

# Safety Data Sheet v1.6

UN Globally Harmonized System of Classification and Labelling of Chemicals (GHS) compliant

## Section 1 (Identification):

**Product Description:** Non-Alcohol based hand sanitizer  
**Trade name(s):** Avsan/hand, MEDsan/hand, K9san/hand, PETsan/hand  
**Product manufacturer:** Lessing Research Laboratories, chemical division, 1986/021266/23  
**Address:** P.O.Box 40012, Cleveland, 2022  
**Recommended use:** Used as hand sanitizer, spray on hands and rub vigorously for at least 30 seconds, wait for product to dry off before proceeding.  
**Uses advised against:** Do not add to detergents as a surface sanitizer.

## Section 2 (Hazard information):

### Hazard classification:

This chemical is not considered hazardous according to the OSHA Hazard communications standard.

**Appearance:** light green      **Physical State:** Liquid      **Odour:** light apple

### Storage:

Store in a dry place at room temperature away from direct sunlight, do not expose to extreme heat.

### Disposal:

Dispose of contents/container only to an approved waste disposal plant.

### Unintended exposure:

Eye contact may cause mild, transient irritation. For irritation, rinse cautiously with water for several minutes. If contact lenses present, remove immediately if it is easy to do, continue rinsing. If eye irritation persists, seek medical advice/attention.

Skin contact or hair contact, no irritation, sensitizing, photo allergenic or photo toxic when used as intended. If irritation occurs following intended use or prolonged contact it is expected to be mild and transient.

Inhalation, may cause respiratory irritation, if persists seek medical advice/attention.

### Other information:

This product when used according to instructions, is safe and presents no immediate or long-term health hazard. It is safe for consumers with intended and reasonable foreseeable use. Normal usage should not create hazardous conditions. Do not use in conjunction with any other detergents or hard waters. Under no circumstances should this product be exposed for extended periods to direct sunlight, the Hydrogen Peroxide stabilizer used in this product does not protect against Ultraviolet decomposition.

## Section 3 (product composition):

Chemical name	CAS number	Percentage (w/w)
Benzalkonium Chloride	68424-85-1	< 1%
Glycerine	56-81-5	1 – 5%
NI-90	26027-38-3	1 – 5%
Hydrogen Peroxide	7722-84-1	< 1%
2-Propanol	67-63-0	< 0.5%
Stabilizer	---	< 2%
Perfume	---	< 0.06%
Green Dye No 5	4403-90-1	< 0.0007%
Water	7732-18-5	< 96%

**Appearance:** Light green Aqueous solution

**Physical State:** Liquid

**Odour:** Very mild apple odour

## Section 4 (First Aid Measures):

**Skin contact**      None anticipated under foreseeable use conditions. Repeated or prolonged with this product may cause irritation in sensitive individuals. If irritation develops seek medical advice/assistance.

**Eye contact**      Flush with copious amount of clean water immediately. If contact lenses present flush for 5 minutes before removing lenses. Rinse effected eye(s) continuously for 15 to 20 minutes, if irritation persists seek medical advice/assistance.

**Inhalation**      None expected under foreseeable use conditions, if respiratory irritation is experienced, seek medical assistance/advice.

**Ingestion**      DO NOT induce vomiting. Drink lot of clean water, never give anything by mouth to an unconscious person and seek medical assistance.

**Note to Physician**      Treat symptomatically.

## Section 5 (Fire Fighting measures):

**Suitable extinguishing media:** Water, Foam, Carbon Dioxide CO<sub>2</sub>  
**Unsuitable extinguishing media:** No information  
**Specific Hazard arising from product:** No information

### Explosive data:

**Sensitivity to mechanical impact** None  
**Sensitivity to electrostatic discharge** None

### Protective equipment and precautions:

As with all fires, use self-contained breathing apparatus and full protective gear. Cool product containers with flooding quantities of water until well after the fire is out.

## Section 6 (Accidental release measures):

Use personal protection equipment as product contain Glycerine and iso propanol, be mindful of confined areas. Emergency responders should isolate the area and keep unnecessary personal away.

### Containment methods:

Prevent further leakage or spillage if safe to do so. Contain and collect spillage with non-combustible Methods for cleaning up absorbent material, (e.g. sand, Di-atomaceous earth, vermiculite) and place in container for disposal according to local/national regulations.

### Clean-up methods:

Use inert absorbent material to soak up spilled product. Sweep up and shovel absorbent material into suitable containers for disposal. Following product recovery, flush area with water.

## Section 7 (Handling and storing measures):

Handle in accordance with good industrial hygiene and safety practice.

Store in a cool, dry place, keep away from heat.

Keep Containers tightly closed in a dry, cool and well-ventilated place. Store between 5°Celsius and 30°Celsius.

### Incompatible materials:

Keep away from strong oxidizers.

## Section 8 (Personal protection/Exposure control):

<b>Exposure Guidelines</b>	This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.
<b>Engineering Measures</b>	Showers Eyewash stations Ventilation systems
<b>Eye/Face Protection</b>	No special protective equipment required.
<b>Skin and Body Protection</b>	No special protective equipment required.
<b>Respiratory Protection</b>	If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.
<b>Hygiene Measures</b>	Handle in accordance with good industrial hygiene and safety practice.

See also section 11

## Section 9 (Physical and Chemical Properties):

### Basic physical characteristics:

**Appearance:** light green      **Physical State:** Liquid      **Odor:** light apple

### Chemical properties:

pH	5.5 – 7.0
Melting Point/Range	No data
Boiling Point/Boiling Range	No data
Flash Point	No data
Evaporation rate	No data
Flammability (solid, gas)	No data
Partition coefficient: n-octanol/water	No data
Flammability Limits in Air	No data
upper flammability limit	No data
lower flammability limit	No data
Vapour Pressure	No data
Vapour Density	No data
Specific Gravity	0.97-1.03
Water Solubility	No data
Solubility in other solvents	No data
Auto-ignition Temperature	No data
Decomposition Temperature	No data
Viscosity	No data

<b>Flammable Properties</b>	Not flammable
<b>Explosive Properties</b>	Not explosive
<b>Oxidizing Properties</b>	No data

## Section 10 (Stability and Reactivity):

<b>Reactivity</b>	No data available.
<b>Chemical stability</b>	Stable under recommended storage conditions.
<b>Incompatible materials</b>	Strong oxidizing agents.

## Section 11 (Toxicological Information):

### Information on the likely routes of exposure

<b>Inhalation</b>	Vapours may irritate throat and respiratory system.
<b>Eye Contact</b>	Contact with eyes may cause irritation.
<b>Skin Contact</b>	May cause irritation.
<b>Ingestion</b>	May be harmful if swallowed.

### Exposure data:

Glycerol CAS 56-81-5 general accepted exposure limit is 15mg/m<sup>3</sup>, please refer to local health and safety procedures.

Hydrogen Peroxide 7722-84-1 generally accepted international exposure limits are:

ACGIH TLV TWA: 1 ppm  
 OSHA PEL: TWA 1 ppm (1.4mg/m<sup>3</sup>)  
 NIOSH IDLH: 75 ppm  
 NIOSH REL TWA: 1 ppm (1.4 mg/m<sup>3</sup>)  
 Please refer to local health and safety procedures.

2-Propanol CAS 67-63-0 generally accepted international exposure limits are:

ACGIH TWA: 200 ppm STEL: 400ppm  
 NIOSH REL TWA: 400 ppm (980 mg/m<sup>3</sup>)  
 NIOSH REL STEL: 500 ppm (1225 mg/m<sup>3</sup>)  
 Please refer to local health and safety procedures.

### Toxicity data:

Information is included here for completeness as concentrations in product is lower than figures listed here.

Glycerol CA 56-81-5 LD Oral 50% 12600mg/kg, LD Dermal (rabbit) >10g/kg, Inhalation LD50 (rat) >2.75 mg/L/4H exposure.

2-Propanol CAS 67-63-0 LD Oral (rat) 5000mg/kg, Inhalation LD50 (rat) 10000mg/kg 6 hour exposure (Equivalent or similar to OECD 403).

Hydrogen Peroxide 7722-84-1 LD Oral 50% (rat) 225 mg/kg, inhalation LD50 (mouse) 2150 mg/kg

## Section 12 (ECOLOGICAL INFORMATION):

Information is included here for completeness as concentrations in product are lower than figures listed here.

### Glycerin

56-81-5

Fish LC50 Oncorhynchus mykiss	51 - 57 mL/L, 96h static
EC50 Daphnia magna	> 500 mg/L, 24h exposure
Fresh water algae:	no data

Persistence and degradability: Readily biodegradable

Persistence: Persistence is unlikely

### Hydrogen Peroxide 7722-84-1

Fish LC50 Pimephales promelas	16.4mg/L 96H exposure
Fish LC50 Leuciscus idus	35.0mg/L 72H exposure
EC50 Daphnia pulex	2.4mg/L 48H exposure
EC50 Daphnia magna	7.7mg/L 24H exposure
EC50 Algae Skeletone macostatum	1.38mg/L 72H exposure

**Eco-toxicity persistence and degradability:** Readily degradable in the environment.

**Persistence and degradability:** Hydrogen peroxide in the aquatic environment is subject to various reduction or oxidation processes and decomposes into water and oxygen. Hydrogen peroxide half-life in fresh water ranged from 8 hours to 20 days, in air from 10 - 20 hours, and in soils from minutes to hours depending upon microbiological activity and metal contamination.

**Bio-accumulation Material:** may have some potential to bio -accumulate but will likely degrade in most environments before accumulation can occur.

**Mobility:** Will likely be mobile in the environment due to its water solubility but will likely degrade overtime.

**Other Adverse Effects:** Decomposes into oxygen and water. No adverse effects.

### 2-Propanol 67-63-0

Fish LC50 Pimephales promelas	9.64-10.0g/L 96H exposure (Equivalent or similar to OECD 203)
Freshwater algae:	no data

**Ecology -air:** Not included in the list of substances which may contribute to the greenhouse effect (IPCC). Not included in the list of fluorinated greenhouse gases (Regulation (EU) No 517/2014). Photo oxidation in the air. Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009).

**Ecology -water:** Not harmful to Crustacea. Not harmful to fishes. Groundwater pollutant. Inhibition of activated sludge. Not harmful to algae. Not harmful to bacteria

## Section 13 (Disposal Considerations)

**Waste Disposal Methods:** This product, as supplied, is not a hazardous waste according to local regulations.

This product could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult the appropriate state, regional, or local regulations for additional requirements.

**Contaminated Packaging:** Do not re-use empty containers.

## Section 14 (Transport Information)

This product is not regulated.

## Section 15 (Regulatory Information)

U.S. Federal Regulations

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

EPA SARA 311/312 Hazard Categories

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

## Section 16 (General scientific Information):

Effectiveness against COVID-19, no hard empirical data exists but looking at the structure of the virus internationally the norm is to use products that contains Alcohols or Benzalkonium Chloride as per example <https://www.canada.ca/en/health-canada/services/drugs-health-products/disinfectants/covid-19.html>

When this product is used on clean and unsoiled hands, the effective percentage of Benzalkonium Chloride would be no less than 0.2%, internationally 0.13% is considered sufficient to kill envelope viruses on human skin. In conjunction with Hydrogen Peroxide the destruction of microbes including various virus types is sped up to less than 20 seconds.

### Further references:

Inactivation of Viruses by Benzalkonium Chloride by J.A. Armstrong and E.J. Froelich

Disinfection efficacy against parvoviruses compared with reference viruses by M. Eterpi, G. McDonnell, V. Thomas

Virucidal efficacy of the newer quaternary ammonium compounds by M.A. Kennedy, V.S. Mellon, G. Caldwell, L.N. Potgieter.

## Disclaimer

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 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.