SAFETY DATA SHEET

Desinfektol G

The safety data sheet is in accordance with Commission Regulation (EU) 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

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

Date issued	28.02.2014
Revision date	25.02.2013

1.1. Product identifier

Product name	Desinfektol G
Article no.	32. 13241222, 13241223, 13241230, 13241232

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

Use categories nordic (UCN).	Biocide
Use of the substance / preparation	Hand rub disinfection
Standard industrial classification (NACE)	Health service

1.3. Details of the supplier of the safety data sheet

Manufacturer

Company name	Berner Ltd/Pro
Office address	Hitsaajankatu 24
Postal address	P.O.Box 22
Postcode	00811
City	Helsinki
Country	Finland
Telephone number	+3582079100
Email	pro@berner.fi

1.4. Emergency telephone number

Emergency telephone	Description: HUS Myrkytystietokeskus suora puh. (09) 471 977, 24 h (vaihde (09) 4711)

SECTION 2: Hazards identification

2.1. Classification of substance or mixture

Classification according to 67/548/EEC or 1999/45/EC	F; R11
Classification according to Regulation (EC) No 1272/2008 [CLP / GHS]	Flam. Liq. 2;H225 Eye Irrit. 2;H319
Substance / mixture hazardous properties	Highly flammable liquid and vapour. Causes serious eye irritation.

2.2. Label elements

Hazard pictograms (CLP)

Composition on the label	ethanol = 71,0 %, 2-methylpropan-2-ol = 2,5 %
Signal word	Danger
Hazard statements	H225 Highly flammable liquid and vapour. H319 Causes serious eye irritation.
Precautionary statements	P233 Keep container tightly closed. P210 Keep away from . No smoking. P305 IF IN EYES: P351 Rinse cautiously with water for several minutes.

2.3. Other hazards

Other hazards	-

SECTION 3: Composition / information on ingredients

3.2. Mixtures

Substance	Identification	Classification	Contents
ethanol	CAS No.: 64-17-5 EC No.: 200-578-6 Index No.: 603-002-00-5	F;R11 Flam. Liq. 2;H225 Eye Irrit. 2;H319	= 71,0 %
2-methylpropan-2-ol	CAS No.: 75-65-0 EC No.: 200-889-7 Index No.: 603-005-00-1	F;R11 Xn;R20 Flam. Liq. 2; H225 Acute tox. 4; H332	= 2,5 %
Substance comments	Mixture/ Registration number 01-2119457610-43-xxx		

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation	Move to fresh air.
Skin contact	Wash off with warm water. If skin irritation persists, call a physician.
Eye contact	Rinse immediately with plenty of water for at least 15 minutes. If eye irritation

	persists, consult a specialist.
Ingestion	Do NOT induce vomiting. If swallowed, seek medical advice immediately and show this container or label.

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

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

Medical treatment	For specialist advice physicians should contact the Poisons Information Service.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Improper extinguishing media	Water spray

5.2. Special hazards arising from the substance or mixture

Fire and explosion hazards	Very flammable

5.3. Advice for firefighters

Personal protective equipment	Self-contained breathing apparatus
Other information	-

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	Keep people away from and upwind of spill/leak. Remove all sources of ignition.

6.2. Environmental precautions

Environmental precautionary measures	Prevent further leakage or spillage if safe to do so. Do not flush into surface water or sanitary sewer system.

6.3. Methods and material for containment and cleaning up

Other information	Local authorities should be advised if significant spillages cannot be contained.

6.4. Reference to other sections

Other instructions	For suitable protective equipment, see section 8. Dispose of waste, see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Handling	Keep away from sources of ignition - No smoking. Take precautionary measures against static discharges. Provide sufficient air exchange and/or exhaust in work

rooms.

7.2. Conditions for safe storage, including any incompatibilities

Storage	Keep out of the reach of children. Keep containers tightly closed in a cool, well-ventilated place. Store in conformity with local fire regulations.

7.3. Specific end use(s)

Specific use(s)	-

SECTION 8: Exposure controls / personal protection

8.1. Control parameters

Substance	Identification	Value	TWA Year
ethanol	CAS No.: 64-17-5 EC No.: 200-578-6 Index No.: 603-002-00-5	TWA (8h) : 1000 ppm TWA (8h) : 1900 mg/m3 **OEL short term value** Value: 1300 ppm **OEL short term value** Value: 2500 mg/m3	
2-methylpropan-2-ol	CAS No.: 75-65-0 EC No.: 200-889-7 Index No.: 603-005-00-1	TWA (8h) : 50 ppm TWA (8h) : 150 mg/m3 **OEL short term value** Value: 75 ppm **OEL short term value** Value: 230 mg/m3	

DNEL / PNEC

DNEL	Group: Worker Route of exposure: Long term (repeated) - Inhalation - Local effect Value: 1900 mg/m3 Group: Consumer Route of exposure: Short term (acute) - Inhalation - Local effect Value: 950 mg/L Group: Consumer Route of exposure: Long term (repeated) - Inhalation - Local effect Value: 114 mg/ L Group: Worker Route of exposure: Long term (repeated) - Inhalation - Local effect Value: 950 mg/m3 Group: Consumer Route of exposure: Long term (repeated) - Dermal - Local effect Value: 206 mg/kg Group: Worker Route of exposure: Long term (repeated) - Dermal - Local effect Value: 343 mg/kg
PNEC	Route of exposure: Freshwater

	Value: 0,96 mg/kg Route of exposure: Sewage treatment plant STP Value: 0,96 mg/kg Route of exposure: Soil Value: 0,63 mg/kg Route of exposure: Saltwater Value: 0,79 mg/kg
Control parameters comments	-

8.2. Exposure controls

Precautionary measures to prevent exposure

Product related measures to prevent exposure	Handle in accordance with good industrial hygiene and safety practice.

Respiratory protection

Respiratory protection, general	No personal respiratory protective equipment normally required. Respiratory protection Recommended Filter type: A

Hand protection

Required properties for hand protection	-

Eye / face protection

Required Properties	Use when needed goggles

Appropriate environmental exposure control

Environmental exposure controls	Dispose of rinse water in accordance with local and national regulations. Discharge into the environment must be avoided.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	clear viscous gel
Odour	Odour of alcohol.
pH	Status: In delivery state Comments: n. 7
Boiling point / boiling range	Comments: 78°C (etanoli)
Flash point	Comments: 17 °C
Lower explosion limit with unit of measurement	Comments: 3,3 t-%
Upper explosion limit with units of measurement	Comments: 19 t-%

Vapour pressure	Comments: 5,9 kPa (20°C) (etanoli)
Specific gravity	Comments: 0,858 kg/dm³ 20°C
Solubility description	completely soluble
Partition coefficient: n-octanol/ water	Comments: Etanoli log Pow = -0,3
Spontaneous combustability	Comments: 363 - 425 °C (EtOH)

9.2. Other information

Other physical and chemical properties

Physical and chemical properties	-

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	Stable under normal conditions.

10.2. Chemical stability

Stability	Stable at normal ambient temperature and pressure.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.

10.4. Conditions to avoid

Conditions to avoid	Heat, flames and sparks.

10.5. Incompatible materials

Materials to avoid	Keep away from oxidising agents, strongly alkaline and strongly acid materials in order to avoid exothermic reactions.

10.6. Hazardous decomposition products

Hazardous decomposition products	-

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicological data for substances

Substance	ethanol
Acute toxicity	**Type of toxicity:** Acute **Value:**
Substance	2-methylpropan-2-ol

Acute toxicity	**Type of toxicity:** Acute **Value:**

Acute toxicity, Mixture estimate

Assessment of acute toxicity, classification	Etanoli: LD50/dermal/rat = =10470 mg/kg LD50/dermal/rabbit = =15800 mg/kg LC50/inhalation/ 4 h/rat = =51-55 mg/l LC50/hengitysteitse/1h/hiiri = =30000 mg/m3 tert-Butanoli: LD50/oral/rat = 2733 mg/kg LC50/inhalation/ 4 h/rat = =29,8 mg/l LD50/dermal/rabbit = = > 2000 mg/kg Ihokosketus

Potential acute effects

Irritation	Ethanol may irritate eyes and dry skin.

Delayed effects / repeated exposure

General respiratory or skin sensitisation	No sensitisation responses were observed.
STOT-single exposure	Overexposure may cause headache and irritation to eyes and mucous membrane. Ingestion of large amounts may cause alcoholpoisoning. Repeated and prolonged use of ethanol will result in cirrhosis of the liver.

Carcinogenic, Mutagenic or Reprotoxic

Assessment of carcinogenicity, classification	Did not show carcinogenic effects in animal experiments.

Symptoms of exposure

Other information	-

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicity	Etanoli: LC50/48t/vesikirppu (daphnia) = 3700-6800 mg/l , LC50/96t/kirjolohi = 14200 mg/l, LOEC (levä) =65 mg/l tert- Butanoli: LC 50 (vesieliöt, 96h)>1000 mg/l -

12.2. Persistence and degradability

Persistence degradability additional information	Ethanol: Hydrolytic stable, T½ = ca. 4 - 6 days in the atmosphere. No information available.
Persistence and degradability, comments	The product is biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential	Etanoli: log Pow= -0,3, kertyvyys heikko. tert-Butanoli: log Pow 0,35

12.4. Mobility in soil

Mobility	The product evaporates readily. tert-Butanoli: No information available.

12.5. Results of PBT and vPvB assessment

PBT assessment results	This mixture contains no substance considered to be persistent, bioaccumulating nor toxic (PBT). This mixture contains no substance considered to be very persistent nor very bioaccumulating (vPvB).

12.6. Other adverse effects

Other adverse effects, comments	-

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Specify the appropriate methods of disposal	Keep away from sources of ignition - No smoking. The organic ingredients can be incinerated in a suitable installation when in accordance with local regulations. Tarvittaessa Contact the proper local authorities.

SECTION 14: Transport information

14.1. UN number

ADR / RID / ADN	1170
IMDG	1170
ICAO / IATA	1170

14.2. UN proper shipping name

ADR / RID / ADN	Flammable liquid ethanol
IMDG	Flammable liquid ethanol

14.3. Transport hazard class(es)

Comments	3

14.4. Packing group

ADR / RID / ADN	II
IMDG	II
ICAO / IATA	II

14.5. Environmental hazards

Comments	No known.

14.6. Special precautions for user

Special safety precautions for user	No known.

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

Pollution category	Not applicable.

SECTION 15: Regulatory information

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

Legislation and regulations	-

15.2. Chemical safety assessment

Chemical safety assessment	-

SECTION 16: Other information

List of relevant R-phrases (under headings 2 and 3).	R11 Highly flammable. R20 Harmful by inhalation.
List of relevant H-phrases (Section 2 and 3)	H332 Harmful if inhaled. H225 Highly flammable liquid and vapour. H319 Causes serious eye irritation.
Classification according to Regulation (EC) No 1272/2008 [CLP / GHS]	Flam. Liq. 2; H225; Eye Irrit. 2; H319;
Additional information	Manufacturer and the label of the product.
Key literature references and sources for data	REACH MSDS of the raw materials
Information added, deleted or revised	1,2,3,4,8,9,11
Version	2