



SAFETY DATA SHEET HANDISAN

According to Regulation (EC) No 1907/2006, Annex II, as amended.

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

1.1. Product identifier

Product name HANDISAN

Internal identification C178

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

Identified uses Hand cleaner. Disinfectant.

Uses advised against Use only for intended applications.

1.3. Details of the supplier of the safety data sheet

Supplier ARROW SOLUTIONS
RAWDON ROAD
MOIRA
SWADLINCOTE
DERBYSHIRE
DE12 6DA
TEL: +44 (0)1283 221044
FAX: +44 (0)1283 225731
sales@arrowchem.com

1.4. Emergency telephone number

Emergency telephone +44 (0) 777 8505 330 (24 hrs).

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards Flam. Liq. 2 - H225

Health hazards Eye Irrit. 2 - H319

Environmental hazards Not Classified

2.2. Label elements

Hazard pictograms



Signal word Danger

Hazard statements
H225 Highly flammable liquid and vapour.
H319 Causes serious eye irritation.

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Precautionary statements	<p>P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.</p> <p>P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>P337+P313 If eye irritation persists: Get medical advice/ attention.</p> <p>P501 Dispose of contents/ container in accordance with national regulations.</p>
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2.3. Other hazards

This product does not contain any substances classified as PBT or vPvB.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

ethanol	60-100%
CAS number: 64-17-5	EC number: 200-578-6
	REACH registration number: 01-2119457610-43-XXXX
Classification Flam. Liq. 2 - H225 Eye Irrit. 2 - H319	
Glycerol	<1%
CAS number: 56-81-5	EC number: 200-289-5
	REACH registration number: 01-2119471987-18-XXXX
Classification Not Classified	

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

Composition comments This product contains a substance classified as PBT.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information	Show this Safety Data Sheet to the medical personnel. Keep affected person away from heat, sparks and flames. If medical advice is needed, have product container or label at hand.
Inhalation	Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing.
Ingestion	Rinse mouth thoroughly with water. Do not induce vomiting. Get medical attention if any discomfort continues.
Skin contact	Rinse with water.
Eye contact	Rinse immediately with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if any discomfort continues.

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

Inhalation	Vapours may cause headache, fatigue, dizziness and nausea.
Ingestion	Gastrointestinal symptoms, including upset stomach.
Skin contact	Prolonged contact may cause dryness of the skin.
Eye contact	Causes eye irritation.

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

Notes for the doctor Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media Extinguish with alcohol-resistant foam, carbon dioxide or dry powder.

5.2. Special hazards arising from the substance or mixture

Specific hazards Highly flammable liquid and vapour.

Hazardous combustion products Thermal decomposition or combustion products may include the following substances:
Carbon monoxide (CO). Carbon dioxide (CO₂).

5.3. Advice for firefighters

Protective actions during firefighting Cool containers exposed to flames with water until well after the fire is out.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Ensure procedures and training for emergency decontamination and disposal are in place. No action shall be taken without appropriate training or involving any personal risk. No smoking, sparks, flames or other sources of ignition near spillage. Wear suitable protective equipment, including gloves, goggles/face shield, respirator, boots, clothing or apron, as appropriate. Avoid contact with skin, eyes and clothing. Take care as floors and other surfaces may become slippery. Wash thoroughly after dealing with a spillage. Avoid contact with contaminated tools and objects. Take precautionary measures against static discharges. Do not handle broken packages without protective equipment. Avoid inhalation of vapours. Do not enter storage areas or confined spaces unless adequately ventilated. Use suitable respiratory protection if ventilation is inadequate.

6.2. Environmental precautions

Environmental precautions Do not discharge into drains or watercourses or onto the ground.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Wear suitable protective equipment, including gloves, goggles/face shield, respirator, boots, clothing or apron, as appropriate. No smoking, sparks, flames or other sources of ignition near spillage. Provide adequate ventilation. Absorb spillage with inert, damp, non-combustible material. Collect and place in suitable waste disposal containers and seal securely. Containers with collected spillage must be properly labelled with correct contents and hazard symbol. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage.

6.4. Reference to other sections

Reference to other sections Wear protective clothing as described in Section 8 of this safety data sheet.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Use biocides safely. Always read the label and product information before use. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Avoid contact with eyes. Avoid inhalation of vapours. Avoid contact with contaminated tools and objects. Do not reuse empty containers. Do not eat, drink or smoke when using this product. Do not handle broken packages without protective equipment.

7.2. Conditions for safe storage, including any incompatibilities

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Storage precautions Store at temperatures between 4°C and 40°C. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Storage class Flammable liquid storage.

7.3. Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure controls/Personal protection

8.1. Control parameters

Occupational exposure limits

ethanol

Long-term exposure limit (8-hour TWA): WEL 1000 ppm 1920 mg/m³

Glycerol

Long-term exposure limit (8-hour TWA): WEL 10 mg/m³ mist

WEL = Workplace Exposure Limit

ethanol (CAS: 64-17-5)

DNEL

Workers - Inhalation; Short term : 1900 mg/m³
 Workers - Dermal; Long term systemic effects: 343 mg/kg/day
 Workers - Inhalation; Long term : 950 mg/m³
 Consumer - Inhalation; Short term : 950 mg/m³
 Consumer - Dermal; Long term systemic effects: 206 mg/kg/day
 Consumer - Inhalation; Long term : 114 mg/m³
 Consumer - Oral; Long term systemic effects: 87 mg/kg/day

PNEC

- Fresh water; 0.96 mg/l
 - marine water; 0.79 mg/l
 - Soil; 0.63 mg/kg
 - STP; 580 mg/l
 - Sediment (Freshwater); 3.6 mg/kg

Glycerol (CAS: 56-81-5)

DNEL

Workers - Inhalation; Long term local effects: 56 mg/m³
 General population - Inhalation; Long term local effects: 33 mg/m³
 General population - Oral; Long term systemic effects: 229 mg/kg/day

PNEC

- Fresh water; 0.885 mg/l
 - marine water; 0.0885 mg/l
 - Intermittent release; 8.85 mg/l
 - STP; 1000 mg/l
 - Sediment (Freshwater); 3.3 mg/kg
 - Sediment (Marinewater); 0.33 mg/kg
 - Soil; 0.141 mg/kg

8.2. Exposure controls

Protective equipment



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Appropriate engineering controls	Observe any occupational exposure limits for the product or ingredients.
Eye/face protection	No specific eye protection required during normal use. Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. Personal protective equipment for eye and face protection should comply with European Standard EN166. The following protection should be worn: Tight-fitting safety glasses.
Hand protection	No specific requirements are anticipated under normal conditions of use. Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. To protect hands from chemicals, gloves should comply with European Standard EN374. The selected gloves should have a breakthrough time of at least 4 hours. The breakthrough time for any glove material may be different for different glove manufacturers. When used with mixtures, the protection time of gloves cannot be accurately estimated. Protective gloves should have a minimum thickness of 0.15 mm. Glove thickness is not necessarily a good measure of glove resistance as the permeation rate will depend on the exact glove composition. Gloves made from the following material may provide suitable chemical protection: Nitrile rubber. Rubber (natural, latex).
Other skin and body protection	Provide eyewash station.
Hygiene measures	Good personal hygiene procedures should be implemented.
Respiratory protection	No specific requirements are anticipated under normal conditions of use. Respiratory protection complying with an approved standard should be worn if a risk assessment indicates inhalation of contaminants is possible. Respirator selection must be based on exposure levels, the hazards of the product and the safe working limits of the selected respirator. Ensure all respiratory protective equipment is suitable for its intended use and is 'CE'-marked. Respiratory protection must be used if the airborne contamination exceeds the recommended occupational exposure limit. Half mask and quarter mask respirators with replaceable filter cartridges should comply with European Standard EN140. Gas and combination filter cartridges should comply with European Standard EN14387. Particulate filters should comply with European Standard EN143. Disposable filtering half mask respirators should comply with European Standard EN149 or EN405. Wear a respirator fitted with the following cartridge: Combination filter, type A2/P2. Organic vapour + dust and mist filter.
Environmental exposure controls	Store in a demarcated bunded area to prevent release to drains and/or watercourses. Residues and empty containers should be taken care of as hazardous waste according to local and national provisions. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Viscous liquid.
Colour	Water-white.
Odour	Alcoholic.
Odour threshold	Not determined.
pH	pH (concentrated solution): ~7.5
Melting point	Not determined.
Initial boiling point and range	Not determined.

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Flash point	20°C Pensky-Martens closed cup.
Evaporation rate	Not determined.
Evaporation factor	Not determined.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	Not determined.
Other flammability	Not applicable.
Vapour pressure	Not determined.
Vapour density	Not determined.
Relative density	~ 0.88 @ 25°C
Solubility(ies)	Soluble in water.
Partition coefficient	Not determined.
Auto-ignition temperature	Not determined.
Decomposition Temperature	Not applicable.
Viscosity	~13000 cP @ 25°C
Explosive properties	There are no chemical groups present in the product that are associated with explosive properties.
Oxidising properties	There are no chemical groups present in the product that are associated with oxidising properties.
Comments	Information declared as "Not available" or "Not applicable" is not considered to be relevant to the implementation of the proper control measures.

9.2. Other information

Other information	Not determined.
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SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	There are no known reactivity hazards associated with this product.
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10.2. Chemical stability

Stability	Stable at normal ambient temperatures and when used as recommended.
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10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	Not determined.
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10.4. Conditions to avoid

Conditions to avoid	Avoid heat, flames and other sources of ignition.
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10.5. Incompatible materials

Materials to avoid	Flammable/combustible materials.
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10.6. Hazardous decomposition products

Hazardous decomposition products	Thermal decomposition or combustion products may include the following substances: Carbon monoxide (CO). Carbon dioxide (CO ₂).
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SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

Notes (oral LD₅₀) Based on available data the classification criteria are not met.

Acute toxicity - dermal

Notes (dermal LD₅₀) Based on available data the classification criteria are not met.

Acute toxicity - inhalation

Notes (inhalation LC₅₀) Based on available data the classification criteria are not met.

Skin corrosion/irritation

Skin corrosion/irritation Based on available data the classification criteria are not met.

Serious eye damage/irritation

Serious eye damage/irritation Causes serious eye irritation.

Respiratory sensitisation

Respiratory sensitisation Based on available data the classification criteria are not met.

Skin sensitisation

Skin sensitisation Based on available data the classification criteria are not met.

Germ cell mutagenicity

Genotoxicity - in vitro Does not contain any substances known to be mutagenic.

Carcinogenicity

Carcinogenicity Does not contain any substances known to be carcinogenic.

Reproductive toxicity

Reproductive toxicity - fertility Does not contain any substances known to be toxic to reproduction.

Specific target organ toxicity - single exposure

STOT - single exposure Based on available data the classification criteria are not met.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Based on available data the classification criteria are not met.

Aspiration hazard

Aspiration hazard Not anticipated to present an aspiration hazard, based on chemical structure.

Inhalation

Vapours may cause headache, fatigue, dizziness and nausea.

Ingestion

Gastrointestinal symptoms, including upset stomach.

Skin contact

Prolonged contact may cause dryness of the skin.

Eye contact

Causes serious eye irritation.

Acute and chronic health hazards

Irritating to eyes. Defatting, drying and cracking of skin. Headache.

Route of exposure

Inhalation Skin and/or eye contact

Target organs

Eyes Skin

Medical symptoms

Headache. Irritation of eyes and mucous membranes. Dryness and/or cracking. Dry skin.

Toxicological information on ingredients.

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ethanol

Acute toxicity - inhalation

Acute toxicity inhalation (LC₅₀ vapours mg/l) 124.7

ATE inhalation (vapours mg/l) 124.7

Specific target organ toxicity - repeated exposure

STOT - repeated exposure NOAEL 1730 mg/kg, Oral,

Target organs Gastro-intestinal tract Liver

Glycerol

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 2,001.0

Species Rat

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 1,000.0

Species Rabbit

SECTION 12: Ecological information

Ecotoxicity Not regarded as dangerous for the environment.

12.1. Toxicity

Acute aquatic toxicity

Acute toxicity - fish Not determined.

Chronic aquatic toxicity

Chronic toxicity - fish early life stage Not determined.

Ecological information on ingredients.

ethanol

Acute aquatic toxicity

Acute toxicity - fish LC50, 48 hours: > 100 mg/l, Leuciscus idus (Golden orfe)
LC₅₀, 96 hours: 11.000 mg/l, Fish

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: 12.34 mg/l, Daphnia magna

Acute toxicity - aquatic plants EC₅₀, hours: mg/l, Selenastrum capricornutum

Glycerol

Acute aquatic toxicity

Acute toxicity - fish LC50, 96 hours: 54000 mg/l, Oncorhynchus mykiss (Rainbow trout)

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Acute toxicity - aquatic invertebrates	EC ₅₀ , >: > 10000 mg/l, Daphnia magna
Acute toxicity - aquatic plants	EC ₅₀ , 72 hours: > 2900 mg/l, Freshwater algae
Acute toxicity - microorganisms	EC ₅₀ , >: > 1000 mg/l, Activated sludge

12.2. Persistence and degradability

Persistence and degradability The product is expected to be biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential The product does not contain any substances expected to be bioaccumulating.

Partition coefficient Not determined.

12.4. Mobility in soil

Mobility Soluble in water.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

12.6. Other adverse effects

Other adverse effects Not determined.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal methods Disposal of this product, process solutions, residues and by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any local authority requirements.

SECTION 14: Transport information

General For limited quantity packaging/limited load information, consult the relevant modal documentation using the data shown in this section.

Special Provisions note

14.1. UN number

UN No. (ADR/RID) 1993

UN No. (IMDG) 1993

UN No. (ICAO) 1993

14.2. UN proper shipping name

Proper shipping name (ADR/RID) FLAMMABLE LIQUID, N.O.S.(ethanol)

Proper shipping name (IMDG) FLAMMABLE LIQUID, N.O.S.(ethanol)

Proper shipping name (ICAO) FLAMMABLE LIQUID, N.O.S.(ethanol)

14.3. Transport hazard class(es)

ADR/RID class 3

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ADR/RID classification code	F1
ADR/RID label	3
IMDG class	3
ICAO class/division	3

Transport labels



14.4. Packing group

ADR/RID packing group	III
IMDG packing group	III
ICAO packing group	III

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant
No.

14.6. Special precautions for user

EmS	F-E, S-E
ADR transport category	3
Emergency Action Code	•3YE
Hazard Identification Number (ADR/RID)	33
Tunnel restriction code	(D)

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

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

SECTION 15: Regulatory information

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

National regulations	Control of Substances Hazardous to Health Regulations 2002 (as amended).
EU legislation	Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended). Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended). Commission Regulation (EU) No 2015/830 of 28 May 2015.
Guidance	Workplace Exposure Limits EH40.

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

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**Abbreviations and acronyms
used in the safety data sheet**

ATE: Acute Toxicity Estimate.
ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.
CAS: Chemical Abstracts Service.
DNEL: Derived No Effect Level.
EC₅₀: 50% of maximal Effective Concentration.
IATA: International Air Transport Association.
IMDG: International Maritime Dangerous Goods.
LC₅₀: Lethal Concentration to 50 % of a test population.
LD₅₀: Lethal Dose to 50% of a test population (Median Lethal Dose).
NOAEL: No Observed Adverse Effect Level.
PBT: Persistent, Bioaccumulative and Toxic substance.
PNEC: Predicted No Effect Concentration.
REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006.
UN: United Nations.
vPvB: Very Persistent and Very Bioaccumulative.

**Classification abbreviations
and acronyms**

Flam. Liq. = Flammable liquid
Eye Irrit. = Eye irritation

Revision comments

This is the first issue.

Revision date

08/04/2020

Revision

1.0

SDS number

29729

Hazard statements in full

H225 Highly flammable liquid and vapour.
H319 Causes serious eye irritation.

This 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. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.