivity

Serious eye damage/eye irritation: Skin corrosion/irritation: Causes severe skin burns and eye damage.

Sensitising effects

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

Carcinogenic/mutagenic/toxic effects for reproduction

Germ cell mutagenicity: Based on available data, the classification criteria are not met.
Carcinogenicity: Based on available data, the classification criteria are not met.
Reproductive toxicity: 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

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

11.2. Information on other hazards

Endocrine disrupting properties

This information is not available.

Further information

Health injuries are not known or expected under normal use.

SECTION 12: Ecological information

12.1. Toxicity

Very toxic to aquatic life.
Harmful to aquatic life with long lasting effects.
Toxicity to fish (LC50): 38,6 mg/l (Oncorhynchus mykiss (rainbow trout))
Toxicity to fish (NOEC): 1,28 mg/l (Brachydanio rerio (zebra fish))
LC50/96h/bluegill sunfish = 20,6 mg/l
EC50/48h/daphnia = 2,00 mg/l
Toxicity to daphnia (NOEC): 0,284 mg/l (Daphnia magna (Water flea))
EC50/96h/green algae = 1,50 mg/l
Toxicity to bacteria (EC50): 375 mg/l
EC10/18h/bacteria = 5,20 mg/l
Toxicity to soil dwelling organisms.: 161400 mg/kg (Eisenia fetida (earthworms))

CAS No	Chemical name						
	Aquatic toxicity	Dose		[h] | [d]	Species	Source	Method
7173-51-5	didecyldimethylammonium chloride						
	Acute fish toxicity	LC50	0,5 mg/l	96 h	Danio rerio (zebrafish)		
	Acute crustacea toxicity	EC50 mg/l	0,03	48 h	Daphnia		

12.2. Persistence and degradability

The surfactants in the product meet all requirements of the detergents regulation 648/2004/EC.

12.3. Bioaccumulative potential

This information is not available.

12.4. Mobility in soil

This information is not available.

12.5. Results of PBT and vPvB assessment

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

12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

12.7. Other adverse effects

This information is not available.

Further information

Chemical Oxygen Demand (COD) 340 mg O2/g.
Cationic compounds are biodegradable only in high dilution. They are adequate diluted in sewage and become inactive through contact with other waste-water substances. Therefore solutions could be disposed of in the sewerage system.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

Container should be emptied thoroughly. Do not pour remains of product in large quantities into the sewage.

List of Wastes Code - residues/unused products

070699 WASTES FROM ORGANIC CHEMICAL PROCESSES; wastes from the MFSU of fats, grease, soaps, detergents, disinfectants and cosmetics; wastes not otherwise specified

List of Wastes Code - used product

070699 WASTES FROM ORGANIC CHEMICAL PROCESSES; wastes from the MFSU of fats, grease, soaps, detergents, disinfectants and cosmetics; wastes not otherwise specified

Contaminated packaging

Clean container with water. Return cleaned containers to the company for recycling.
Offer rinsed packaging material to local recycling facilities.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number or ID number:	UN 1719
14.2. UN proper shipping name:	CAUSTIC ALKALI LIQUID, N.O.S. (Potassium silicate, solution)
14.3. Transport hazard class(es):	8
14.4. Packing group:	III
Hazard label:	8

Classification code:	C5
Special Provisions:	274
Limited quantity:	5 L
Excepted quantity:	E1
Transport category:	3
Hazard No:	80
Tunnel restriction code:	E

Marine transport (IMDG)

14.1. UN number or ID number:	UN 1719
14.2. UN proper shipping name:	CAUSTIC ALKALI LIQUID, N.O.S. (Potassium silicate, solution)
14.3. Transport hazard class(es):	8
14.4. Packing group:	III
Hazard label:	8

Special Provisions:	223, 274
Limited quantity:	5 L
Excepted quantity:	E1
EmS:	F-A, S-B
Segregation group:	alkalis

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: Yes

Danger releasing substance: quaternary ammonium compounds

14.6. Special precautions for user

Not required

14.7. Maritime transport in bulk according to IMO instruments

Not relevant

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, Entry 75

National regulatory information

Water hazard class (D): 2 - obviously hazardous to water

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): 3 / 6 / 7 / 8 / 12

Abbreviations and acronyms

Met. Corr: Corrosive to metals
Acute Tox: Acute toxicity
Skin Corr: Skin corrosion
Eye Dam: Eye damage
Aquatic Acute: Acute aquatic hazard
Aquatic Chronic: Chronic aquatic hazard
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
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
MARPOL: International Convention for the Prevention of Marine Pollution from Ships
IBC: Intermediate Bulk Container
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 GB CLP Regulation

Classification	Classification procedure
Skin Corr. 1B; H314	Calculation method
Aquatic Acute 1; H400	Calculation method
Aquatic Chronic 3; H412	Calculation method

Relevant H and EUH statements (number and full text)

H290	May be corrosive to metals.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.

H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

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