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

1.1. Product identifier

CERKAMED Pulp Spray Orange 200ml

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

Use of the substance/mixture

see product name
To be used by dentist only

1.3. Details of the supplier of the safety data sheet

Company name:	Friedrich Huber aeronova GmbH & Co.	
Street:	Sobrigauer Weg 4	
Place:	D-01257 Dresden	
Telephone:	0049-(0)351-27046-0	Telefax: 0049-(0)351-2704616
E-mail:	info@aeronova.de	
Contact person:	Labor	Telephone: 0049-(0)351-2704615
E-mail:	labor@aeronova.de	
Internet:	www.aeronova.de	

1.4. Emergency telephone number:

0049-(0)351-27046-0

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Aerosol 1; H222-H229
Eye Irrit. 2; H319

Full text of hazard statements: see SECTION 16.

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.
H319	Causes serious eye irritation.

Precautionary statements

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
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.

Special labelling of certain mixtures

EUH208	Contains (R)-p-mentha-1,8-diene. May produce an allergic reaction.

2.3. Other hazards

Refrigerated liquefied gas. Contact with the product can cause cold burns or frostbite. Even after use and until complete evaporation of the flammable components, there is still a danger of an explosive steam-air mixture forming.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Relevant ingredients

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008)			
106-97-8	butane			60 - < 65 %
	203-448-7	601-004-00-0	01-2119474691-32	
	Flam. Gas 1, Liquefied gas; H220 H280			
74-98-6	propane			25 - < 30 %
	200-827-9	601-003-00-5	01-2119486944-21	
	Flam. Gas 1, Liquefied gas; H220 H280			
64-17-5	Ethanol			2.5 - < 5 %
	200-578-6	603-002-00-5	01-2119457610-43	
	Flam. Liq. 2, Eye Irrit. 2; H225 H319			
67-63-0	Propan-2-ol			0.1 - < 0.5 %
	200-661-7	603-117-00-0	01-2119457558-25	
	Flam. Liq. 2, Eye Irrit. 2, STOT SE 3; H225 H319 H336			
5989-27-5	(R)-p-mentha-1,8-diene			< 0.1 %
	227-813-5	601-029-00-7	01-2119529223-47	
	Flam. Liq. 3, Skin Irrit. 2, Skin Sens. 1B, Asp. Tox. 1, Aquatic Acute 1, Aquatic Chronic 1; H226 H315 H317 H304 H400 H410			
101-86-0	alpha hexylzimtaldehyde			< 0.1 %
	202-983-3		01-2119533092-50	
	Skin Sens. 1B, Aquatic Acute 1, Aquatic Chronic 2; H317 H400 H411			

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		
64-17-5	200-578-6	Ethanol	2.5 - < 5 %
	inhalation: LC50 = 95,6 mg/l (vapours); oral: LD50 = 6200 mg/kg Eye Irrit. 2; H319: >= 50 - 100		
67-63-0	200-661-7	Propan-2-ol	0.1 - < 0.5 %
	dermal: LD50 = 13900 mg/kg; oral: LD50 = 5840 mg/kg		
5989-27-5	227-813-5	(R)-p-mentha-1,8-diene	< 0.1 %
	oral: LD50 = 4400 mg/kg Aquatic Acute 1; H400: M=1		
101-86-0	202-983-3	alpha hexylzimtaldehyde	< 0.1 %
	Aquatic Acute 1; H400: M=10		

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

When in doubt or if symptoms are observed, get medical advice.
If medical advice is needed, have product container or label at hand.

After inhalation

Provide fresh air. If breathing is irregular or stopped, administer artificial respiration. Medical treatment necessary.

After contact with skin

After contact with skin, wash immediately with plenty of water and soap. Take off immediately all contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical advice/attention.

After contact with eyes

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

After ingestion

Observe risk of aspiration if vomiting occurs. If accidentally swallowed rinse the mouth with plenty of water (only if the person is conscious) and obtain immediate medical attention.

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

Refrigerated liquefied gas. Contact with the product can cause cold burns or frostbite.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Water spray jet, Carbon dioxide (CO2), Foam, Extinguishing powder.

Unsuitable extinguishing media

Full water jet

5.2. Special hazards arising from the substance or mixture

Extremely flammable aerosol. Pressurized container: May burst if heated. Vapours can form explosive mixtures with air.

5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus.

Additional information

Use water spray jet to protect personnel and to cool endangered containers. Suppress gases/vapours/mists with water spray jet. 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

General advice

Remove all sources of ignition. Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Use personal protection equipment.

For non-emergency personnel

Ventilate affected area. Remove persons to safety.

For emergency responders

Wear breathing apparatus if exposed to vapours/dusts/aerosols.

6.2. Environmental precautions

Do not allow uncontrolled discharge of product into the environment. Explosion risk.

6.3. Methods and material for containment and cleaning up

For cleaning up

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

6.4. Reference to other sections

Safe handling: see section 7
Personal protection equipment: see section 8
Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Do not pierce or burn, even after use.

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.

Advice on general occupational hygiene

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat, drink, smoke, sniff.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

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.

Further information on storage conditions

Keep away from food, drink and animal feedingstuffs.

7.3. Specific end use(s)

Aerosol

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

DNEL/DMEL values

CAS No	Name of agent			
DNEL type		Exposure route	Effect	Value
64-17-5	Ethanol			
Consumer DNEL, long-term		oral	systemic	87 mg/kg bw/day
Worker DNEL, long-term		inhalation	systemic	380 mg/m³
Consumer DNEL, long-term		inhalation	systemic	114 mg/m³
Worker DNEL, long-term		dermal	systemic	343 mg/kg bw/day
Consumer DNEL, long-term		dermal	systemic	206 mg/kg bw/day
67-63-0	Propan-2-ol			
Worker DNEL, acute		inhalation	systemic	1000 mg/m³
Consumer DNEL, acute		inhalation	systemic	178 mg/m³
Consumer DNEL, acute		oral	systemic	51 mg/kg bw/day
Worker DNEL, long-term		dermal	systemic	888 mg/kg bw/day
Worker DNEL, long-term		inhalation	systemic	500 mg/m³
Consumer DNEL, long-term		dermal	systemic	319 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	89 mg/m³
Consumer DNEL, long-term		oral	systemic	26 mg/kg bw/day
5989-27-5	(R)-p-mentha-1,8-diene			
Worker DNEL, long-term		inhalation	systemic	66,7 mg/m³
Worker DNEL, long-term		dermal	systemic	9,5 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	16,6 mg/m³
Consumer DNEL, long-term		dermal	systemic	4,8 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	4,8 mg/kg bw/day

PNEC values

CAS No	Name of agent	
Environmental compartment		Value
64-17-5	Ethanol	
Freshwater		0,96 mg/l
Freshwater (intermittent releases)		2,75 mg/l
Marine water		0,79 mg/l
Freshwater sediment		3,6 mg/kg
Marine sediment		2,9 mg/kg
Secondary poisoning		380 mg/kg
Micro-organisms in sewage treatment plants (STP)		580 mg/l
Soil		0,63 mg/kg
67-63-0	Propan-2-ol	
Freshwater		140,9 mg/l
Freshwater (intermittent releases)		140,9 mg/l
Marine water		140,9 mg/l
Freshwater sediment		552 mg/kg
Marine sediment		552 mg/kg
Secondary poisoning		160 mg/kg
Micro-organisms in sewage treatment plants (STP)		2251 mg/l
Soil		28 mg/kg
5989-27-5	(R)-p-mentha-1,8-diene	
Freshwater		0,014 mg/l
Marine water		0,0014 mg/l
Freshwater sediment		3,85 mg/kg
Marine sediment		0,385 mg/kg
Secondary poisoning		133 mg/kg
Micro-organisms in sewage treatment plants (STP)		1,8 mg/l
Soil		0,763 mg/kg

Additional advice on limit values

To date, no national critical limit values exist.

8.2. Exposure controls

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear eye protection/face protection. Suitable eye protection: Eye glasses with side protection (EN ISO 16321)

Hand protection

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.

Suitable gloves type Gloves with long cuffs, heat insulating

Skin protection

Wear anti-static footwear and clothing

Respiratory protection

Usually no personal respirative protection necessary.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Liquid
Colour:	colourless clear
Odour:	fruity

		Test method
Melting point/freezing point:	not determined	
Boiling point or initial boiling point and boiling range:	< -20 °C	
Flammability:	not determined	
Lower explosion limits:	1,5 vol. %	
Upper explosion limits:	10,9 vol. %	
Flash point:	< -20 °C	
Auto-ignition temperature:	365 °C	
Decomposition temperature:	not determined	
pH-Value:	not applicable	
Viscosity / kinematic:	not applicable	
Water solubility: (at 20 °C)	practically insoluble	
Solubility in other solvents not determined		
Partition coefficient n-octanol/water:	not determined	
Vapour pressure:	not determined	
Density (at 20 °C):	0,57 g/cm³	calculated
Relative vapour density:	not determined	
Particle characteristics:	not applicable	

9.2. Other information

Information with regard to physical hazard classes

Explosive properties

Heating may cause an explosion.

Sustaining combustion: No data available

Oxidizing properties

The product is not: oxidising.

Other safety characteristics

Evaporation rate: not determined

Solid content: not determined

SECTION 10: Stability and reactivity

10.1. Reactivity

Extremely flammable aerosol. Pressurized container: May burst if heated.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

No known hazardous reactions.

10.4. Conditions to avoid

Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. Vapours can form explosive

mixtures with air.

10.5. Incompatible materials

No information available.

10.6. Hazardous decomposition products

No known hazardous decomposition products.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

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

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
64-17-5	Ethanol				
	oral	LD50 6200 mg/kg	Rat	IUCLID	
	inhalation (4 h) vapour	LC50 95,6 mg/l	Rat	RTECS	
67-63-0	Propan-2-ol				
	oral	LD50 5840 mg/kg	Rat		OECD 401
	dermal	LD50 13900 mg/kg	Rabbit		OECD 402
5989-27-5	(R)-p-mentha-1,8-diene				
	oral	LD50 4400 mg/kg	Rat		

Irritation and corrosivity

Serious eye damage/eye irritation: Causes serious eye irritation.
Skin corrosion/irritation: Based on available data, the classification criteria are not met.

Sensitising effects

Based on available data, the classification criteria are not met.
Contains (R)-p-mentha-1,8-diene. May produce an allergic reaction.

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 product does not contain a substance that has endocrine disrupting properties with respect to humans as no components meets the criteria.

Further information

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].

SECTION 12: Ecological information

12.1. Toxicity

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

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] | [d]	Species	Source	Method
64-17-5	Ethanol					
	Acute crustacea toxicity	EC50 9268 - 14221 mg/l	48 h	Daphnia magna	IUCLID	
67-63-0	Propan-2-ol					
	Acute fish toxicity	LC50 10000 mg/l	96 h		REACh Registration Dossier	OECD Guideline 203
	Acute algae toxicity	ErC50 >100 mg/l	72 h	Scenedesmus subspicatus		
	Acute crustacea toxicity	EL50 9714 mg/l	48 h	Daphnia magna (Big water flea)		OECD 202
	Fish toxicity	NOEC > 1000 mg/l	28 d	Danio rerio	REACh Registration Dossier	other: REACH Guidance on QSARs R.6
	Crustacea toxicity	NOEC > 1000 mg/l	21 d		REACh Registration Dossier	other: REACH Guidance on QSARs R.6
	Acute bacteria toxicity	EC50 >100 mg/l ( )				

12.2. Persistence and degradability

The product has not been tested.

CAS No	Chemical name			
	Method	Value	d	Source
	Evaluation			
67-63-0	Propan-2-ol			
	Biodegradation	95%	21	
	Readily biodegradable (according to OECD criteria).			

12.3. Bioaccumulative potential

The product has not been tested.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
106-97-8	butane	2,89
74-98-6	propane	2,36
64-17-5	Ethanol	-0,31
67-63-0	Propan-2-ol	0,05

BCF

CAS No	Chemical name	BCF	Species	Source
67-63-0	Propan-2-ol	0,994		Meylan,WM, Howard,PH

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. 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

No further relevant information available.

Further information

Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

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

Contaminated packaging

Completely emptied packages can be recycled.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number or ID 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
Transport category:	2
Tunnel restriction code:	D

Inland waterways transport (ADN)

14.1. UN number or ID 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 or ID 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 or ID 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
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. Maritime transport in bulk according to IMO instruments

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, Entry 28, Entry 40

Directive 2010/75/EU on industrial emissions:	99,992 % (569,952 g/l)
Directive 2004/42/EC on VOC in paints and varnishes:	99,994 % (569,964 g/l)
Information according to Directive 2012/18/EU (SEVESO III):	P3a FLAMMABLE AEROSOLS

Additional information

To follow: 850/2004/EC, 1107/2009/EC, 649/2012/EC
Aerosol Directive (75/324/EEC).

National regulatory information

Employment restrictions:	Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC).
Water hazard class (D):	1 - slightly hazardous to water
Skin resorption/Sensitization:	Causes allergic hypersensitivity reactions.

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): 1,4,5,6,7,8,9,11,12.

Abbreviations and acronyms

Flam. Gas: Flammable gases
Aerosol: Aerosol
Liquefied gas
Flam. Liq: Flammable liquid
Asp. Tox: Aspiration hazard
Skin Irrit: Skin irritation
Eye Irrit: Eye irritation
Skin Sens: Skin sensitisation
STOT SE: Specific target organ toxicity - single exposure
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
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
For abbreviations and acronyms, see: ECHA Guidance on information requirements and chemical safety assessment, chapter R.20 (Table of terms and abbreviations).

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
Eye Irrit. 2; H319	Bridging principle "Aerosols"

Relevant H and EUH statements (number and full text)

H220	Extremely flammable gas.
H222	Extremely flammable aerosol.
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
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.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
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.
EUH208	Contains (R)-p-mentha-1,8-diene. May produce an allergic reaction.

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