

### 1. Identification of substance

Product Name	Hand Sanitizer
Trade Name	Rinse-free disinfectant Gel
Chemical Name	None
Recommended Use	Disinfect
Manufacturer Address	
Phone Number	
Fax Number	
WEB	
Emergency Phone Number	

### 2. Hazards identification

GHS classification	Flammable liquids 2
GHS Pictograms	



Signal words	Danger
Hazard statements	H225: Highly flammable liquid and vapour
Precautionary Statement Prevention	P210: Keep away from heat/sparks/open flames/hot surfaces.-No smoking. P233: Keep container tightly closed. P240: Ground/bond container and receiving equipment. P241: Use explosion-proof electrical/ventilating/lighting equipment. P242: Use only non-sparking tools. P243: Take precautionary measures against static discharge. P280: Wear protective gloves/protective clothing/eye protection/face protection.
Precautionary Statement Response	P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse affected areas with water[or shower]. P370+P378: In case of fire: Use extinguisher to extinguish.
Precautionary Statement Storage	P403+P235: Store in a well-ventilated place. Keep cool.
Precautionary Statement Disposal	P501: Dispose of contents/container in according with local regulation.
Other hazards which do not result in classification	Not available.

### 3. Composition/information on ingredients

Substances

✓ **Mixtures**

**Component Information**

<b>Component</b>	<b>CAS number</b>	<b>EINECS number</b>	<b>Mass(%)</b>
Alcohol	64-17-5	200-578-6	73%wt
Deionized water	7732-18-5	231-791-2	25.3%wt
Glycerol	56-81-5	200-289-5	1%wt
Carbopol 940	9003-01-4	618-347-7	0.45%wt
Triethanolamine	102-71-6	203-049-8	0.25%wt

**4. First-aid measures**

<b>NOTE TO PHYSICIAN</b>	In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation. Symptoms may be delayed.
After inhalation	Move to fresh air. Oxygen or artificial respiration if needed. Get immediate medical attention.
After skin contact	Immediately flush skin with plenty of water. Remove and isolate contaminated clothing and shoes. If irritation persists, get medical attention immediately. For minor skin contact, avoid spreading material on unaffected skin. Wash clothing separately before reuse.
After eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Assure adequate flushing of the eyes by separating the eyelids with fingers. Get medical attention immediately.
After ingestion	Rinse mouth. Give one or two glasses of water to drink. Do not induce vomiting without medical advice. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Loosen tight clothing such as a collar, tie, belt or waistband. Do not use mouth-to-mouth method if victim ingested the substance. Seek immediate medical attention.
Most important symptoms/effects, acute and delayed	No data available.

**5. Fire-fighting measures**

Suitable extinguishing agents	Water spray, alcohol-resistant foam, carbon dioxide, dry chemical powder, sandy soil.
Special hazards caused by the material, its products of combustion or flue gases	The decomposition products depend on temperature, air supply and other substances. Decomposition products may include but are not limited to: carbon monoxide and carbon dioxide, nitrogen oxides.
Protective equipment for fire-fighters	Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask.

**6. Accidental release measures**

Person-related safety precautions	Ensure adequate ventilation. Remove all sources of ignition. Beware of vapours accumulating to form explosive
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Measures for environmental protection	concentrations. Ventilate closed spaces before entering. Keep unnecessary personnel away.
Measures for cleaning/collecting	Prevent further leakage or spillage if safe to do so. Do not allow material to be released to the environment without proper governmental permits.
Additional Information	Control spillage, and then collect with non-combustible absorbent material (e.g. sand, earth, diatomaceous earth, vermiculite) and place in suitable container. Clean contaminated surface thoroughly. See Section 7 for information on safe handling See section 8 for information on personal protection equipment. See Section 13 for information on disposal.

### 7. Handling and storage

<b>Handling</b>	
Information for safe handling	Use spark-proof tools and mechanical equipments. In case of insufficient ventilation, wear suitable respiratory equipment.
Information about protection against explosions and fires	Keep away from heat, sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.
<b>STORAGE</b>	
Requirements to be met by storerooms and containers	Keep in a cool, dry, well-ventilated place. Keep tightly closed until used. Use of explosion-proof lighting, ventilation facilities.
Information about storage in one common storage facility	Store away from incompatible substances such as strong oxidizing agents, alkalis, etc.
Further information about storage conditions	Storage area should be equipped with appropriate variety and quantity of fire equipment, emergency treatment equipments and suitable materials for leakage.

### 8. Exposure controls/personal protection

Limit Values for Exposure Component	CAS number	ACGIH TLV-TWA	ACGIH TLV-STEL	NIOSH REL-TWA	NIOSH REL-STEL
Alcohol	64-17-5	N.E.	1,000 ppm	1,000 ppm	N.E.
Glycerol	56-81-5	N.E.	N.E.	N.E.	N.E.
Carbopol 940	9003-01-4	N.E.	N.E.	N.E.	N.E.
Triethanolamine	102-71-6	5 mg/m <sup>3</sup>	N.E.	N.E.	N.E.
Appropriate engineering controls	Use adequate ventilation to keep airborne concentrations low. Provide safety shower and eyewash facility.				
General protective and hygienic measures	Do not get this material in contact with eyes. Handle in accordance with good industrial hygiene and safety practice.				

Personal protective equipment	Wash hands before breaks and at the end of workday. Splash goggles, gloves, protective clothing and a vapor respirator.
Breathing equipment	When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
Protection of hands	Wear appropriate chemical resistant gloves.
Eye/Face protection	Use safety glasses with side shields or safety goggles as mechanical barrier for prolonged exposure.
Body protection	Full set of anti chemical reagent overalls, flame retardant antistatic protective clothing, choose body protection according to the amount and concentration of the dangerous substance at the work place.

Note:1. N.E. means not established.

#### 9. Physical and chemical properties

Physical state	Gel
Colour	Colourless
Odour	No data available
Melting point/freezing point	No data available
Boiling point or initial boiling point and boiling range	No data available
Flammability	Highly flammable
Lower and upper explosion limit/ flammability limit	No data available
Flash point	14.8 °C (Closed cup)
Auto-ignition temperature	No data available
Decomposition temperature	No data available
pH	No data available
Kinematic viscosity	No data available
Solubility	No data available
Partition coefficient: n-octanol/water(log value)	No data available
Vapour pressure	No data available
Density and/or relative density	No data available
Relative vapour density (air=1)	No data available
Particle characteristics	Not applicable

#### 10. Stability and reactivity

Reactivity	Alcohol reacts slowly with calcium hypochlorite, silver oxide and ammonia. This generates fire and explosion hazard. Reacts
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Chemical stability	violently with strong oxidants such as nitric acid, silver nitrate, mercuric nitrate and magnesium perchlorate. This generates fire and explosion hazard.
Possibility of hazardous reactions	Stable under recommended storage conditions. No data available.
Conditions to avoid (e.g. static discharge, shock or vibration)	Heat and flame and spark. The extreme temperatures and direct sunlight. Static discharge.
Incompatible materials	Avoid contact with strong oxidizing agents, alkalis, etc.
Hazardous decomposition products	The decomposition products depend on temperature, air supply and other substances. Decomposition products may include but are not limited to: carbon monoxide and carbon dioxide, nitrogen oxides.

### 11. Toxicological information

Routes of Entry: Dermal contact, eye contact, inhalation, ingestion.

#### Acute Toxicity

Alcohol (CAS 64-17-5)	LD50 (Oral, rat): 10,470 mg/kg LC50 (Inhalation, rat): 124.7 mg/l (4 h) LD50 (Dermal, rabbit): N/A
Glycerol (CAS 56-81-5)	LD50 (Oral, rat): 4,090 mg/kg LC50 (Inhalation, rat): N/A LD50 (Dermal, rabbit): N/A
Carbopol 940 (CAS 9003-01-4)	LD50 (Oral, rat): 2,500 mg/kg LC50 (Inhalation, rat): N/A LD50 (Dermal, rabbit): N/A

Skin corrosion/Irritation	Not classified
Serious eye damage/irritation	Not classified
Respiratory or skin sensitization	Not classified
Germ cell mutagenicity	Not classified
Carcinogenicity	Not classified
Reproductive toxicity	Not classified
STOT-single exposure	Not classified
STOT-repeated exposure	Not classified
Aspiration hazard	Not classified
Chronic Effects	Not classified
Further Information	None.

### 12. Ecological information

Ecotoxicity

**Aquatic Toxicity**

Test & Species  
96 Hr LC50 fish: N/A  
48 Hr EC50 Daphnia: N/A  
72 Hr EC50 Algae: N/A

Persistence and degradability Not available  
Bioaccumulative potential Not available  
Mobility in soil Not available  
Additional Information None

**13. Disposal considerations**

**WASTE DISPOSAL INSTRUCTIONS**

Contact a qualified professional waste disposal service to dispose of this material.  
Dispose of in accordance with local environmental regulations or local authority requirements.

**14. Transport information**

The Recommendation of Transport of Dangerous Goods(TDG)

UN Number UN 1170  
Proper Shipping Name ETHANOL SOLUTION  
Class/Division Class 3 Flammable Liquids  
Package Group PG II  
Subsidiary risk —  
labelling pictogram



Maritime transport IMDG/ Marine pollutant (Yes/No) Being same with TDG/No  
Air transport ICAO-TI and IATA-DGR Being same with TDG

**15. Regulatory information**

**European/International Regulations**

**OSHA:** Hazardous by definition of Hazard Communication Standard(29CFR 1910.1200).  
**EINECS Status:** The main components of this chemical are included in EINECS inventory.  
**EPA TSCA Status:** The main components of this chemical are included in TSCA inventory.

<b>Canadian DSL(Domestic Substances List):</b>	The main components of this chemical are included in DSL.
<b>HMIS(Hazardous Material Identification System Ratings):</b>	Health: 0 Flammability: 3 Physical hazard: 0 Personal protection: H (4. Severe Hazard; 3. Serious Hazard; 2. Moderate Hazard; 1. Slight Hazard; 0. Minimal Hazard)
<b>WHMIS (Canadian Workplace Hazardous Material Identification System Ratings):</b>	B2, D2B (Alcohol).
<b>GB 12268-2012 List of dangerous goods</b>	This product is a dangerous goods on the GB 12268-2012 list of dangerous goods.

#### 16. other information

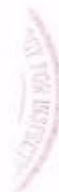
Employers should use this information only as a supplement to other information gathered by them, and should make independent judgment of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of 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.

This Material Safety Data Sheet was based on the "Globally Harmonized System of Classification and Labelling of Chemicals", "Recommendations on the TRANSPORT OF DANGEROUS GOODS Model Regulations", "INTERNATIONAL MARITIME DANGEROUS GOODS CODE", "International Air Transport Association Dangerous Goods Regulations", the National Standards and other related dangerous chemicals management laws, regulations and standards, which are periodically updated and changed. To make dangerous goods / hazardous chemicals comply with the relevant requirements of the latest management, regularly update is recommended.

This Material Safety Data Sheet has been compiled in both English and Chinese. For any discrepancies, the Chinese version shall prevail.

Abbreviations and acronyms	ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road RID: Regulations Concerning the International Transport of Dangerous Goods by Rail IMDG: International Maritime Code for Dangerous Goods IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA) ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO) EINECS: European Inventory of Existing Commercial Chemical Substances CAS: Chemical Abstracts Service
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<b>Edit Date</b>	LC50: Lethal concentration, 50 percent LD50: Lethal dose, 50 percent EC50: Effective concentration, 50 percent 17.03.2020
<b>Update and Revise</b>	Original edition
<b>Edit Standard</b>	<i>Globally Harmonized System of Classification and Labelling for Chemicals</i> Part 1.5
<b>Revised Institution</b>	Zhejiang Academy of Science and Technology for Inspection and Quarantine





# Safety Data Sheet

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

### 1.1 Product identifiers

Product name : Hand Sanitizer

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

Identified uses : Laboratory chemicals, Manufacture of substances

### 1.3 Details of the supplier of the safety data sheet

Company BT Supplies / GSI Supplies / Lifeguard has on file

### 1.4 Emergency telephone

Emergency Phone #

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## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

#### Classification according to Regulation (EC) No 1272/2008

Flammable liquids (Category 2), H225

For the full text of the H-Statements mentioned in this Section, see Section 16.

#### Classification according to EU Directives 67/548/EEC or 1999/45/EC

F Highly flammable R11

For the full text of the R-phrases mentioned in this Section, see Section 16.

### 2.2 Label elements

#### Labelling according Regulation (EC) No 1272/2008

Pictogram



Signal word Danger

Hazard statement(s)  
H225 Highly flammable liquid and vapour.

Precautionary statement(s)  
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Supplemental Hazard  
Statements none

### 2.3 Other hazards - none

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## SECTION 3: Composition/information on ingredients

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## 3.1 Substances

Product/ingredient name	%	CAS
Water	20%-30%	7732-18-5
Alcohol	68%-74%	64-17-5
Glycerin	1%-5%	56-81-5
Others	<2%	

No components need to be disclosed according to the applicable regulations.

For the full text of the H-Statements and R-Phrases mentioned in this Section, see Section 16

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

#### General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

#### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

#### In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

#### In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

#### If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

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

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

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

No data available

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

#### Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

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

No data available

### 5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

### 5.4 Further information

Use water spray to cool unopened containers.

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation.

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Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.  
For personal protection see section 8.

## 6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

## 6.3 Methods and materials for containment and cleaning up

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).

## 6.4 Reference to other sections

For disposal see section 13.

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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

For precautions see section 2.2.

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

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Hygroscopic.

### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

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## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Components with workplace control parameters

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs	OSHA - Vacated Pels
Ethanol	1000 pp	1000 ppm TWA 1900 mg/m <sup>3</sup> TWA 3300 ppm IDLH	1000 ppm TWA 1900 mg/m <sup>3</sup> TWA	1000 ppm TWA 1900 mg/m <sup>3</sup> TWA

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### 8.2 Exposure controls

#### Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

#### Personal protective equipment

##### Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

##### Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

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The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Full contact

Material: butyl-rubber

Minimum layer thickness: 0,3 mm

Break through time: 480 min

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0,2 mm

Break through time: 38 min

test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

## Body Protection

impervious clothing, Flame retardant antistatic protective clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

## Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate: use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

## Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

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## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

- |   |   |
|---|---|
| a) Appearance                                   | Form: gel<br>Colour: colourless                                   |
| b) Odour  | No data available   |
| c) Odour Threshold                              | No data available   |
| d) pH   | 6.0-8.5   |
| e) Melting point/freezing point                 | -144,0 °C   |
| f) Initial boiling point and boiling range      | 78,0 - 80,0 °C  |
| g) Flash point                                  | 14,0 °C - closed cup  |
| h) Evaporation rate                             | No data available   |
| i) Flammability (solid, gas)                    | No data available   |
| j) Upper/lower flammability or explosive limits | Upper explosion limit: 19 %(V)<br>Lower explosion limit: 3,3 %(V) |

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k) Vapour pressure	59,5 hPa at 20,0 °C
l) Vapour density	No data available
m) Relative density	0.79-0.90 g/cm <sup>3</sup>
n) Water solubility	completely soluble
o) Partition coefficient: n-octanol/water	No data available
p) Auto-ignition temperature	363,0 °C
q) Decomposition temperature	No data available
r) Viscosity	No data available
s) Explosive properties	No data available
t) Oxidizing properties	No data available

## 9.2 Other safety information

No data available

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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

No data available

### 10.2 Chemical stability

Stable under recommended storage conditions.

### 10.3 Possibility of hazardous reactions

No data available

### 10.4 Conditions to avoid

Heat, flames and sparks. Extremes of temperature and direct sunlight.

### 10.5 Incompatible materials

Alkali metals, Ammonia, Oxidizing agents, Peroxides

### 10.6 Hazardous decomposition products

Other decomposition products - No data available

In the event of fire: see section 5

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## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

LD50 Oral - Rat - 7.060 mg/kg

Remarks: Lungs, Thorax, or Respiration:Other changes.

LC50 Inhalation - Rat - 10 h - 20000 ppm

#### Skin corrosion/irritation

Skin - Rabbit

Result: No skin irritation - 24 h

(OECD Test Guideline 404)

#### Serious eye damage/eye irritation

Eyes - Rabbit

Result: Mild eye irritation - 24 h

(OECD Test Guideline 405)

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## **Respiratory or skin sensitisation**

No data available

## **Germ cell mutagenicity**

No data available

## **Carcinogenicity**

Carcinogenicity - Mouse - Oral

Tumorigenic: Equivocal tumorigenic agent by RTECS criteria. Liver: Tumors. Blood: Lymphomas including Hodgkin's disease.

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

## **Reproductive toxicity**

Reproductive toxicity - Human - female - Oral

Effects on Newborn: Apgar score (human only). Effects on Newborn: Other neonatal measures or effects.

Effects on Newborn: Drug dependence.

## **Specific target organ toxicity - single exposure**

No data available

## **Specific target organ toxicity - repeated exposure**

No data available

## **Aspiration hazard**

No data available

## **Additional Information**

RTECS: KQ6300000

Central nervous system depression, narcosis, Damage to the heart., To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

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## **SECTION 12: Ecological information**

### **12.1 Toxicity**

No data available

### **12.2 Persistence and degradability**

No data available

### **12.3 Bioaccumulative potential**

No data available

### **12.4 Mobility in soil**

No data available

### **12.5 Results of PBT and vPvB assessment**

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

### **12.6 Other adverse effects**

No data available

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## **SECTION 13: Disposal considerations**

### **13.1 Waste treatment methods**

#### **Product**

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting

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as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company.

## Contaminated packaging

Dispose of as unused product.

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### SECTION 14: Transport information

<b>14.1 UN number</b> ADR/RID: 1170	IMDG: 1170	IATA: 1170
<b>14.2 UN proper shipping name</b> ADR/RID: ETHANOL IMDG: ETHANOL IATA: Ethanol		
<b>14.3 Transport hazard class(es)</b> ADR/RID: 3	IMDG: 3	IATA: 3
<b>14.4 Packaging group</b> ADR/RID: II	IMDG: II	IATA: II
<b>14.5 Environmental hazards</b> ADR/RID: no	IMDG Marine pollutant: no	IATA: no
<b>14.6 Special precautions for user</b> No data available		

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### SECTION 15: Regulatory information

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

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

No data available

#### 15.2 Chemical Safety Assessment

For this product a chemical safety assessment was not carried out

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### SECTION 16: Other information

#### Full text of H-Statements referred to under sections 2 and 3.

H225 Highly flammable liquid and vapour.

#### Full text of R-phrases referred to under sections 2 and 3

R11 Highly flammable.

#### Further information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. 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.