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

1.1. Product identifier

Dentoderm HD Liquid

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

Use of the substance/mixture

Hand disinfectant

1.3. Details of the supplier of the safety data sheet

Company name:	Müller-Omicron GmbH & Co. KG
Street:	Schlosserstr. 1
Place:	D-51789 Lindlar
Telephone	+49 (0) 2266/4742-0
Telefax	+49 (0) 2266/3417
e-mail:	einkauf@mueller-omicron.de

Responsible for the safety data sheet: sds@gbk-ingelheim.de

1.4. Emergency telephone number:

INTERNATIONAL: +49 - (0) 6132 - 84463, GBK GmbH (24h - 7d/w - 365d/a)
England and Wales: NHS Direct - 0845 4647; Scotland: NHS 24 - 08454 24 24 24

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

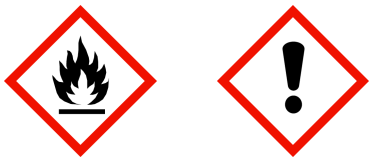
Indications of danger: F - Highly flammable
R phrases:
Highly flammable.

Classification according to Regulation (EC) No. 1272/2008 [CLP]
Hazard categories:
Flammable liquid: Flam. Liq. 2
Serious eye damage/eye irritation: Eye Irrit. 2
Hazard Statements:
Highly flammable liquid and vapour.
Causes serious eye irritation.

2.2. Label elements

Signal word: Danger

Pictograms: GHS02-GHS07



Hazard statements

H225	Highly flammable liquid and vapour.
H319	Causes serious eye irritation.

Precautionary statements

P102	Keep out of reach of children.
P101	If medical advice is needed, have product container or label at hand.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233	Keep container tightly closed.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313	If eye irritation persists: Get medical advice/attention.
P501	Dispose of contents/container to approved disposal company or local collection.

2.3. Other hazards

Vapours may form explosive mixture with air.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical characterization
Alcoholic solution

Hazardous components

EC No	Chemical name	Quantity
CAS No	Classification according to Directive 67/548/EEC	
Index No	Classification according to Regulation (EC) No. 1272/2008 [CLP]	
REACH No		
200-578-6	Ethanol	80 %
64-17-5	F - Highly flammable R11	
603-002-00-5	Flam. Liq. 2, Eye Irrit. 2; H225 H319	
01-2119457610-43		
270-325-2	Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides	< 0,25 %
68424-85-1	C - Corrosive, Xn - Harmful, N - Dangerous for the environment R22-34-50	
	Met. Corr. 1, Acute Tox. 4, Skin Corr. 1B, Eye Dam. 1, Aquatic Acute 1 (M-Factor = 10), Aquatic Chronic 1; H290 H302 H314 H318 H400 H410	
01-2119965180-41		

Full text of R, H and EUH phrases: see section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information
Remove contaminated soaked clothing immediately.
If you feel unwell, seek medical advice.

After inhalation
Move to fresh air in case of accidental inhalation of vapours.
In the event of symptoms refer for medical treatment.

After contact with skin
Consult a doctor if skin irritation persists.

After contact with eyes
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
If eye irritation persists, consult a specialist.

After ingestion
Rinse out mouth and give plenty of water to drink.
Seek medical treatment immediately.
If swallowed or in the event of vomiting, risk of entering the lungs.

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

Causes serious eye irritation.
Inhalation of vapours in high concentration can cause narcotic effects.

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

Treat symptoms.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media
Alcohol-resistant foam, dry chemical, carbon dioxide (CO_2), water-spray.

Unsuitable extinguishing media
Full water jet.

5.2. Special hazards arising from the substance or mixture

Fire may produce:

carbon monoxide and carbon dioxide
Risk of formation of toxic pyrolysis products.

5.3. Advice for firefighters

Use breathing apparatus with independent air supply.
Protective suit.

Additional information

Vapours are heavier than air and spread along ground.
The vapour/air mixture is explosive, even in empty, uncleaned receptacles.
Cool containers at risk with water spray jet.
Fire residues and contaminated firefighting water must be disposed of in accordance with the local regulations.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

In case of vapour formation use respirator.
Ensure adequate ventilation.
Use personal protective clothing.
Keep away sources of ignition.

6.2. Environmental precautions

Do not discharge into the drains/surface waters/ground water.

6.3. Methods and material for containment and cleaning up

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder).
Shovel into suitable container for disposal.

6.4. Reference to other sections

Observe protective instructions (see Sections 7 and 8).
Information for disposal see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Use only in well-ventilated areas.
Use solvent-resistant equipment.
Avoid spilling or spraying in enclosed areas.

Advice on protection against fire and explosion

Keep away from sources of ignition - No smoking.
Take measures against electrostatically charging.
Vapours are heavier than air and spread along ground.
Vapour/air mixture is explosive, even in empty uncleaned receptacles.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed in a dry, cool and well-ventilated place.
Protect containers from heat / overheating.
Keep only in original container.

Advice on storage compatibility

Incompatible with oxidizing agents.

Further information on storage conditions

Keep away from food, drink and animal feeding stuffs.

7.3. Specific end use(s)

Hand disinfectant

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits (EH40)

CAS No	Substance	ppm	mg/m³	fibres/ml	Category	Origin
64-17-5	Ethanol	1000	1920		TWA (8 h)	WEL
		-	-		STEL (15 min)	WEL

8.2. Exposure controls

Appropriate engineering controls
Ensure adequate ventilation, especially in confined areas.

Protective and hygiene measures
Do not breath vapours or spray mist.
When using do not eat, drink or smoke.
Avoid contact with eyes.
Remove and wash contaminated clothes before re-use.

Eye/face protection
If used properly, no need to wear eye protection. Otherwise wear protective goggles with integrated side shields.

Skin protection
Long sleeved clothing (EN 368).

Respiratory protection
No personal respiratory protective equipment normally required.
In case of insufficient ventilation wear suitable respiratory equipment (gas filter type A) (EN 14387).

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Liquid
Colour:	Colourless
Odour:	Alcoholic
pH-Value (at 20 °C):	4,8 - 6
Melting point:	< - 20 °C
Initial boiling point and boiling range:	approx. 85 °C
Flash point:	14 °C
Lower explosion limits:	3,5 vol. %
Upper explosion limits:	15 vol. %
Density (at 20 °C):	approx. 0,84 g/cm³
Water solubility: (at 20 °C)	Miscible
Ignition temperature:	> 425 °C

9.2. Other information

No data available.

SECTION 10: Stability and reactivity

10.1. Reactivity
No decomposition if stored and applied as directed.

10.2. Chemical stability
Stable under normal conditions.

10.3. Possibility of hazardous reactions
Reactions with oxidizing agents.

10.4. Conditions to avoid
Vapour/air mixtures are explosive at intensive warming.
Heating can release vapours which can be ignited.

10.5. Incompatible materials
oxidizing agents

10.6. Hazardous decomposition products

Carbon monoxide and carbon dioxide

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity
Based on available data, the classification criteria are not met.
LD50/oral/rat: > 10 g/kg (OECD 401)

CAS No	Chemical name				
	Exposure route	Method	Dose	Species	Source
64-17-5	Ethanol				
	oral	LD50	6200 mg/kg	Rat	
	inhalative (4 h) vapour	LC50	95,6 mg/l	Rat	
68424-85-1	Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides				
	oral	LD50	795 mg/kg	Rat	

Irritation and corrosivity
Causes serious eye irritation.
Skin corrosion/irritation: Based on available data, the classification criteria are not met.
Skin irritation: Not classified.

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

STOT-single exposure
Based on available data, the classification criteria are not met.

Severe effects after repeated or prolonged exposure
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.

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

Additional information on tests
Classification in compliance with the assessment procedure specified in the Regulation (EC) no 1272/2008.

Practical experience

Other observations
Inhalation of vapours in high concentration can cause narcotic effects .
Components of the product may be absorbed into the body through the skin.
May cause irritation of the mucous membranes.

SECTION 12: Ecological information

12.1. Toxicity

Ecological data are not available.

CAS No	Chemical name					
	Aquatic toxicity	Method	Dose	[h] | [d]	Species	Source
64-17-5	Ethanol					
	Acute fish toxicity	LC50	8140 mg/l	96 h	Golden orfe	
	Acute crustacea toxicity	EC50	9268 - 14221 mg/l	48 h	Daphnia magna	
68424-85-1	Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides					
	Acute fish toxicity	LC50	0,085 mg/l	96 h	Oncorhynchus mykiss	OECD 203)
	Acute algae toxicity	ErC50	0,025 mg/l	72 h	Selenastrum capricornutum	OECD 201)
	Acute crustacea toxicity	EC50	0,016 mg/l	48 h	Daphnia	
	Crustacea toxicity	NOEC	0,025 mg/l	21 d	Daphnia	OECD 201)

12.2. Persistence and degradability

No data available.
Ethanol: Readily biodegradable (to OECD criteria).

12.3. Bioaccumulative potential

No data available.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
64-17-5	Ethanol	- 0,31

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

According to Regulation (EC) No 1907/2006 (REACH) none of the substances, contained in this product are a PBT / vPvB substance.

12.6. Other adverse effects

Product can contain organically bound halogen and contribute to the adsorbable organic halogen value.
Low hazard to waters.

Further information

Ecological injuries are not known or expected under normal use.
Do not discharge into surface waters/groundwater.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Advice on disposal

Can be incinerated, when in compliance with local regulations.
Where possible recycling is preferred to disposal.

Waste disposal number of waste from residues/unused products

070604 WASTES FROM ORGANIC CHEMICAL PROCESSES; wastes from the MFSU of fats, grease, soaps, detergents, disinfectants and cosmetics; other organic solvents, washing liquids and mother liquors
Classified as hazardous waste.

Contaminated packaging

Empty containers should be taken for local recycling, recovery or waste disposal.
Contaminated packaging should be emptied as far as possible and after appropriate cleansing may be taken for reuse.
Packaging that cannot be cleaned should be disposed of like the product.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number: UN 1987

14.2. UN proper shipping name: ALCOHOLS, N.O.S. (Ethanol)

14.3. Transport hazard class(es): 3

14.4. Packing group: II

Hazard label: 3

Classification code: F1
Limited quantity: 1 L / 30 kg
Transport category: 2
Hazard No: 33
Tunnel restriction code: D/E

Inland waterways transport (ADN)

14.1. UN number: UN 1987

14.2. UN proper shipping name: ALCOHOLS, N.O.S. (Ethanol)

14.3. Transport hazard class(es):	3
14.4. Packing group:	II
Hazard label:	3

Classification code:	F1
Limited quantity:	1 L / 30 kg

Marine transport (IMDG)

14.1. UN number:	UN 1987
14.2. UN proper shipping name:	ALCOHOLS, N.O.S. (Ethanol)
14.3. Transport hazard class(es):	3
14.4. Packing group:	II
Hazard label:	3

Marine pollutant:	No
Limited quantity:	1 L / 30 kg
EmS:	F-E, S-D

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number:	UN 1987
14.2. UN proper shipping name:	ALCOHOLS, N.O.S. (Ethanol)
14.3. Transport hazard class(es):	3
14.4. Packing group:	II
Hazard label:	3

Limited quantity Passenger:	1 L
IATA-packing instructions - Passenger:	353
IATA-max. quantity - Passenger:	5 L
IATA-packing instructions - Cargo:	364
IATA-max. quantity - Cargo:	60 L

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: no

14.6. Special precautions for user

Take the usual precautions when handling with chemicals.

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

The transport takes place only in approved and appropriate packaging.

SECTION 15: Regulatory information

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

EU regulatory information

1999/13/EC (VOC):	80 %

National regulatory information

Employment restrictions:	Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

15.2. Chemical safety assessment

For this substance a chemical safety assessment has not been carried out.

SECTION 16: Other information

Abbreviations and acronyms

ADR = Accord européen relatif au transport international des marchandises Dangereuses par Route
RID = Règlement concernant le transport international ferroviaire de marchandises dangereuses
ADN = Accord européen relatif au transport international des marchandises dangereuses par voie de navigation intérieure
IMDG = International Maritime Code for Dangerous Goods
IATA/ICAO = International Air Transport Association / International Civil Aviation Organization
MARPOL = International Convention for the Prevention of Pollution from Ships
IBC-Code = International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
REACH = Registration, Evaluation, Authorization and Restriction of Chemicals
CAS = Chemical Abstract Service
EN = European norm
ISO = International Organization for Standardization
DIN = Deutsche Industrie Norm
PBT = Persistent Bioaccumulative and Toxic

LD = Lethal dose
LC = Lethal concentration
EC = Effect concentration
IC = Median immobilisation concentration or median inhibitory concentration

Relevant R phrases (number and full text)

11	Highly flammable.
22	Harmful if swallowed.
34	Causes burns.
50	Very toxic to aquatic organisms.

Relevant H and EUH statements (number and full text)

H225	Highly flammable liquid and vapour.
H290	May be corrosive to metals.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

Further Information

Data of items 4 to 8, as well as 10 to 12, do partly not refer to the use and the regular employing of the product (in this sense consult information on use and on product), but to liberation of major amounts in case of accidents and irregularities.
The information describes exclusively the safety requirements for the product(s) and is based on the present level of our knowledge.
The delivery specifications are contained in the corresponding product sheet.
This data does not constitute a guarantee for the characteristics of the product(s) as defined by the legal warranty regulations.
(n.a. = not applicable; n.d. = not determined)

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