

Safety Data Sheet

according to UK REACH Regulation

Staining Solution for Leukocytes

Revision date: 06.03.2024

Product code: 11638.xxxxx

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

1.1. Product identifier

Staining Solution for Leukocytes

UFI: S671-K1MA-J00S-7C1W

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

Use of the substance/mixture

Use as laboratory reagent. The product is intended for research, analysis and scientific education.

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

Carc. 1A; H350

Full text of hazard statements: see SECTION 16.

2.2. Label elements

GB CLP Regulation

Hazard components for labelling

benzidine

Signal word: Danger

Pictograms:



Hazard statements

H226 Flammable liquid and vapour.

H350 May cause cancer.

Precautionary statements

P201 Obtain special instructions before use.

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.

P308+P313 IF exposed or concerned: Get medical advice/attention.

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Special labelling of certain mixtures

Restricted to professional users.

Labelling of packages where the contents do not exceed 125 ml
Signal word: Danger

Pictograms:

Hazard statements

H350

Precautionary statements

P201-P280-P308+P313

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)			
64-17-5	Ethanol			40 - < 45 %
	200-578-6	603-002-00-5	01-2119457610-43	
	Flam. Liq. 2, Eye Irrit. 2; H225 H319			
78-93-3	butanone			< 1 %
	201-159-0	606-002-00-3	01-2119457290-43	
	Flam. Liq. 2, Eye Irrit. 2, STOT SE 3; H225 H319 H336 EUH066			
92-87-5	benzidine			< 1 %
	202-199-1	612-042-00-2		
	Carc. 1A, Acute Tox. 4, Aquatic Acute 1, Aquatic Chronic 1; H350 H302 H400 H410			

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

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Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
		Specific Conc. Limits, M-factors and ATE	
64-17-5	200-578-6	Ethanol	40 - < 45 %
		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	< 1 %
		dermal: LD50 = >2000 mg/kg; oral: LD50 = 2054 mg/kg	
92-87-5	202-199-1	benzidine	< 1 %
		oral: LD50 = 309 mg/kg Carc. 1A; H350: >= 0,01 - 100 Aquatic Acute 1; H400: M=10	

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

First aider: Pay attention to self-protection! Take off contaminated clothing and wash it before reuse. Provide fresh air. Remove affected person from the danger area and lay down. Remove casualty to fresh air and keep warm and at rest. In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). Do not leave affected person unattended. To supervise the blood circulation.

After inhalation

Provide fresh air. Remove casualty to fresh air and keep warm and at rest. If unconscious but breathing normally, place in recovery position and seek medical advice. In case of allergic symptoms, especially in the breathing area, seek medical advice immediately. Medical treatment necessary.

After contact with skin

Immediately remove any contaminated clothing, shoes or stockings. Take off immediately all contaminated clothing. Wash with plenty of water. Medical treatment necessary.

After contact with eyes

Rinse immediately carefully and thoroughly with eye-bath or water. In case of eye irritation consult an ophthalmologist. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician in any case!

After ingestion

If accidentally swallowed rinse the mouth with plenty of water (only if the person is conscious) and obtain immediate medical attention. Rinse out mouth, spit out liquid again. Let water be drunken in little sips (dilution effect). Observe risk of aspiration if vomiting occurs. Seek medical advice.

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

Mucous membrane irritation after eye contact or inhalation. dehydration of skin. Irritation drowsiness. Headache. Dizziness. Intoxication. unconsciousness. vomiting. Impairment of inhibitory functions of the central nervous system, skin redness, nausea after ingestion of large amounts. toxic and carcinogenic effect. Immunotoxicity.

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

Treat symptomatically. The substance Benzidine has been evaluated as immunotoxic (GESTIS) and is strongly suspected of causing cancer. Due to the mixture with ethanol, the substance quickly enters the body when it comes into contact with the skin or mucous membranes. Medical treatment, careful decontamination and intensive follow-up are therefore necessary.

SECTION 5: Firefighting measures

5.1. Extinguishing media

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Suitable extinguishing media

Water spray jet, Carbon dioxide (CO₂), Foam, Extinguishing powder.
Extinguish larger fires with alcohol-resistant foam or water spray.

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 dioxide (CO₂). Carbon monoxide (CO). Nitrogen oxides (NO_x). small amounts of toxic fumes..

5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing. Full protection suit. In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion. Beware of reignition. Reignition possible over considerable distance.

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. Use water spray jet to protect personnel and to cool endangered containers.

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. Ensure adequate ventilation.

For non-emergency personnel

Clear danger zone. Follow emergency plan. Consult an expert.

For emergency responders

Wear a self-contained breathing apparatus and chemical protective clothing. Move undamaged containers from immediate hazard area if it can be done safely.

6.2. Environmental precautions

Do not allow uncontrolled discharge of product into the environment. Explosion risk. highly hazardous to water. Do not allow to enter into surface water or drains. In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

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

Cover drains. Collect, embank and pump out. Observe possible material restrictions (section 10).

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. Ventilate affected area. Clean contaminated articles and floor according to the environmental legislation.

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**

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray. Ensure adequate ventilation. Use extractor hood (laboratory). Wear personal protection equipment (refer to section 8). Always close containers tightly after the removal of product.

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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 non-sparking tools. Wear anti-static footwear and clothing. Have fire-extinguishers in readiness before opening containers.

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. Ensure cleanliness and dryness in the workplace. Always close containers tightly after the removal of product. Contaminated work clothing should not be allowed out of the workplace. Separate storage of work clothes.

Further information on handling

General protection and hygiene measures: refer to chapter 8

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

Keep container tightly closed. Keep locked up. Store in a place accessible by authorized persons only. Provide adequate ventilation as well as local exhaust at critical locations. Keep in a cool, well-ventilated place. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Make sure spills can be contained, e.g. in sump pallets or kerbed areas.

Hints on joint storage

Do not store together with: Oxidizing agent. Pyrophoric or self-heating substances. Do not store together with: food and feed. pharmaceuticals. Infectious substances. Radioactive substances. Explosive substances. Oxidizing substances. Oxidizing liquids. Organic peroxides. Self-reactive substances and mixtures. Pyrophoric solids. Substances which in contact with water form flammable gases. Ammonium nitrate and preparations containing ammonium nitrate. gas. Flammable solids. flammable liquids. . Substances or mixtures which, in contact with water, emit flammable gases.

Further information on storage conditions

Recommended storage temperature: 15-25°C
 Protect against: UV-radiation/sunlight. heat. Cold.

7.3. Specific end use(s)

Use as laboratory reagent. The product is intended for research, analysis and scientific education.

SECTION 8: Exposure controls/personal protection
8.1. Control parameters
Exposure limits (EH40)

CAS No	Substance	ppm	mg/m ³	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

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

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DNEL/DMEL values

CAS No	Substance		
DNEL type	Exposure route	Effect	Value
64-17-5	Ethanol		
Worker DNEL, acute	inhalation	local	1900 mg/m ³
Worker DNEL, long-term	dermal	systemic	343 mg/kg bw/day
Worker DNEL, long-term	inhalation	systemic	950 mg/m ³
Consumer DNEL, acute	inhalation	local	950 mg/m ³
Consumer DNEL, long-term	dermal	systemic	206 mg/kg bw/day
Consumer DNEL, long-term	inhalation	systemic	114 mg/m ³
Consumer DNEL, long-term	oral	systemic	87 mg/kg bw/day
78-93-3	butanone		
Worker DNEL, long-term	inhalation	systemic	600 mg/m ³
Worker DNEL, long-term	dermal	systemic	1161 mg/kg bw/day

PNEC values

CAS No	Substance	
Environmental compartment	Value	
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

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray. Technical measures and the application of suitable work processes have priority over

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personal protection equipment. Technical ventilation of workplace. Use extractor hood (laboratory). Recirculation of exhaust air is not recommended. Provide washing facilities at the workplace, provide an eye shower or eyewash bottle and mark them. The floor should not have a floor drain.

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

Wear eye/face protection. Eye glasses with side protection. 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.

Recommended material:

Breakthrough time (maximum wearing time): >480 min.

Butyl rubber. 0,5mm.

FKM (fluororubber). 0,4mm.

continuous:

CR (polychloroprenes, Chloroprene rubber). 0,5mm.

Before using check leak tightness / impermeability.

Skin protection

Use of protective clothing. Wear anti-static footwear and clothing. Wear fire resistant or flame retardant clothing. Lab apron.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

Suitable respiratory protective equipment: gas filtering equipment (EN 141). A Identification color: brown.

The filter class must be suitable for the maximum contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If the concentration is exceeded, self-contained breathing apparatus must be used.

Thermal hazards

Wear anti-static footwear and clothing. Wear fire resistant or flame retardant clothing. Use only antistatically equipped (spark-free) tools.

Environmental exposure controls

Do not allow to enter into surface water or drains. Make sure spills can be contained, e.g. in sump pallets or kerbed areas.

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Physical state:	liquid	
Colour:	dark pink	
Odour:	alcoholic	
Melting point/freezing point:		not determined
Boiling point or initial boiling point and boiling range:		78 °C
Flammability:		not determined
Lower explosion limits:		not determined
Upper explosion limits:		not determined
Flash point:		26 °C
Auto-ignition temperature:		not determined
Decomposition temperature:		not determined
pH-Value:		not determined
Viscosity / kinematic:		not determined

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Water solubility: (at 20 °C)	not determined
Solubility in other solvents not determined	
Partition coefficient n-octanol/water:	not determined
Vapour pressure:	58 hPa
Density (at 20 °C):	0,90 g/cm ³
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. In case of insufficient ventilation and/or through use, explosive/highly flammable mixtures may develop. Vapours can travel considerable distances to a source of ignition where they can ignite, flash back, or explode.

Self-ignition temperature

Gas: not determined

Oxidizing properties

none

Other safety characteristics

Evaporation rate:	not determined
Solvent separation test:	not determined
Solvent content:	not determined
Solid content:	not determined
Sublimation point:	not determined
Softening point:	not determined
Pour point:	not determined
Viscosity / dynamic:	not determined
Flow time:	not determined

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

Flammable. Thermal decomposition.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

Chlorine, potassium, sodium, strong oxidising agents, nitric acid, calcium hypochlorite, halogen oxides, di-sulphur difluoride, acetic anhydride + salts + acids, isocyanates, potassium dioxide, perchlorates, potassium permanganate/sulphuric acid, sodium hypochlorite, sodium peroxide, nitrosyl perchlorate, peracids, perchloronitrile, mercury nitrate, oxygen (liquid), sulphuric acid + hydrogen peroxide, silver/nitric acid, silver nitrate, silver nitrate/ammonia, silver oxide/ammonia, nitrogen dioxide, hydrogen peroxide, conc. Alkali/alkaline earth metals, fluorine, reducing agents, acids, acetyl bromide, acetyl chloride, barium perchlorate, bromine trifluoride, cesium oxide, chromium trioxide, chromyl chloride, ethylene oxide, iodine heptafluoride, potassium tert-butoxide, potassium tert-butoxide, butoxide, lithium hydride, phosphorus trioxide, platinum black, nitric acid/potassium permanganate, acid anhydrides, uranium hexafluoride, zirconium (IV) chloride, zirconium (IV) iodide.

10.4. Conditions to avoid

Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. Vapours can form explosive mixtures with air. Keep away from heat. Protect from direct sunlight. Protect from moisture.

In use may form flammable/explosive vapour-air mixture.

Heating causes rise in pressure with risk of bursting.

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10.5. Incompatible materials

Strong acid. Oxidizing agents. Alkali metals. Alkaline earth metals. Peroxides. phosphorus oxides. Nitrogen oxides (NOx). Hydrogenium peroxide. Nitric acid. hydrochloric acid. Sulfuric acid. Perchlorates. Chromium oxides. Acid chlorides.

10.6. Hazardous decomposition products

In case of fire may be liberated: Carbon monoxide Carbon dioxide (CO₂). Nitrogen oxides (NOx).

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

CAS No	Chemical name					
	Exposure route	Dose	Species	Source	Method	
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		
92-87-5	benzidine					
	oral	LD50 309 mg/kg	Rat.	GESTIS		

Irritation and corrosivity

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

May cause cancer. (benzidine)

Germ cell mutagenicity: Based on available data, the classification criteria are not met.

Reproductive toxicity: 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

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

Other information

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP]. Special hazards arising from the substance or mixture! Depending on the ingested quantity the following symptoms can be induced: a reduction of inhibitions, euphoria but also dysphoria, aggressiveness, impaired motoric skills, impaired responsiveness, blurred vision and fatigue.

SECTION 12: Ecological information

12.1. Toxicity

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

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
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
92-87-5	benzidine					
	Acute fish toxicity	LC50 mg/l	5,88	96 h	fish	GESTIS
	Acute crustacea toxicity	EC50	0,6 mg/l	48 h	Daphnia magna	GESTIS

12.2. Persistence and degradability

The product has not been tested.

CAS No	Chemical name			
	Method	Value	d	Source
	Evaluation			
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
64-17-5	Ethanol	-0,31
78-93-3	butanone	0,3
92-87-5	benzidine	1,34

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BCF

CAS No	Chemical name	BCF	Species	Source
92-87-5	benzidine	83		

12.4. Mobility in soil

The product has not been tested.

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

highly hazardous to water.

Further information

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

SECTION 13: Disposal considerations

13.1. Waste treatment methods
Disposal recommendations

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. Dispose of waste according to applicable legislation. Hazardous waste according to Directive 2008/98/EC (waste framework directive). Consult the appropriate local waste disposal expert about waste disposal. The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process. Control report for waste code/ waste marking according to (EWC) European Waste Catalogue:

List of Wastes Code - residues/unused products

070104 WASTES FROM ORGANIC CHEMICAL PROCESSES; wastes from the manufacture, formulation, supply and use (MFSU) of basic organic chemicals; other organic solvents, washing liquids and mother liquors; hazardous waste

List of Wastes Code - used product

070104 WASTES FROM ORGANIC CHEMICAL PROCESSES; wastes from the manufacture, formulation, supply and use (MFSU) of basic organic chemicals; 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

Hazardous waste according to Directive 2008/98/EC (waste framework directive). Handle contaminated packages in the same way as the substance itself. Non-contaminated packages may be recycled.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number or ID number:	UN 1170
14.2. UN proper shipping name:	ETHANOL SOLUTION
14.3. Transport hazard class(es):	3
14.4. Packing group:	III
Hazard label:	3

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Classification code:	F1
Special Provisions:	144 601
Limited quantity:	5 L
Excepted quantity:	E1
Transport category:	3
Hazard No:	30
Tunnel restriction code:	D/E

Inland waterways transport (ADN)

14.1. UN number or ID number:	UN 1170
14.2. UN proper shipping name:	ETHANOL SOLUTION
14.3. Transport hazard class(es):	3
14.4. Packing group:	III
Hazard label:	3



Classification code:	F1
Special Provisions:	144 601
Limited quantity:	5 L
Excepted quantity:	E1

Marine transport (IMDG)

14.1. UN number or ID number:	UN 1170
14.2. UN proper shipping name:	ETHANOL SOLUTION
14.3. Transport hazard class(es):	3
14.4. Packing group:	III
Hazard label:	3



Special Provisions:	144 223
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 1170
14.2. UN proper shipping name:	ETHANOL SOLUTION
14.3. Transport hazard class(es):	3
14.4. Packing group:	III
Hazard label:	3



Special Provisions:	A3 A58 A180
Limited quantity Passenger:	10 L
Passenger LQ:	Y344
Excepted quantity:	E1
IATA-packing instructions - Passenger:	355
IATA-max. quantity - Passenger:	60 L

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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 applicable

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 28, Entry 40, Entry 75

Directive 2010/75/EU on industrial emissions: not determined

Directive 2004/42/EC on VOC in paints and varnishes: not determined

Information according to Directive 2012/18/EU (SEVESO III): P5c FLAMMABLE LIQUIDS

Additional information

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

National regulatory information

Employment restrictions: Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

Water hazard class (D): 3 - highly hazardous to water

Additional information

The product is subject to the Chemicals Prohibition Ordinance (ChemVerbotsV). Observe the requirements and restrictions for handling and dispensing in Section 3 of the ChemVerbotsV, among others.

15.2. Chemical safety assessment

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

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. 1,0; 16.07.2021, Initial release.

Rev. 2,0: 06.03.2024; general adjustment(s)

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Abbreviations and acronyms

Flam. Liq: Flammable liquids
Acute Tox: Acute toxicity
Eye Irrit: Eye irritation
Carc: Carcinogenicity
STOT SE: Specific target organ toxicity - single exposure
Aquatic Acute: Acute aquatic hazard
Aquatic Chronic: Chronic aquatic hazard
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
LC50: Lethal concentration, 50%
LD50: Lethal dose, 50%
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)
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)
IMDG: International Maritime Code for Dangerous Goods
EmS: Emergency Schedules
MFAG: Medical First Aid Guide
IATA: International Air Transport Association
ICAO: International Civil Aviation Organization
MARPOL: International Convention for the Prevention of Marine Pollution from Ships
IBC: Intermediate Bulk Container
VOC: Volatile Organic Compounds
SVHC: Substance of Very High Concern
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).

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

Classification	Classification procedure
Flam. Liq. 3; H226	On basis of test data
Carc. 1A; H350	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.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
H350	May cause cancer.
H400	Very toxic to aquatic life.
H410	Very toxic 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 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.)