1. Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name : desderman pure

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

Use of the Substance/Mixture : Disinfectants and general biocidal products

Recommended restrictions on use : Restricted to professional users.

1.3 Details of the supplier of the safety data sheet

Producer/Supplier : Schülke & Mayr GmbH
Robert-Koch-Str. 2
22851 Norderstedt
Germany
Telephone: +4940521000
Telefax: +494052100318
mail@schuelke.com
www.schuelke.com

Contact person : Application Department HI
+49 (0)40/ 521 00 544 (Schülke UK +44 114 254 3500)
pab@schuelke.com

1.4 Emergency telephone number

Emergency telephone number : UK Poisons Emergency number: 0870 600 6266

Emergency telephone number : +49 (0)40 / 52 100 –0

2. Hazards identification

2.1 Classification of the substance or mixture

Classification (67/548/EEC, 1999/45/EC)

Flammable R11: Highly flammable.

2.2 Label elements

Labelling according to EC Directives (1999/45/EC)

Hazard pictograms :

Highly flammable

R-phrase(s) : R11 Highly flammable.

S-phrase(s) : S 7/9 Keep container tightly closed and in a well-

	ventilated place.
S16	Keep away from sources of ignition - No smoking.
S35	This material and its container must be disposed of in a safe way.

In the EU, this product falls under the Directive on biocide products 98/8/EC.The product is classified and labelled in accordance with EC directives or respective national laws.

Further information : Use biocides safely. Always read the label and product information before use.

2.3 Other hazards

Vapours are heavier than air and may spread along floors.
Take precautionary measures against static discharge.

3. Composition/information on ingredients

3.2 Mixtures

Chemical nature : Solution of the following substances with harmless additives.

Hazardous components

Chemical Name	Index-Number CAS-No. EC-No. Registration number	Classification (67/548/EEC)	Classification (REGULATION (EC) No 1272/2008)	Concentration [%]
Ethanol	603-002-00-5 64-17-5 200-578-6 01-2119457610-43-XXXX	F; R11	Flam. Liq. 2; H225	78,2 %
Propan-2-ol	603-003-00-0 67-63-0 200-661-7 01-2119457558-25-XXXX	F; R11 Xi; R36 R67	Flam. Liq. 2; H225 Eye Irrit. 2; H319 STOT SE 3; H336	10 %
Biphenyl-2-ol	604-020-00-6 90-43-7 201-993-5	Xi; R36/37/38 N; R50	Eye Irrit. 2; H319 Skin Irrit. 2; H315 STOT SE 3; H335 Aquatic Acute 1; H400	0,1 %

For the full text of the R-phrases mentioned in this Section, see Section 16.
For the full text of the H-Statements mentioned in this Section, see Section 16.

4. First aid measures

4.1 Description of first aid measures

General advice	:	Take off all contaminated clothing immediately.
If inhaled	:	Move to fresh air. If symptoms persist, call a physician.
In case of eye contact	:	Rinse thoroughly with plenty of water, also under the eyelids. If eye irritation persists, consult a specialist.
If swallowed	:	Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. If swallowed, seek medical advice immediately and show this container or label.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms	:	Treat symptomatically.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment	:	For specialist advice physicians should contact the Poisons Information Service.

5. Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media	:	Dry powder Alcohol-resistant foam Water spray jet Carbon dioxide (CO2)
Unsuitable extinguishing media	:	High volume water jet

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire-fighting	:	Vapours are heavier than air and may spread along floors. Cool closed containers exposed to fire with water spray.

5.3 Advice for firefighters

Special protective equipment for firefighters	:	In the event of fire, wear self-contained breathing apparatus.
Specific risk from the sub-stance or the product itself, its combustion products or evolved gases	:	Vapours may form explosive mixtures with air.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions	:	Ensure adequate ventilation. Remove all sources of ignition.

6.2 Environmental precautions

Environmental precautions : Avoid subsoil penetration.

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up : Wipe up with absorbent material (e.g. cloth, fleece).
Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).

6.4 Reference to other sections

See chapter 8 + 13

7. Handling and storage

7.1 Precautions for safe handling

Advice on safe handling : Do not spray on a naked flame or any incandescent material.
Keep away from sources of ignition - No smoking. Keep away from children.

Advice on protection against fire and explosion : The hot product gives off combustible vapours.
Take measures to prevent the build up of electrostatic charge.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Store at room temperature in the original container.
Keep at temperature not exceeding 25 °C.

Further information on storage conditions : Keep away from direct sunlight.
Keep container tightly closed.

Advice on common storage : Keep away from food and drink.
Do not store together with oxidising agents.

7.3 Specific end use(s)

none

8. Exposure controls/personal protection

8.1 Control parameters

Components	CAS-No.	Value	Control parameters	Basis
Ethanol	64-17-5	Permissible exposure limit	500 ppm 960 mg/m3	TRGS 900
Ethanol	64-17-5	Ceiling Limit Value	1.000 ppm 1.920 mg/m3	TRGS 900
Ethanol	64-17-5	Permissible exposure limit	1.000 ppm 1.900 mg/m3	OSHA
Propan-2-ol	67-63-0	Permissible exposure limit	200 ppm 500 mg/m3	TRGS 900

Propan-2-ol	67-63-0	Ceiling Limit Value	400 ppm 1.000 mg/m3	TRGS 900
Propan-2-ol	67-63-0	Permissible exposure limit	400 ppm 980 mg/m3	OSHA

DNEL

Propan-2-ol : End Use: Workers
Exposure routes: Skin contact
Potential health effects: Chronic effects
Value: 888 mg/m3

End Use: Workers
Exposure routes: Inhalation
Potential health effects: Chronic effects
Value: 500 mg/m3

PNEC

Propan-2-ol : Fresh water
Value: 140,9 mg/l

Marine water
Value: 140,9 mg/l

Fresh water sediment
Value: 552 mg/kg

Marine sediment
Value: 552 mg/kg

Soil
Value: 28 mg/kg

8.2 Exposure controls

Personal protective equipment

Eye protection : If splashes are likely to occur, wear:
Safety glasses

Hygiene measures : Keep away from food and drink.

Protective measures : Avoid contact with eyes.

Environmental exposure controls

General advice : Avoid subsoil penetration.

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance : liquid

Colour	:	colourless
Odour	:	alcohol-like
Flash point	:	16 °C, DIN 51755 Part 1
Ignition temperature	:	Ethanol: > 360 °C Propan-2-ol: 425 °C
Lower explosion limit	:	Ethanol: 3,1 %(V) Propan-2-ol: 2 %(V)
Upper explosion limit	:	Ethanol: 15 %(V) Propan-2-ol: 12 %(V)
Flammability	:	Sustains combustion
Explosive properties	:	Not explosive
Oxidizing properties	:	no data available
Auto-ignition temperature	:	no data available
pH	:	not applicable
Melting point/freezing point	:	< -5 °C
Decomposition temperature		no data available
Boiling point/boiling range	:	ca. 80 °C
Vapour pressure	:	ca. 50 hPa, 20 °C
Density	:	ca. 0,83 g/cm3, 20 °C
Water solubility	:	20 °C, in all proportions
Partition coefficient: n-octanol/water	:	not applicable
Flow time	:	< 15 s, 20 °C, DIN 53211
Relative vapor density	:	no data available
Evaporation rate	:	no data available

9.2 Other information

None known.

10. Stability and reactivity

10.1 Reactivity

No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

The product is chemically stable.

10.3 Possibility of hazardous reactions

Vapours may form explosive mixture with air.
Reaction with oxidising agents
Exothermic reaction with strong acids.

10.4 Conditions to avoid

Heat, flames and sparks.

10.5 Incompatible materials

Strong acids and oxidizing agents

10.6 Hazardous decomposition products

Decomposition products : None reasonably foreseeable.

11. Toxicological information

11.1 Information on toxicological effects

Acute oral toxicity : The toxicity of desderman pure corresponds approximately to that of ethanol (oral toxicity LD 50 of >2000mg/kg in rats)., 2-biphenylol, which is present at 0,1% in desderman pure, has an oral toxicity LD 50 of 2700mg/kg in rats.

Acute inhalation toxicity

Ethanol	:	LC50: 11200 mg/l, 1 h, mouse
Propan-2-ol	:	LC50: > 20 mg/l, 4 h, rat
Biphenyl-2-ol	:	LC0: > 36 mg/l, rat

Acute dermal toxicity

Ethanol	:	LD50: 20000 mg/kg, rabbit
Propan-2-ol	:	LD50: > 2000 mg/kg, rabbit
Biphenyl-2-ol	:	LD50: > 2000 mg/kg, rat

Skin irritation : Result: No skin irritation

Eye irritation

Ethanol	:	rabbit, Result: Mild eye irritation
Propan-2-ol	:	Result: Irritating to eyes.
Biphenyl-2-ol	:	rabbit, Result: Eye irritation

Sensitisation

Ethanol	:	Maximisation Test, guinea pig, Result: Did not cause sensitization on laboratory animals.
Propan-2-ol	:	Buehler Test, guinea pig, Result: Did not cause sensitization on laboratory animals.
Biphenyl-2-ol	:	Maximisation Test, guinea pig, Result: Did not cause sensitization on laboratory animals.

Germ cell mutagenicity

Ethanol : Result: Not mutagenic in Ames Test. , OECD Test Guideline 471

Genotoxicity in vivo

Ethanol : Result: not mutagenic

Mutagenicity

Ethanol : Tests on bacterial or mammalian cell cultures did not show

mutagenic effects.

Propan-2-ol	:	Animal testing did not show any mutagenic effects.
Biphenyl-2-ol	:	Not mutagenic in Ames Test.

Carcinogenicity

Ethanol	:	Did not show carcinogenic effects in animal experiments.
Propan-2-ol	:	Animal testing did not show any carcinogenic effects.
Biphenyl-2-ol	:	no data available

Reproductive toxicity

Ethanol	:	In animal testing, risk of impaired fertility was shown only after administration of very high doses of this substance.
Propan-2-ol	:	Animal testing did not show any effects on fertility.
Biphenyl-2-ol	:	no data available

Teratogenicity

Ethanol	:	rat, Oral, NOAEL: 2.000 mg/kg

Teratogenicity

Ethanol	:	Animal experiments showed mutagenic and teratogenic effects.
Propan-2-ol	:	Ingestion of excessive amounts by pregnant animals resulted in maternal and foetal toxicity.
Biphenyl-2-ol	:	Animal testing did not show any effects on foetal development.

Repeated dose toxicity

Ethanol	:	rat, Oral, NOAEL: 2.400 mg/kg

12. Ecological information

12.1 Toxicity

Toxicity to fish

Ethanol	:	LC50: 8.140 mg/l, 48 h, Leuciscus idus (Golden orfe)
Propan-2-ol	:	LC50: > 100 mg/l, 48 h, Leuciscus idus, static test, Raw material
Biphenyl-2-ol	:	LC50: 5,99 mg/l, 96 h, Pimephales promelas (fathead minnow)

Toxicity to daphnia and other aquatic invertebrates

Ethanol	:	EC50: > 5.000 mg/l, 48 h, Daphnia magna (Water flea)
Propan-2-ol	:	EC50: > 100 mg/l, 48 h, Daphnia magna, static test, Raw material

Biphenyl-2-ol	:	EC50: 1,5 mg/l, 24 h, Daphnia magna
Toxicity to algae		
Ethanol	:	IC50: > 100 mg/l, 72 h, Scenedesmus quadricauda (Green algae)
Propan-2-ol	:	EC50: > 100 mg/l, 72 h, Desmodesmus subspicatus (green algae), static test, Raw material
Biphenyl-2-ol	:	EC50: 0,98 mg/l, 72 h, Desmodesmus subspicatus (green algae)
Toxicity to bacteria	:	EC50: 4.000 mg/l, OECD 209

12.2 Persistence and degradability

Biodegradability	:	Result: Readily biodegradable., OECD 301D / EEC 84/449 C6

12.3 Bioaccumulative potential

Bioaccumulation		
Ethanol	:	Does not bioaccumulate.
Propan-2-ol	:	No bioaccumulation is to be expected (log Pow <= 4).
Biphenyl-2-ol	:	Bioconcentration factor (BCF): 21,07, Bioaccumulation is unlikely.
Partition coefficient: n-octanol/water	:	not applicable

12.4 Mobility in soil

Mobility		
Ethanol	:	no data available
Propan-2-ol	:	Mobile in soils
Biphenyl-2-ol	:	no data available

12.5 Results of PBT and vPvB assessment

Assessment	:	This mixture contains no substance considered to be persistent, bioaccumulating nor toxic (PBT).

12.6 Other adverse effects

Additional ecological information	:	none

13. Disposal considerations

13.1 Waste treatment methods

Product	:	Dispose of the product according to the defined EWC (European Waste Code) No.

Contaminated packaging	:	Take empty packaging to the recycling plant.
Waste key for the unused product	:	EWC 070604
Waste key for the unused product(Group)	:	Waste material of HZVA from fats, lubricants, soaps, detergents, disinfectants and personal protection products.

14. Transport information

ADR : UN number 1987

Proper shipping name
ALCOHOLS, N.O.S. (Ethanol, Propan-2-ol)

Transport hazard class	3
Packaging group	II
Environmental hazards	-
Classification Code	F1
ADR/RID-Labels	3
ICAO-Labels	33

IMDG : UN number 1987

Proper shipping name
ALCOHOLS, N.O.S. (Ethanol, Propan-2-ol)

Transport hazard class	3
Packaging group	II
Environmental hazards	-
EmS	F-E, S-D

IATA : UN number 1987

Proper shipping name
ALCOHOLS, N.O.S. (Ethanol, Propan-2-ol)

Transport hazard class	3
Packaging group	II
Environmental hazards	-

Special precautions for user

ADR Tunnel restriction code: D/E

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Exempt

15. Regulatory information

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

Legislation on the control of major-accident hazards involving dangerous substances	:	The product belongs to at least one of the categories 1 through 11 mentioned in Annex 1 of the Directive 1996/82/EC concerning the control of major accident hazards.
Volatile organic compounds (VOC) content	:	88,2 % Directive 1999/13/EC on the limitation of emissions of volatile organic compounds

15.2 Chemical Safety Assessment

Exempt

16. Other information

Full text of R-phrases referred to under sections 2 and 3

R11	Highly flammable.
R36	Irritating to eyes.
R36/37/38	Irritating to eyes, respiratory system and skin.
R50	Very toxic to aquatic organisms.
R67	Vapours may cause drowsiness and dizziness.

Full text of H-Statements referred to under sections 2 and 3.

H225	Highly flammable liquid and vapour.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H400	Very toxic to aquatic life.

Further information

Changes compared with the previous edition!!!

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.