SAFETY DATA SHEET

LV Hand Disinfectant

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	28.12.2015
Revision date	28.12.2015

1.1. Product identifier

Product name	LV Hand Disinfectant
Article no.	32. 26815, 26819, 26820

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

Use of the substance / preparation	For repetitive disinfection of hands

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	Telephone number: suora (09) 471 977 Description: HYKS Myrkytystietokeskus puh. (09) 4711 klo. 8.00 - 22.00

SECTION 2: Hazards identification

2.1. Classification of the 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

2.2. Label elements

Hazard pictograms (CLP)

Composition on the label	ethanol = min74 %, 2-methylpropan-2-ol < 3 %
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+P351 IF IN EYES: Rinse cautiously with water for several minutes.
Special supplemental label information mixtures	Highly flammable liquid and vapour. Causes serious eye irritation.

2.3. Other hazards

SECTION 3: Composition / information on ingredients

3.2. Mixtures

Substance	Identification	Classification	Contents	Notes
ethanol	CAS No.: 64-17-5 EC No.: 200-578-6 Index No.: 603-002-00-5	Flam. Liq. 2;H225 Eye Irrit. 2;H319	= min74 %	
2-methylpropan-2-ol	CAS No.: 75-65-0 EC No.: 200-889-7 Index No.: 603-005-00-1	Flam. Liq. 2; H225 Acute tox. 4; H332	< 3 %	

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation	Move to fresh air.
Eye contact	Rinse immediately with plenty of water for at least 15 minutes. If eye irritation persists, consult a specialist.
Ingestion	Induce vomiting if person is conscious. Consult a physician if necessary. and if person has swallowed the product a lot.

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

General symptoms and effects	-

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

Medical treatment	-

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Use dry chemical, CO2, water spray or alcohol foam.
Improper extinguishing media	-

5.2. Special hazards arising from the substance or mixture

Fire and explosion hazards	-

5.3. Advice for firefighters

Personal protective equipment	Self-contained breathing apparatus
Other information	In the event of fire, cool tanks with water spray.

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	Large spillages: 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	Clean-up methods - small spillage : Flush into sewer with plenty of water. Clean-up methods - large spillage : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). 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	Exposure limits	TWA Year
ethanol	CAS No.: 64-17-5	Limit value (8 h) : 1000 ppm Limit value (8 h) : 1900 mg/m3 **Limit value (short term)** Value: 1300 ppm **Limit value (short term)** Value: 2500 mg/m3	
2-methylpropan-2-ol	CAS No.: 75-65-0	Limit value (8 h) : 50 ppm Limit value (8 h) : 150 mg/m3 **Limit value (short term)** Value: 75 ppm **Limit value (short term)** Value: 230 mg/m3	
Control parameters comments	Eristettävä sytytyslähteistä - Tupakointi kielletty.		

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.

Eye / face protection

Required Properties	-

Hand protection

Required properties for hand protection	-

Skin protection

Skin protection (except hands)	-

Respiratory protection

Respiratory protection, general	-

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	clear ,slightly viscous liquid

Odour	astringent
pH	Status: In delivery state Comments: not known
Boiling point / boiling range	Comments: 78°C (ethanol)
Flash point	Comments: 12 °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) (ethanol)
Relative density	Comments: 0,858 kg/dm³ 20°C
Solubility description	completely soluble
Partition coefficient: n-octanol/ water	Comments: Etanoli log Pow = -0,3

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. . Vapours may form explosive mixture with air.

10.5. Incompatible materials

Materials to avoid	Strong oxidizers calciumhypochlorite, perhchloric acid, krom(VI)oxide, perchlorates.

10.6. Hazardous decomposition products

Hazardous decomposition products	Thermal decomposition can lead to release of irritating gases and vapours.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Other information regarding health hazards

Assessment of acute toxicity, classification	Ethanol: LD50/oral/rat = >10000 mg/kg LC50/inhalation/8h/rat = 20000 cm³/m³ tert-Buthanol: LD50/oral/rat = 3500mg/kg
Irritation	Can be Irritating to eyes.
General respiratory or skin sensitisation	No sensitisation responses were observed.
Assessment of carcinogenicity, classification	-
STOT-single exposure	Over 1000 ppm ethanol content may cause headache and irritation to eyes and mucous membrane.Ingestion of large amounts may cause alcoholpoisoning. Repeated and prolonged use of ethanol will results in cirrhosis of the liver.

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicity	Ethanol LC50/48h/daphnia = 3700-6800 mg/l , LC50/96h/rainbow trout = 14200 mg/l, LOEC (levä) =65 mg/l tert-buthanol: LC 50 (aquatic organism, 96h)>1000 mg/l

12.2. Persistence and degradability

Persistence degradability additional information	Ethanol; Hydrolytically stable, T½ is appr.. 4-6 days in the air. tert- buthanol: No information available.
Persistence and degradability, comments	Ethanol: BOD5/COD >0,5; readily biologically degradable. Tert-buthanol No information available.

12.3. Bioaccumulative potential

Bioaccumulative potential	Ethanol: log Pow= -0,3,Bioaccumulation is unlikely. tert-Buthanol No information available

12.4. Mobility in soil

Mobility	Ethanol: As water soluble drifts readily to enviroment. The product evaporates readily. tert- buthanol: 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	Ethanol solutions
IMDG	Ethanol solutions

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 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	Highly flammable liquid and vapour. Causes serious eye irritation.

15.2. Chemical safety assessment

Chemical safety assessment	-

SECTION 16: Other information

List of relevant H-phrases (Section 2 and 3)	H225 Highly flammable liquid and vapour. H319 Causes serious eye irritation. H332 Harmful if inhaled.
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	REACH-2010
Version	2