

## Safety Data Sheet

according to UK REACH Regulation

### Isopropanol-ethanol mixture

Revision date: 27.02.2024

Product code: 16880.xxxxx

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

### 1.1. Product identifier

Isopropanol-ethanol mixture

UFI: 27RG-R1S9-300X-RUQ3

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

#### Use of the substance/mixture

Use as laboratory reagent. Intended for scientific research and development.

#### Uses advised against

Any non-intended use.

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

Company name: MORPHISTO GmbH  
Street: Schumannstr. 142/144  
Place: D-63069 Offenbach  
Telephone: +49 (0) 69 / 400 3019-60      Telefax: +49 (0) 69 / 400 3019-64  
E-mail: info@morphisto.de  
Contact person: Morphisto GmbH  
E-mail: gefahrstoffmanagement@morphisto.de  
Internet: http://www.morphisto.de

### 1.4. Emergency telephone number:

Poison Information Center Mainz, Germany, Tel: +49(0)6131/19240

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

#### GB CLP Regulation

Flam. Liq. 3; H226

Eye Irrit. 2; H319

Full text of hazard statements: see SECTION 16.

### 2.2. Label elements

#### GB CLP Regulation

Signal word: Warning

Pictograms:



#### Hazard statements

H226 Flammable liquid and vapour.  
H319 Causes serious eye irritation.

#### Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P337+P313 If eye irritation persists: Get medical advice/attention.

#### Labelling of packages where the contents do not exceed 125 ml

Signal word: Warning

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**Pictograms:**

**2.3. Other hazards**

This substance/mixture contains no components considered to be either persistent, bioaccumulating and toxic (PBT) or very persistent and very bioaccumulating (vPvB) at levels of 0.1% or higher. Ecological information: The substance/mixture does not contain any components that are considered to be hazardous according to REACH Article 57(f) or Commission Delegated Regulation (EU) 2017/2100 or Commission Delegated Regulation (EU) 2018/605 in amounts of 0.1 % or more have endocrine disrupting properties. Toxicological information: The substance/mixture does not contain any components that are to be classified according to REACH Article 57(f) or Commission Delegated Regulation (EU) 2017/2100 or Commission Delegated Regulation (EU) 2018/605 in quantities of 0.1 % or more have endocrine disrupting properties.

**SECTION 3: Composition/information on ingredients**
**3.2. Mixtures**
**Relevant ingredients**

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (GB CLP Regulation)			
67-63-0	2-propanol			15 - < 20 %
	200-661-7	603-117-00-0	01-2119457558-25	
	Flam. Liq. 2, Eye Irrit. 2, STOT SE 3; H225 H319 H336			
64-17-5	ethanol			10 - < 15 %
	200-578-6	603-002-00-5	01-2119457610-43	
	Flam. Liq. 2, Eye Irrit. 2; H225 H319			
78-93-3	butanone			< 0.1 %
	201-159-0	606-002-00-3	01-2119457290-43	
	Flam. Liq. 2, Eye Irrit. 2, STOT SE 3; H225 H319 H336 EUH066			
3734-33-6	Denatoniumbenzoate			< 0.1 %
	223-095-2			
	Acute Tox. 4, Acute Tox. 4, Skin Irrit. 2, Eye Dam. 1, Aquatic Chronic 3; H332 H302 H315 H318 H412			

Full text of H and EUH statements: see section 16.

**Specific Conc. Limits, M-factors and ATE**

CAS No	EC No	Chemical name	Quantity
		Specific Conc. Limits, M-factors and ATE	
67-63-0	200-661-7	2-propanol	15 - < 20 %
		dermal: LD50 = >5000 mg/kg; oral: LD50 = >5000 mg/kg	
64-17-5	200-578-6	ethanol	10 - < 15 %
		inhalation: LC50 = 124,7 mg/l (vapours); dermal: LD50 = >2000 mg/kg; oral: LD50 = >5000 mg/kg Eye Irrit. 2; H319: >= 50 - 100	
78-93-3	201-159-0	butanone	< 0.1 %
		dermal: LD50 = >2000 mg/kg; oral: LD50 = 2054 mg/kg	
3734-33-6	223-095-2	Denatoniumbenzoate	< 0.1 %
		inhalation: ATE = 11 mg/l (vapours); inhalation: ATE = 1,5 mg/l (dusts or mists); dermal: LD50 = >2000 mg/kg; oral: ATE = 500 mg/kg	

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**Further Information**

This product contains no substances of very high concern (SVHC) (>0,1%) which are included in the Candidate List according to Article 59 of REACH.

**SECTION 4: First aid measures****4.1. Description of first aid measures****General information**

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

**After inhalation**

Provide fresh air. In case of respiratory tract irritation, consult a physician. If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.

**After contact with skin**

Wash with plenty of water. Take off contaminated clothing and wash it before reuse. In case of skin irritation consult a doctor.

**After contact with eyes**

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

**After ingestion**

Observe risk of aspiration if vomiting occurs. Rinse mouth thoroughly with water. Let water be drunk in little sips (dilution effect). Do NOT induce vomiting. In all cases of doubt, or when symptoms persist, seek medical advice.

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

Narcotic effects, Respiratory complaints, Headache, Dizziness.

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

Treat symptomatically.

**SECTION 5: Firefighting measures****5.1. Extinguishing media****Suitable extinguishing media**

Water spray jet, Carbon dioxide (CO<sub>2</sub>), Foam, Extinguishing powder.

**Unsuitable extinguishing media**

High power water jet.

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

Flammable. Vapours can form explosive mixtures with air. In case of fire may be liberated: Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>).

**5.3. Advice for firefighters**

In case of fire: Wear self-contained breathing apparatus. In case of fire and/or explosion do not breathe fumes. Co-ordinate fire-fighting measures to the fire surroundings.

**Additional information**

Use water spray jet to protect personnel and to cool endangered containers. Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures****General advice**

Remove all sources of ignition. Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Use personal protection equipment. General protection and hygiene

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measures - see section 7.1

**6.2. Environmental precautions**

Do not allow uncontrolled discharge of product into the environment. Explosion risk. Do not allow to enter into surface water or drains. Discharge into the environment must be avoided. Cover drains.

**6.3. Methods and material for containment and cleaning up****For cleaning up**

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

**Other information**

Clear contaminated areas thoroughly. Wash with plenty of water. Ventilate affected area.

**6.4. Reference to other sections**

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

**SECTION 7: Handling and storage****7.1. Precautions for safe handling****Advice on safe handling**

Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray.

Wear suitable protective clothing. Avoid contact with eyes.

**Advice on protection against fire and explosion**

Keep away from sources of ignition - No smoking. Take precautionary measures against static discharges.

Vapours can form explosive mixtures with air. Use only antistatically equipped (spark-free) tools. Keep away from hot surfaces.

**Advice on general occupational hygiene**

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme.

Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat, drink, smoke, sniff. Take recovery periods for skin regeneration.

**Further information on handling**

Flammable vapours can accumulate in head space of closed systems. When using do not eat, drink or smoke.

Avoid contact with eyes.

**7.2. Conditions for safe storage, including any incompatibilities****Requirements for storage rooms and vessels**

Keep container tightly closed. Keep in a cool, well-ventilated place. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Protect from sunlight. Take precautionary measures against static discharges.

**Hints on joint storage**

Do not store together with: Oxidizing agent. Pyrophoric or self-heating substances. Do not store together with:

Oxidizing agent. Pyrophoric or self-heating substances. Do not store together with: Substances that form

flammable gases when in contact with water. Organic peroxides. Oxidizing substances. Alkali metals.

Explosive substances. Radioactive materials. Food and fodder

**Further information on storage conditions**

Store small packages in a suitable, robust cabinet. storage temperature: 15-25 °C

**7.3. Specific end use(s)**

Use as laboratory reagent.

**SECTION 8: Exposure controls/personal protection****8.1. Control parameters**

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**Exposure limits (EH40)**

CAS No	Substance	ppm	mg/m <sup>3</sup>	fibres/ml	Category	Origin
78-93-3	Butan-2-one (methyl ethyl ketone)	200	600		TWA (8 h)	WEL
		300	899		STEL (15 min)	WEL
64-17-5	Ethanol	1000	1920		TWA (8 h)	WEL
67-63-0	Propan-2-ol	400	999		TWA (8 h)	WEL
		500	1250		STEL (15 min)	WEL

**Biological Monitoring Guidance Values (EH40)**

CAS No	Substance	Parameter	Value	Test material	Sampling time
78-93-3	Butan-2-one	butan-2-one	70 µmol/L	urine	Post shift

**DNEL/DMEL values**

CAS No	Substance	DNEL type	Exposure route	Effect	Value
67-63-0	2-propanol				
		Worker DNEL, long-term	inhalation	systemic	500 mg/m <sup>3</sup>
		Consumer DNEL, long-term	inhalation	systemic	89 mg/m <sup>3</sup>
		Worker DNEL, long-term	dermal	systemic	888 mg/kg bw/day
		Consumer DNEL, long-term	oral	systemic	26 mg/kg bw/day
		Consumer DNEL, long-term	dermal	systemic	319 mg/kg bw/day
64-17-5	ethanol				
		Worker DNEL, acute	inhalation	local	1900 mg/m <sup>3</sup>
		Worker DNEL, long-term	dermal	systemic	343 mg/kg bw/day
		Worker DNEL, long-term	inhalation	systemic	950 mg/m <sup>3</sup>
		Consumer DNEL, acute	inhalation	local	950 mg/m <sup>3</sup>
		Consumer DNEL, long-term	dermal	systemic	206 mg/kg bw/day
		Consumer DNEL, long-term	inhalation	systemic	114 mg/m <sup>3</sup>
		Consumer DNEL, long-term	oral	systemic	87 mg/kg bw/day
78-93-3	butanone				
		Worker DNEL, long-term	inhalation	systemic	600 mg/m <sup>3</sup>
		Worker DNEL, long-term	dermal	systemic	1161 mg/kg bw/day

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**PNEC values**

CAS No	Substance	Value
Environmental compartment		
67-63-0	2-propanol	
Freshwater		140,9 mg/l
Marine water		140,9 mg/l
Freshwater sediment		552 mg/kg
Marine sediment		552 mg/kg
Secondary poisoning		160 mg/kg
Soil		28 mg/kg
64-17-5	ethanol	
Freshwater		0,96 mg/l
Freshwater (intermittent releases)		2,75 mg/l
Marine water		0,79 mg/l
Marine water (intermittent releases)		2,75 mg/l
Freshwater sediment		3,6 mg/kg
Marine sediment		2,9 mg/kg
Secondary poisoning		0,72 mg/kg
Micro-organisms in sewage treatment plants (STP)		580 mg/l
Soil		0,63 mg/kg
78-93-3	butanone	
Freshwater		55,8 mg/l
Freshwater (intermittent releases)		55,8 mg/l
Marine water		55,8 mg/l
Freshwater sediment		284,7 mg/kg
Marine sediment		284,7 mg/kg
Micro-organisms in sewage treatment plants (STP)		709 mg/l
Soil		22,5 mg/kg

**8.2. Exposure controls**

**Appropriate engineering controls**

Provide adequate ventilation as well as local exhaust at critical locations. Do not breathe gas/fumes/vapour/spray. Additional information: refer to section 7. No further action is necessary.

**Individual protection measures, such as personal protective equipment**
**Eye/face protection**

Suitable eye protection: goggles. : Tightly sealed safety glasses. EN 166

**Hand protection**

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

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Protective gloves according to EN 374.  
 Before using check leak tightness / impermeability.

#### Skin protection

Use of protective clothing. Filling and transfer: Wear anti-static footwear and clothing. Suitable protective clothing: Flame-retardant protective clothing; Lab apron.

#### Respiratory protection

In case of inadequate ventilation wear respiratory protection. Respiratory protection necessary at: Generation/formation of aerosols exceeding exposure limit values Insufficient ventilation. Suitable respiratory protective equipment: gas filtering equipment (EN 141). Typ: a.AX  
 Details on the requirements for use and maximum concentrations can be found in the "Rules for the use of respiratory protective devices" (BGR 190).

#### Environmental exposure controls

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

Physical state:	liquid	
Colour:	colourless	
Odour:	characteristic, alcoholic	
Melting point/freezing point:		not determined
Boiling point or initial boiling point and boiling range:		not determined
Flammability:		not applicable
Lower explosion limits:		not determined
Upper explosion limits:		not determined
Flash point:		28 °C
Auto-ignition temperature:		not determined
Decomposition temperature:		not determined
pH-Value:		not determined
Viscosity / kinematic:		not determined
Water solubility: (at 20 °C)		easily soluble
Solubility in other solvents		not determined
Partition coefficient n-octanol/water:		not determined
Vapour pressure: (at 20 °C)		58 hPa
Density (at 20 °C):		0,93 g/cm <sup>3</sup>
Bulk density:		not applicable
Relative vapour density:		not determined
Particle characteristics:		not applicable

#### 9.2. Other information

##### Information with regard to physical hazard classes

##### Explosive properties

The product is not: Explosive. The product itself is not explosive, but can form explosive air/vapour mixtures.

##### Sustaining combustion:

Not sustaining combustion

##### Self-ignition temperature

Solid:

not applicable

Gas:

not applicable

##### Oxidizing properties

In case of insufficient ventilation and/or through use, explosive/highly flammable mixtures may develop.

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**Other safety characteristics**

Evaporation rate:	not determined
Solvent separation test:	not determined
Solid content:	not applicable
Sublimation point:	not determined
Softening point:	not applicable
Pour point:	not applicable
Viscosity / dynamic: (at 20 °C)	not determined
Flow time:	not determined

**SECTION 10: Stability and reactivity****10.1. Reactivity**

Flammable.

**10.2. Chemical stability**

Stable under normal storage and handling conditions.

**10.3. Possibility of hazardous reactions**

May cause or intensify fire; oxidiser. In case of insufficient ventilation and/or through use, explosive/highly flammable mixtures may develop.

**10.4. Conditions to avoid**

In case of warming: Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. Vapours can form explosive mixtures with air. Vapours can travel considerable distances to a source of ignition where they can ignite, flash back, or explode. Vapours of flammable solvents can accumulate in the gas phase of closed container, especially during heat treatment. Therefore keep away from fire and sources of ignition.

**10.5. Incompatible materials**

Materials to avoid: Substances that form flammable gases when in contact with water. Organic peroxides. Inflammatory substances. Alkali metals. Alkaline earth metals. Chloroform. nitric acid. hydrogenium peroxide. Oxidizing agents. bromine. Reducing agents. Fluorine. nitrosyl compounds..

**10.6. Hazardous decomposition products**In case of fire may be liberated: Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>). UV-radiation/sunlight: Protect from sunlight.**SECTION 11: Toxicological information****11.1. Information on hazard classes as defined in GB CLP Regulation****Acute toxicity**

Based on available data, the classification criteria are not met.

**ATEmix calculated**

ATE (oral) &gt; 2000 mg/kg; ATE (dermal) &gt; 2000 mg/kg; ATE (inhalation vapour) &gt; 20 mg/l; ATE (inhalation dust/mist) &gt; 5 mg/l



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CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
67-63-0	2-propanol				
	oral	LD50 >5000 mg/kg	Rat	ECHA Dossier	
	dermal	LD50 >5000 mg/kg	Rabbit	ECHA Dossier	
64-17-5	ethanol				
	oral	LD50 >5000 mg/kg	Rat	ECHA Dossier	
	dermal	LD50 >2000 mg/kg	Rabbit	ECHA Dossier	
	inhalation (4 h) vapour	LC50 124,7 mg/l	Rat	ECHA Dossier	
78-93-3	butanone				
	oral	LD50 2054 mg/kg	Ratte	SDB Lieferant	
	dermal	LD50 >2000 mg/kg	Rabbit	ECHA Dossier	
3734-33-6	Denatoniumbenzoate				
	oral	ATE 500 mg/kg			
	dermal	LD50 >2000 mg/kg	Rat	suppliers SDS.	
	inhalation vapour	ATE 11 mg/l			
	inhalation dust/mist	ATE 1,5 mg/l			

**Irritation and corrosivity**

Causes serious eye irritation.

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

**Sensitising effects**

Based on available data, the classification criteria are not met.

**Carcinogenic/mutagenic/toxic effects for reproduction**

Based on available data, the classification criteria are not met.

**STOT-single exposure**

Based on available data, the classification criteria are not met.

**STOT-repeated exposure**

Based on available data, the classification criteria are not met.

**Aspiration hazard**

Based on available data, the classification criteria are not met.

**11.2. Information on other hazards**
**Endocrine disrupting properties**

This product does not contain any substance that has endocrine disrupting properties in humans as no ingredient meets the criteria.

**Other information**

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].

**SECTION 12: Ecological information**
**12.1. Toxicity**

Based on available data, the classification criteria are not met.

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CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
67-63-0	2-propanol					
	Acute fish toxicity	LC50 mg/l	9640	96 h	Pimephales promelas	ECHA Dossier OECD Guideline 203
	Acute algae toxicity	ErC50 mg/l	1800	96 h	Scenedesmus quadricauda	ECHA Dossier
	Acute crustacea toxicity	EC50 mg/l	>10000	48 h	Daphnia magna (24h)	ECHA Dossier OECD Guideline 202
64-17-5	ethanol					
	Acute fish toxicity	LC50 mg/l	14200	96 h	Pimephales promelas (fathead minnow)	ECHA Dossier
	Acute algae toxicity	ErC50	275 mg/l	72 h	Chlorella vulgaris	ECHA Dossier
	Acute crustacea toxicity	EC50 mg/l	5012	48 h	Ceriodaphnia dubia (water flea)	ECHA Dossier
	Crustacea toxicity	NOEC	9,6 mg/l	9 d	Daphnia magna	ECHA Dossier
78-93-3	butanone					
	Acute fish toxicity	LC50 mg/l	2993	96 h	Pimephales promelas	ECHA Dossier OECD 203
	Acute algae toxicity	ErC50 mg/l	1972	72 h	Pseudokirchnerella subcapitata	ECHA Dossier OECD 201
	Acute crustacea toxicity	EC50	308 mg/l	48 h	Daphnia magna	ECHA Dossier OECD 202
3734-33-6	Denatoniumbenzoate					
	Acute fish toxicity	LC50 mg/l	>1000	96 h	Oncorhynchus mykiss (Rainbow trout)	suppliers SDS.
	Acute crustacea toxicity	EC50	13 mg/l	48 h	Daphnia magna (Big water flea)	suppliers SDS.

**12.2. Persistence and degradability**

Biodegradable.

CAS No	Chemical name			
	Method	Value	d	Source
	Evaluation			
67-63-0	2-propanol			
	EU Method C.5/ EU Method C.6	53%	5	ECHA Dossier
	Easily biodegradable (concerning to the criteria of the OECD)			
64-17-5	ethanol			
	other guideline	84%	20	ECHA Dossier
	Biodegradable.			
78-93-3	butanone			
		98%	28	ECHA Dossier
	Readily biodegradable (according to OECD criteria).			

**12.3. Bioaccumulative potential**

The product has not been tested.

**Partition coefficient n-octanol/water**

CAS No	Chemical name	Log Pow
67-63-0	2-propanol	0,05
64-17-5	ethanol	-0,31
78-93-3	butanone	0,3

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#### 12.4. Mobility in soil

No information available.

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

The substances in the mixture do not meet the PBT/vPvB criteria according to UK REACH.

#### 12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

#### 12.7. Other adverse effects

No information available.

#### **Further information**

Avoid release to the environment. Do not allow uncontrolled discharge of product into the environment.

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

##### **Disposal recommendations**

Do not allow to enter into surface water or drains. Avoid release to the environment. Dispose of waste according to applicable legislation. Consult the local waste disposal expert about waste disposal.

##### **List of Wastes Code - residues/unused products**

070704 WASTES FROM ORGANIC CHEMICAL PROCESSES; wastes from the MFSU of fine chemicals and chemical products not otherwise specified; other organic solvents, washing liquids and mother liquors; hazardous waste

##### **List of Wastes Code - used product**

070704 WASTES FROM ORGANIC CHEMICAL PROCESSES; wastes from the MFSU of fine chemicals and chemical products not otherwise specified; other organic solvents, washing liquids and mother liquors; hazardous waste

##### **List of Wastes Code - contaminated packaging**

150110 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); packaging containing residues of or contaminated by hazardous substances; hazardous waste

##### **Contaminated packaging**

Wash with plenty of water. Completely emptied packages can be recycled. Wash with plenty of water.

### SECTION 14: Transport information

#### **Land transport (ADR/RID)**

<b><u>14.1. UN number or ID number:</u></b>	UN 1987
<b><u>14.2. UN proper shipping name:</u></b>	ALCOHOLS, N.O.S. (Ethanol, Isopropanol)
<b><u>14.3. Transport hazard class(es):</u></b>	3
<b><u>14.4. Packing group:</u></b>	III
Hazard label:	3



Classification code:	F1
Special Provisions:	274 601
Limited quantity:	5 L
Excepted quantity:	E1
Transport category:	3
Hazard No:	30
Tunnel restriction code:	D/E

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**Inland waterways transport (ADN)**

**14.1. UN number or ID number:** UN 1987  
**14.2. UN proper shipping name:** ALCOHOLS, N.O.S. (Ethanol, Isopropanol)  
**14.3. Transport hazard class(es):** 3  
**14.4. Packing group:** III  
 Hazard label: 3



Classification code: F1  
 Special Provisions: 274 601  
 Limited quantity: 5 L  
 Excepted quantity: E1

**Marine transport (IMDG)**

**14.1. UN number or ID number:** UN 1987  
**14.2. UN proper shipping name:** ALCOHOLS, N.O.S. (ethanol, isopropanol)  
**14.3. Transport hazard class(es):** 3  
**14.4. Packing group:** III  
 Hazard label: 3



Special Provisions: 223 274  
 Limited quantity: 5 L  
 Excepted quantity: E1  
 EmS: F-E, S-D

**Air transport (ICAO-TI/IATA-DGR)**

**14.1. UN number or ID number:** UN 1987  
**14.2. UN proper shipping name:** ALCOHOLS, N.O.S. (ethanol, isopropanol)  
**14.3. Transport hazard class(es):** 3  
**14.4. Packing group:** III  
 Hazard label: 3



Special Provisions: A3 A180  
 Limited quantity Passenger: 10 L  
 Passenger LQ: Y344  
 Excepted quantity: E1  
 IATA-packing instructions - Passenger: 355  
 IATA-max. quantity - Passenger: 60 L  
 IATA-packing instructions - Cargo: 366  
 IATA-max. quantity - Cargo: 220 L

**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: No

**14.6. Special precautions for user**

Warning: Combustible liquid. Refer to section 6-8

**14.7. Maritime transport in bulk according to IMO instruments**

not relevant

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## SECTION 15: Regulatory information

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

#### EU regulatory information

Restrictions on use (REACH, annex XVII):

Entry 3, Entry 40, Entry 75

Information according to Directive  
2012/18/EU (SEVESO III):

P5c FLAMMABLE LIQUIDS

#### Additional information

This preparation is hazardous in the sense of regulation (EC) No 1272/2008 [GHS].

#### National regulatory information

Employment restrictions:

Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC).

Water hazard class (D):

1 - slightly hazardous to water

### 15.2. Chemical safety assessment

For the following substances of this mixture a chemical safety assessment has been carried out:

2-propanol

ethanol

butanone

## SECTION 16: Other information

### Changes

This data sheet contains changes from the previous version in section(s):

1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16.

Rev. 1.00 27.02.2011; Neuerstellung

Rev. 2,0; 27.02.2024; general adjustment(s)

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**Abbreviations and acronyms**

Flam. Liq: Flammable liquids  
Acute Tox: Acute toxicity  
Skin Irrit: Skin irritation  
Eye Dam: Eye damage  
Eye Irrit: Eye irritation  
STOT SE: Specific target organ toxicity - single exposure  
Aquatic Chronic: Chronic aquatic hazard  
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the  
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)  
IMDG: International Maritime Code for Dangerous Goods  
IATA: International Air Transport Association  
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)  
ICAO: International Civil Aviation Organization  
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)  
GHS: Globally Harmonized System of Classification and Labelling of Chemicals  
OSHA: Occupational Safety and Health Administration  
LC50: Lethal concentration, 50 percent  
LD50: Lethal dose, 50 percent  
NOEL: No observed effect level  
NOAEL: No observed adverse effect level  
LOAEL: Lowest observed adverse effect level  
NOAEC: No observed adverse effect level  
LOAEC: Lowest observed adverse effect concentration  
DNEL: Derived No Effect Level  
PNEC: predicted no effect concentration  
TSCA: Toxic Substances Control Act  
IARC: INTERNATIONAL AGENCY FOR RESEARCH ON CANCER  
NTP: National Toxicology Program  
SARA: Superfund Amendments and Reauthorization Act  
GefStoffV: Gefahrstoffverordnung (Ordinance on Hazardous Substances, Germany)  
PBT: Persistent bioaccumulative toxic  
SVHC: substance of very high concern  
CLP: Classification, labelling and Packaging  
REACH: Registration, Evaluation and Authorization of Chemicals  
GHS: Globally Harmonised System of Classification, Labelling and Packaging of Chemicals  
UN: United Nations  
CAS: Chemical Abstracts Service  
DNEL: Derived No Effect Level  
DMEL: Derived Minimal Effect Level  
PNEC: Predicted No Effect Concentration  
ATE: Acute toxicity estimate  
LL50: Lethal loading, 50%  
EL50: Effect loading, 50%  
EC50: Effective Concentration 50%  
ErC50: Effective Concentration 50%, growth rate  
NOEC: No Observed Effect Concentration  
BCF: Bio-concentration factor  
PBT: persistent, bioaccumulative, toxic  
vPvB: very persistent, very bioaccumulative  
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

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RID: Regulations concerning the international carriage of dangerous goods by rail  
 ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways  
 (Accord européen relatif au transport international des marchandises dangereuses par voies de navigation  
 intérieures)  
 EmS: Emergency Schedules  
 MFAG: Medical First Aid Guide  
 MARPOL: International Convention for the Prevention of Marine Pollution from Ships  
 IBC: Intermediate Bulk Container  
 VOC: Volatile Organic Compounds  
 For abbreviations and acronyms, see table at <http://abbrev.esdscom.eu>  
 EC/EEC: European Community/European Economic Community  
 EU: European Union  
 M-factor: Multiplying factor  
 IATA: International Air Transport Association  
 DGR: Dangerous Goods Regulations  
 ICAO: International Civil Aviation Organization  
 TI: Technical Instructions  
 VOC: volatile organic compound  
 For abbreviations and acronyms, see: ECHA Guidance on information requirements and chemical safety  
 assessment, chapter R.20 (Table of terms and abbreviations).

#### Classification for mixtures and used evaluation method according to GB CLP Regulation

Classification	Classification procedure
Flam. Liq. 3; H226	On basis of test data
Eye Irrit. 2; H319	Calculation method

#### Relevant H and EUH statements (number and full text)

H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H336	May cause drowsiness or dizziness.
H412	Harmful to aquatic life with long lasting effects.
EUH066	Repeated exposure may cause skin dryness or cracking.

#### Further Information

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations. The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations. The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

*(The data for the relevant ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)*