



**MATERIAL SAFETY DATA SHEET**  
Päivänsäde® Käsihuhdegeeli

Date 4.5.2020

**SECTION 1: IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING**

- 1.1 Product Identifiers**  
Product name Päivänsäde® Käsihuhdegeeli
- 1.2 Relevant identified uses of the substance or mixture and uses advised against**  
Identified uses Hand disinfectant
- 1.3 Details of the supplier of the safety data sheet**  
Company Trans-Clean Oy  
Tekijänkatu 14  
04440 Järvenpää  
Telephone 09-271 3997  
E-mail address [tc@transclean.fi](mailto:tc@transclean.fi)
- 1.4 Emergency telephone number**  
National Poison Information Center (24 h) 0800 147 111 (free of charge), 09-471 977.

**SECTION 2: HAZARDS IDENTIFICATION**

- 2.1 Classification of the substance or mixture**  
EC 1272/2008 Flam. Liq. 2, H225  
Eye Irrit. 2, H319
- 2.2 Label elements**  
**Pictogram**    
**Signal word:** Danger  
**Hazard statements:**  
H319 Causes serious eye irritation  
H225 Highly flammable liquid and vapour.  
**Precautionary statements:**  
P210 Keep away from heat, hot surfaces, sparks, open flames. No smoking.  
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.  
P403+P233+P235 Store in a well-ventilated place. Keep container tightly closed and cool.  
P501 Dispose on container and contents according to local regulation.
- 2.3 Other hazards**  
Ingestion of large amounts may cause dizziness, headache, vomiting, unconsciousness and other adverse effects.

**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

- 3.2 Mixtures**  
**Hazardous ingredients according to Regulation (EC) No 1272/2008**

Component / CAS #	REACH #	%	Classification
Ethanol 64-17-5	01-2119457610-43	71-74	Flamm. Liq. 2, H225; Eye Irr. 2, H319
2-Methylpropan-2-ol 75-65-0	01-2119444321-51	0-3	Flamm. Liq. 2, H225; Eye Irr. 2, H319; Acute Tox 4, H332; STOT SE 3, H335
Denatonium Benzoate 3734-33-6		0-1	Acute Tox.4, H302; Aquatic Chronic 3, H412
Isopropanol 67-63-0	01-2119457558-25	0-3	Flam. Liq. 2, H225; Eye Irr. 2, H319; STOT SE 3, H336
2-Butanone 78-93-3	01-2119433307-44	0-3	Flam. Liq. 2, H225; Eye Irr. 2, H319; STOT SE 3, H336
4-Methylpentan-2-one 108-10-1	01-2119473980-30	0-3	Flamm. Liq. 2, H225; Eye Irr. 2, H319; Acute Tox 4, H332; STOT SE 3, H335

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Acetone 67-64-1	01-2119471330-49	0-3	Fam. Liq. 2, H225; Eye Irr. 2, H319; STOT SE 3, H336
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See Section 16 for full text of H phrases.

**INCI:** ALCOHOL DENAT., GLYCERIN, AQUA.**SECTION 4: FIRST AID MEASURES****4.1 Description of first aid measures****Inhalation**

Remove to fresh air. If breathing is difficult, give oxygen. If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions.

**Ingestion**

If swallowed, wash out mouth thoroughly, and give plenty of water to drink. Only induce vomiting at the instruction of a physician. Never give anything by mouth to an unconscious person.

**Skin contact**

Remove contaminated clothing immediately and wash with soap and water. Discontinue use if irritation persists.

**Eye contact**

Rinse thoroughly with plenty of water for at least 15 minutes. Obtain medical attention immediately.

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

Causes serious eye irritation. Inhaling large amounts spray/mists may cause respiratory tract irritation and dizziness, headache, nausea, vomiting, vertigo, narcosis and breathing difficulties.

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

Treat symptomatically.

**SECTION 5: FIRE-FIGHTING MEASURES****5.1 Extinguishing media**

Use water spray, alcohol foam, carbon dioxide or dry chemical to extinguish fires.

Do not use water jet as an extinguisher, as this will spread the fire.

**5.2 Special hazards arising from the substance or mixture**

Flammable. Keep containers cool by spraying with water if exposed to fire.

In case of fire toxic gases may be released, such as carbon oxides.

**5.3 Advice for firefighters**

Wear self-contained breathing apparatus. Wear full firefighting protective clothing. See MSDS Section 8 (Exposure Controls/Personal Protection).

**5.4 Further information**

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**SECTION 6: ACCIDENTAL RELEASE MEASURES****6.1 Personal precautions, protective equipment and emergency procedures**

Use personal protective equipment. Ensure adequate ventilation. Eliminate all ignition sources if safe to do so. Wear self-contained breathing apparatus. Avoid inhalation of vapours and contact with skin and eyes. Vapours may be ignited by a spark, a hot surface or an ember. Vapours are heavier than air and may spread near ground and travel a considerable distance to a source of ignition and flash back. For personal protection see section 8.

**6.2 Environmental precautions**

Stop leak if safe to do so. Avoid the spillage or runoff entering drains, sewers or watercourses. Inform the relevant authorities if environmental pollution occurs (sewers, waterways, soil or air).

**6.3 Methods and materials for containment and cleaning up**

Small spillages: absorb spillage with non-combustible, absorbent material. Large spillages: large spills should be collected mechanically (remove by pumping) for disposal.

**6.4 Reference to other sections**

For disposal see section 13.

**SECTION 7: HANDLING AND STORAGE****7.1 Precautions for safe handling**

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharges. Do not breathe vapour/spray. All handling should only take place in well-ventilated areas. Avoid contact with eyes. For precautions see section 2.2.

**7.2 Conditions for safe storage, including any incompatibilities**

Store in original container in a dry, cool and well-ventilated place. Store at temperatures between 5°C and 25°C. Keep away from heat, sparks and open flame. Protect from direct sunlight. Keep away from food, drink and animal feeding stuffs.

**7.3 Specific end use(s)**

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## SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

### 8.1 Control parameters – Components with workplace control parameters

Occupational exposure limits	ppm (8 h)	ppm (15 min)	mg/m3 (8 h)	mg/m3 (15 min)	info
Ethanol 64-17-5	1000	1300	1900	2500	
2-Methylpropan-2-ol 75-65-0	50	75	150	230	
Isopropanol 67-63-0	200	250	500	620	
2-Butanone 78-93-3		100		300	skin
4-Methylpentan-2-one 108-10-1	20	50	80	210	
Acetone 67-64-1	500	630	1200	1500	

### 8.2 Exposure Controls

#### Appropriate engineering controls

All handling of large amounts should only take place in well-ventilated areas.

Avoid contact with eyes and clothing.

#### Eye/face protection

Use approved safety glasses with side shields.

Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. The following protection should be worn: Chemical splash goggles or face shield.



#### Skin protection

Prevent contamination of skin or clothing when removing protective equipment. Barrier creams may be used in conjunction with the gloves to provide additional skin protection. Wear impermeable gloves and suitable protective clothing when handling large amounts of product.

#### Hand protection

When handling large amounts of product wear protective gloves. It is recommended that gloves are made of the following material: Butyl rubber / Nitrile rubber. The selected gloves should have a breakthrough time of at least 8hours. Protective gloves according to standards EN 420 and EN 374.



#### Hygiene measures

Do not smoke in work area. Promptly remove any clothing that becomes contaminated. Do not eat, drink or smoke at workplace. Contaminated clothing should be placed in a closed container for disposal of decontamination. Warn cleaning personnel of any hazardous properties of the product.

#### Respiratory protection

If ventilation is inadequate, suitable respiratory protection must be worn.

Wear a respirator fitted with the following cartridge: Gas filter, type A2. Filter must be changed often enough.

#### Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

Appearance	liquid
Colour	-
Odour	alcoholic
pH	-
Melting / freezing point	-114 °C (ethanol)
Initial boiling point and boiling range	78 °C (ethanol)
Flash point	<21 °C (closed cup)
flammability or explosive limits	upper 19 % (ethanol) lower 3,3 % (ethanol)
Vapour pressure	5,85 kPa @ 20 °C
Relative density	0,8-0,9 g/cm <sup>3</sup> , 20 °C
Water solubility	soluble
Auto-ignition temperature	363-425 °C (ethanol)
Decomposition temperature	-

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- Viscosity -  
Explosive properties -  
Oxidizing properties -
- 9.2 Other information**  
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**SECTION 10: STABILITY AND REACTIVITY**

- 10.1 Reactivity**  
Avoid heat, flames and other sources of ignition.
- 10.2 Chemical stability**  
Stable at normal ambient temperatures and when used as recommended.
- 10.3 Possibility of hazardous reactions**  
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- 10.4 Conditions to avoid**  
Volatile liquid. Avoid heat, flames and other sources of ignition.
- 10.5 Incompatible materials**  
Oxidizing agents. Strong acids. Alkalis.
- 10.6 Hazardous decomposition products**  
Does not decompose when used and stored as recommended.

**SECTION 11: TOXICOLOGICAL INFORMATION**

- 11.1 Acute toxicity** ATE > 2000 mg/kg

Component	Value
Ethanol 64-17-5	LD50 (oral, rat) 10470 mg/kg LD50 (skin, rabbit) 15800 mg/kg LC50 (inhalation, rat, 4h) 51-55 mg/l LC50 (inhalation, mouse, 1h) 30000 mg/m3

- 11.2 Skin corrosion/irritation**  
No data available
- 11.3 Serious eye damage/eye irritation**  
Severe eye irritant
- 11.4 Respiratory or skin sensitization:**  
No data available
- 11.5 Germ cell mutagenicity:**  
No data available
- 11.6 Carcinogenicity**  
No data available
- 11.7 Reproductive toxicity:**  
No data available
- 11.8 Specific target organ toxicity – single exposure:**  
No data available
- 11.9 Specific target organ toxicity – repeated exposure:**  
No data available
- 11.10 Aspiration hazard:**  
No data available
- 11.11 Additional Information:**  
No data available

**SECTION 12: ECOLOGICAL INFORMATION****12.1 Toxicity**

The product has not been tested, information on components:

Component / CAS #	Toxicity to Algae	Toxicity to Fish	Toxicity to Water Flea
Ethanol 64-17-5	IC5 Scenedesmus quadricauda (Green algae): 5.000 mg/l; 7d (Lit.)	LC50 Leuciscus idus (Golden orfe): 8.140 mg/l; 48 h (IUCLID)	EC50 Daphnia magna: 9.268 -14.221 mg/l; 48 h (IUCLID)
2-Methylpropan-2-ol 75-65-0		LC50 (Pimephales promelas) 6410 mg/l (96 h)	
Denatonium Benzoate 3734-33-6	ErC50 Chlorella vulgaris 281,56 mg/l 72 h (OECD TG 201)	LC50 Danio rerio 100 mg/l 96 h (OECD 203)	
4-Methylpentan-2-one 108-10-1	EC50: 400 mg/L / 96h	LC50: 496 - 514 mg/L, 96h flow-through (Pimephales promelas)	EC50: 4280.0 mg/L / 24h EC50: 170 mg/L / 48h

**12.2 Persistence and degradability**

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- Biodegradability 94 %, OECD Test Guideline 301E (Ethanol)
- 12.3 Bioaccumulative potential**  
Bioaccumulation is not expected. (Lit.)
- 12.4 Mobility in soil**  
No data available
- 12.5 Results of PBT and vPvB assessment**  
Substance does not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII.
- 12.6 Other adverse effects**  
No data available

**SECTION 13: DISPOSAL CONSIDERATIONS**

- 13.1 Waste treatment methods**  
Recycling of empty, rinsed plastic containers is encouraged, where possible.
- 13.2 General Information**  
When handling waste, the safety precautions applying to handling of the product should be considered. Do not dump into any sewers, on the ground, or into any body of water. Not to be disposed of together with household waste. Any disposal practice must be in compliance with all local and national laws and regulations. Handle and dispose contaminated packages in the same way as the product itself.
- 13.3 Disposal methods**  
When recycle or reuse is not possible, dispose the products and packaging as hazardous waste. Dispose of by thermal treatment or incineration at approved facilities. All local and national regulations should be followed. For disposal within the EU, waste codes according to Directive 2008/98/EC should be assigned, based on the application for which the product was used.
- 13.4 Disposal-relevant information**  
Do not release directly or indirectly to surface water, ground water, soil or public sewage system.

**SECTION 14: TRANSPORT INFORMATION**

- |  |                                    |
|--|------------------------------------|
| <b>14.1 UN number</b>                    | 1993                               |
| <b>14.2 UN proper shipping name</b>      | FLAMMABLE LIQUID, N.O.S. (ETHANOL) |
| <b>14.3 Transport hazard class(es)</b>   | 3                                  |
| <b>14.4 Packaging group</b>              | II                                 |
| <b>14.5 Environmental hazards</b>        | -                                  |
| <b>14.6 Special precautions for user</b> | -                                  |

**SECTION 15: REGULATORY INFORMATION**

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**  
This safety datasheet complies with the requirements of Regulations (EC) No. 1907/2006 (REACH), 1272/2008 (CLP), 599/2013 (Chemicals Act), 648/2004 (Detergent regulation), 738/2002 (Occupational Safety and Health Act) and 268/2014 (limits for occupational exposure in Finland).
- 15.2 Chemical Safety Assessment**  
no data available

**SECTION 16: OTHER INFORMATION**

- 16.1 General Information**  
The information contained herein is, to the best of our knowledge and belief, accurate. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is compiled without warranty and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user. It is the responsibility of the user to assume all liability for damages incurred by use of this material and to comply with all applicable laws and regulations.
- 16.2 Hazard statements in full**
- |      |   |
|------|---|
| H225 | Highly flammable liquid and vapour                |
| H302 | Harmful if swallowed                              |
| H319 | Causes serious eye irritation                     |
| H332 | Harmful if inhaled                                |
| H335 | May cause respiratory irritation                  |
| H336 | May cause drowsiness or dizziness                 |
| H412 | Harmful to aquatic life with long lasting effects |