

Creation Date 24-Nov-2010

Revision Date 13-Mar-2014

Revision Number 3

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**1.1. Product identifier**

Product Description: Full range indicator, pH range 1-13
Cat No. : U/0025/PB05, U/0025/PB08, U/0025/05, U/0025/08, U/0025/17

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

Recommended Use Laboratory chemicals
Uses advised against No Information available

1.3. Details of the supplier of the safety data sheet

Company Fisher Scientific UK
Bishop Meadow Road, Loughborough,
Leicestershire LE11 5RG, United Kingdom
E-mail address begel.sdsdesk@thermofisher.com

1.4. Emergency telephone number

Tel: 01509 231166
Chemtrec US: (800) 424-9300
Chemtrec EU: 001 (202) 483-7616

SECTION 2: HAZARDS IDENTIFICATION**2.1. Classification of the substance or mixture****CLP Classification - Regulation (EC) No 1272/2008****Physical hazards**

Flammable liquids Category 2

Health hazards

Acute oral toxicity Category 4
Acute dermal toxicity Category 4
Acute Inhalation Toxicity - Vapors Category 4
Specific target organ toxicity - (single exposure) Category 2

Environmental hazards

Based on available data, the classification criteria are not met

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

Symbol(s) Xn - Harmful
F - Highly flammable
R-phrases(s) R11 - Highly flammable
R20/21/22 - Harmful by inhalation, in contact with skin and if swallowed
R68/20/21/22 - Harmful: possible risk of irreversible effects through inhalation, in contact with skin and if swallowed

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

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SECTION 2: HAZARDS IDENTIFICATION

2.2. Label elements



Signal Word

Danger

Hazard Statements

- H225 - Highly flammable liquid and vapor
- H302 - Harmful if swallowed
- H312 - Harmful in contact with skin
- H332 - Harmful if inhaled
- H371 - May cause damage to organs

Precautionary Statements

- P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking
- P240 - Ground/bond container and receiving equipment
- P280 - Wear protective gloves/ protective clothing/ eye protection/ face protection
- P260 - Do not breathe dust/fume/gas/mist/vapors/spray
- P302 + P352 - IF ON SKIN: Wash with plenty of soap and water
- P304 + P340 - IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing

2.3. Other hazards

No information available.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixtures

Component	CAS-No	EC-No.	Weight %	CLP Classification - Regulation (EC) No 1272/2008	DSD Classification - 67/548/EEC
Ethyl alcohol	64-17-5	EEC No. 200-578-6	80 - 90	Flam. Liq. 2 (H225)	F; R11
Methyl alcohol	67-56-1	EEC No. 200-659-6	3 - 10	Acute Tox. 3 (H301) Acute Tox. 3 (H311) Acute Tox. 3 (H331) STOT SE 1 (H370) Flam. Liq. 2 (H225)	F; R11 T; R23/24/25-39/23/24/25
Methyl Red sodium salt	845-10-3	EEC No. 212-682-9	< 0.5	Acute Tox. 3 (H301)	T; R25
1(3H)-Isobenzofuranone, 3,3-bis(4-hydroxyphenyl)-, disodium salt	518-51-4	EEC No. 208-254-6	< 0.5	-	-
Phenol, 4,4'-(3H-2,1-benzoxathiol-3-ylidene)bis[2-bromo-3-methyl-6-(1-methylethyl)-, S,S-dioxide, monosodium salt	34722-90-2	EEC No. 252-169-7	< 0.5	-	-
Water	7732-18-5	231-791-2	1 - 10	-	-

Component	Reach Registration Number
Ethyl alcohol	01-2119457610-43
Methyl alcohol	01-2119433307-44

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

SECTION 4: FIRST AID MEASURES**4.1. Description of first aid measures**

Eye Contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required.
Skin Contact	Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.
Ingestion	Call a physician or Poison Control Center immediately. Do not induce vomiting without medical advice.
Inhalation	Move to fresh air. If breathing is difficult, give oxygen. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with a respiratory medical device. Immediate medical attention is required.
Protection of First-aiders	Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination

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

Breathing difficulties. . Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

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

Notes to Physician Treat symptomatically. Symptoms may be delayed.

SECTION 5: FIREFIGHTING MEASURES**5.1. Extinguishing media****Suitable Extinguishing Media**

Cool closed containers exposed to fire with water spray. Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Extinguishing media which must not be used for safety reasons

No information available.

5.2. Special hazards arising from the substance or mixture

Flammable. Containers may explode when heated. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back.

Hazardous Combustion Products

Carbon monoxide (CO), Carbon dioxide (CO₂), Formaldehyde.

5.3. Advice for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

SECTION 6: ACCIDENTAL RELEASE MEASURES**6.1. Personal precautions, protective equipment and emergency procedures**

Use personal protective equipment. Remove all sources of ignition. Take precautionary measures against static discharges.

6.2. Environmental precautions

Should not be released into the environment.

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6.3. Methods and material for containment and cleaning up

Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.

6.4. Reference to other sections

Refer to protective measures listed in Sections 8 and 13.

SECTION 7: HANDLING AND STORAGE**7.1. Precautions for safe handling**

Wear personal protective equipment. Do not get in eyes, on skin, or on clothing. Avoid ingestion and inhalation. Keep away from open flames, hot surfaces and sources of ignition. Use only non-sparking tools. Take precautionary measures against static discharges.

7.2. Conditions for safe storage, including any incompatibilities

Keep containers tightly closed in a dry, cool and well-ventilated place. Flammables area. Keep away from heat and sources of ignition.

7.3. Specific end use(s)

Use in laboratories

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**8.1. Control parameters****Exposure limits**

List source(s):

UK - EH40/2005 Containing the workplace exposure limits (WELs) for use with the Control of Substances Hazardous to Health Regulations (COSHH) 2002 (as amended). Updated by September 2006 official press release and October 2007 Supplement.

IRE - 2010 Code of Practice for the Safety, Health and Welfare at Work (Chemical Agents) Regulations 2001. Published by the Health and Safety Authority.

EU - Commission Directive 2006/15/EC of 7 February 2006 establishing a second list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC and amending Directives 91/322/EEC and 2000/39/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

Component	European Union	The United Kingdom	France	Belgium	Spain
Ethyl alcohol		TWA: 1000 ppm TWA; 1920 mg/m ³ TWA WEL - STEL: 3000 ppm STEL; 5760 mg/m ³ STEL	TWA / VME: 1000 ppm (8 heures). TWA / VME: 1900 mg/m ³ (8 heures). STEL / VLCT: 5000 ppm. STEL / VLCT: 9500 mg/m ³ .	TWA: 1000 ppm 8 uren TWA: 1907 mg/m ³ 8 uren	TWA / VLA-ED: 1000 ppm (8 horas) TWA / VLA-ED: 1910 mg/m ³ (8 horas)
Methyl alcohol	TWA: 200 ppm 8 hr TWA: 260 mg/m ³ 8 hr Skin	WEL - TWA: 200 ppm TWA; 266 mg/m ³ TWA WEL - STEL: 250 ppm STEL; 333 mg/m ³ STEL	TWA / VME: 200 ppm (8 heures). restrictive limit TWA / VME: 260 mg/m ³ (8 heures). restrictive limit STEL / VLCT: 1000 ppm. STEL / VLCT: 1300 mg/m ³ . Peau	TWA: 200 ppm 8 uren TWA: 266 mg/m ³ 8 uren STEL: 250 ppm 15 minuten STEL: 333 mg/m ³ 15 minuten Huid	TWA / VLA-ED: 200 ppm (8 horas) TWA / VLA-ED: 266 mg/m ³ (8 horas) Piel

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Component	Italy	Germany	Portugal	The Netherlands	Finland
Ethyl alcohol		500 ppm TWA; 960 mg/m ³ TWA	TWA: 1000 ppm 8 horas	Skin STEL: 1900 mg/m ³ 15 minuten TWA: 260 mg/m ³ 8 uren	TWA: 1000 ppm 8 tunteina TWA: 1900 mg/m ³ 8 tunteina STEL: 1300 ppm 15 minuutteina STEL: 2500 mg/m ³ 15 minuutteina
Methyl alcohol	TWA: 200 ppm 8 ore. TWA: 260 mg/m ³ 8 ore. Skin	200 ppm TWA; 270 mg/m ³ TWA Skin absorber	STEL: 250 ppm 15 minutos TWA: 200 ppm 8 horas Pele	Skin STEL: 520 mg/m ³ 15 minuten TWA: 260 mg/m ³ 8 uren	TWA: 200 ppm 8 tunteina TWA: 270 mg/m ³ 8 tunteina STEL: 250 ppm 15 minuutteina STEL: 330 mg/m ³ 15 minuutteina Skin

Component	Austria	Denmark	Switzerland	Poland	Norway
Ethyl alcohol	STEL: 2000 ppm 15 Minuten STEL: 3800 mg/m ³ 15 Minuten TWA: 1000 ppm 8 Stunden TWA: 1900 mg/m ³ 8 Stunden	TWA: 1000 ppm 8 timer TWA: 1900 mg/m ³ 8 timer	STEL: 1000 ppm 15 Minuten STEL: 1920 mg/m ³ 15 Minuten MAK: 500 ppm 8 Stunden MAK: 960 mg/m ³ 8 Stunden	TWA: 1900 mg/m ³ 8 godzinach	TWA: 500 ppm 8 timer TWA: 950 mg/m ³ 8 timer STEL: 625 ppm 15 minutter. STEL: 1187.5 mg/m ³ 15 minutter.
Methyl alcohol	Skin STEL: 800 ppm 15 Minuten STEL: 1040 mg/m ³ 15 Minuten TWA: 200 ppm 8 Stunden TWA: 260 mg/m ³ 8 Stunden	TWA: 200 ppm 8 timer TWA: 260 mg/m ³ 8 timer Skin	Skin STEL: 800 ppm 15 Minuten STEL: 1040 mg/m ³ 15 Minuten MAK: 200 ppm 8 Stunden MAK: 260 mg/m ³ 8 Stunden	NDSch: 300 mg/m ³ 15 minutach TWA: 100 mg/m ³ 8 godzinach Skóra	TWA: 100 ppm 8 timer TWA: 130 mg/m ³ 8 timer STEL: 150 ppm 15 minutter. STEL: 162.5 mg/m ³ 15 minutter. Skin

Component	Bulgaria	Croatia	Ireland	Cyprus	Czech Republic
Ethyl alcohol	TWA: 1000.0 mg/m ³	TWA: 1000 ppm 8 satima. TWA: 1900 mg/m ³ 8 satima.	TWA: 1000 ppm 8 hr. TWA: 1900 mg/m ³ 8 hr.		TWA: 1000 mg/m ³ 8 hodinách. Ceiling: 3000 mg/m ³
Methyl alcohol	TWA: 260.0 mg/m ³ Skin notation	Skin Notation TWA: 200 ppm 8 satima. TWA: 260 mg/m ³ 8 satima.	TWA: 200 ppm 8 hr. TWA: 260 mg/m ³ 8 hr. Skin	Skin-potential for cutaneous absorption TWA: 200 ppm TWA: 260 mg/m ³	TWA: 250 mg/m ³ 8 hodinách. Potential for cutaneous absorption Ceiling: 1000 mg/m ³

Component	Estonia	Gibraltar	Greece	Hungary	Iceland
Ethyl alcohol	TWA: 500 ppm 8 tundides. TWA: 1000 mg/m ³ 8 tundides. STEL: 1000 ppm 15 minutites. STEL: 1900 mg/m ³ 15 minutites.		TWA: 1000 ppm TWA: 1900 mg/m ³	STEL: 7600 mg/m ³ 15 percekben. TWA: 1900 mg/m ³ 8 órában.	TWA: 1000 ppm 8 klukkustundum. TWA: 1900 mg/m ³ 8 klukkustundum. Ceiling: 2000 ppm Ceiling: 3800 mg/m ³

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Component	Estonia	Gibraltar	Greece	Hungary	Iceland
Methyl alcohol	Skin notation TWA: 200 ppm 8 tundides. TWA: 260 mg/m ³ 8 tundides. TWA: 200 ppm 8 tundides. Methyl alcohol TWA: 250 mg/m ³ 8 tundides. Methyl alcohol STEL: 250 ppm 15 minutites. STEL: 350 mg/m ³ 15 minutites.	Skin notation TWA: 200 ppm 8 hr TWA: 260 mg/m ³ 8 hr	skin - potential for cutaneous absorption STEL: 250 ppm STEL: 325 mg/m ³ TWA: 200 ppm TWA: 260 mg/m ³	TWA: 260 mg/m ³ 8 órában. potential for cutaneous absorption	TWA: 200 ppm 8 klukkustundum. TWA: 260 mg/m ³ 8 klukkustundum. Skin notation Ceiling: 400 ppm Ceiling: 520 mg/m ³

Component	Latvia	Lithuania	Luxembourg	Malta	Romania
Ethyl alcohol	TWA: 1000 mg/m ³	TWA: 500 ppm TWA: 1000 mg/m ³ STEL: 1000 ppm STEL: 1900 mg/m ³			TWA: 1000 ppm 8 ore TWA: 1900 mg/m ³ 8 ore STEL: 5000 ppm 15 minute STEL: 9500 mg/m ³ 15 minute
Methyl alcohol	skin - potential for cutaneous exposure TWA: 200 ppm TWA: 260 mg/m ³	TWA: 200 ppm TWA: 260 mg/m ³ Skin notation	Possibility of significant uptake through the skin TWA: 200 ppm 8 Stunden TWA: 260 mg/m ³ 8 Stunden	possibility of significant uptake through the skin TWA: 200 ppm TWA: 260 mg/m ³	Skin notation TWA: 200 ppm 8 ore TWA: 260 mg/m ³ 8 ore STEL: 5 ppm 15 minute

Component	Russia	Slovak Republic	Slovenia	Sweden	Turkey
Ethyl alcohol	TWA: 1000 mg/m ³ STEL: 2000 mg/m ³ vapor	Ceiling: 1920 mg/m ³ TWA: 500 ppm TWA: 960 mg/m ³	TWA: 1000 ppm 8 urah TWA: 1900 mg/m ³ 8 urah STEL: 4000 ppm 15 minutah STEL: 7600 mg/m ³ 15 minutah	STV: 1000 ppm 15 minuter STV: 1900 mg/m ³ 15 minuter LLV: 500 ppm 8 timmar. LLV: 1000 mg/m ³ 8 timmar.	
Methyl alcohol	TWA: 5 mg/m ³ Skin notation STEL: 15 mg/m ³ vapor	Potential for cutaneous absorption	TWA: 200 ppm 8 urah TWA: 260 mg/m ³ 8 urah Potential for cutaneous absorption	STV: 250 ppm 15 minuter STV: 350 mg/m ³ 15 minuter LLV: 200 ppm 8 timmar. LLV: 250 mg/m ³ 8 timmar. Skin notation	Skin notation TWA: 200 ppm 8 saat TWA: 260 mg/m ³ 8 saat

Biological limit values

List source(s):

Component	European Union	United Kingdom	France	Spain	Germany
Methyl alcohol			Methanol: 15 mg/L urine end of shift	Methanol: 15 mg/L urine end of shift	Methanol: 30 mg/L urine end of shift Methanol: 30 mg/L urine end of several shifts for long-term exposures

Component	Italy	Finland	Denmark	Bulgaria	Romania
Methyl alcohol					Methanol: 6 mg/L urine end of shift

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Component	Gibraltar	Latvia	Slovak Republic	Luxembourg	Turkey
Methyl alcohol			Methanol: 30 mg/L urine end of exposure or work shift Methanol: 30 mg/L urine after all work shifts for long-term exposure		

Monitoring methods

BS EN 14042:2003 Title Identifier: Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents.

MDHS70 General methods for sampling airborne gases and vapours

Derived No Effect Level (DNEL) No information available.

<u>Route of exposure</u>	Acute effects (local)	Acute effects (systemic)	Chronic effects (local)	Chronic effects (systemic)
Oral Dermal Inhalation				

Predicted No Effect Concentration (PNEC) No information available.

8.2. Exposure controls**Engineering Measures**

Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source.

Personal protective equipment

Eye Protection Safety glasses with side-shields (European standard - EN 166)

Hand Protection Protective gloves

Glove material	Breakthrough time	Glove thickness	EU standard	Glove comments
Butyl rubber	> 480 minutes	0.38 mm - 0.56 mm	EN 374	(minimum requirement)
Neoprene	> 480 minutes	0.45 mm		
PVC	< 60 minutes	0.18 mm		
Viton (R)	> 480 minutes	0.7 mm		

Skin and body protection Wear appropriate protective gloves and clothing to prevent skin exposure

Inspect gloves before use.

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information)

Ensure gloves are suitable for the task: Chemical compatibility, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.

Remove gloves with care avoiding skin contamination.

Respiratory Protection When workers are facing concentrations above the exposure limit they must use appropriate certified respirators

Large scale/emergency use Use a NIOSH/MSHA or European Standard EN 136 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced..

Recommended Filter type: low boiling organic solvent, Type AX, Brown, conforming to EN371.

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Small scale/Laboratory use	Maintain adequate ventilation Use a NIOSH/MSHA or European Standard EN 149:2001 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced. Recommended half mask:- Valve filtering: EN405 or Half mask: EN140 plus filter, EN 141
Hygiene Measures	Handle in accordance with good industrial hygiene and safety practice
Environmental exposure controls	No information available.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance		
Physical State	Liquid.	
Odor	Alcohol-like	
Odor Threshold	No data available	
pH	No information available.	
Melting Point/Range	No data available	
Softening Point	No data available	
Boiling Point/Range	No information available.	
Flash Point	12°C / 53.6°F	Method - No information available.
Evaporation Rate	No information available.	
Flammability (solid,gas)	Not applicable	Liquid
Explosion Limits	Lower 3.3 vol % Upper 19 vol %	
Vapor Pressure	No information available.	
Vapor Density	No information available.	(Air = 1.0)
Specific Gravity / Density	0.8	
Bulk Density	Not applicable	Liquid
Water Solubility	miscible	
Solubility in other solvents	No information available.	
Partition Coefficient (n-octanol/water)	Component Ethyl alcohol Methyl alcohol	log Pow -0.32 -0.74
Autoignition Temperature	No data available	
Decomposition temperature	No data available	
Viscosity	No data available	
Explosive Properties	No information available.	Vapors may form explosive mixtures with air
Oxidizing Properties	No information available.	

9.2. Other information

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity	None known, based on information available.
10.2. Chemical stability	Stable under normal conditions.
10.3. Possibility of hazardous reactions	

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**Hazardous Polymerization
Hazardous Reactions**Hazardous polymerization does not occur.
None under normal processing.**10.4. Conditions to avoid**

Incompatible products, Excess heat, Keep away from open flames, hot surfaces and sources of ignition.

10.5. Incompatible materials

Strong oxidizing agents.

10.6. Hazardous decomposition productsCarbon monoxide (CO), Carbon dioxide (CO₂), Formaldehyde.**SECTION 11: TOXICOLOGICAL INFORMATION****11.1. Information on toxicological effects****Product Information****(a) acute toxicity;**

Oral	Category 4
Dermal	Category 4
Inhalation	Category 4

Toxicology data for the components

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Ethyl alcohol	7060 mg/kg (Rat)		20000 ppm/10H (Rat)
Methyl alcohol	5628 mg/kg (Rat)	15800 mg/kg (Rabbit)	64000 ppm (Rat) 4 h 83.2 mg/L (Rat) 4 h

(b) skin corrosion/irritation; No data available**(c) serious eye damage/irritation;** No data available**(d) respiratory or skin sensitization;**

Respiratory	No data available
Skin	No data available

(e) germ cell mutagenicity; No data available**(f) carcinogenicity;** No data available

The table below indicates whether each agency has listed any ingredient as a carcinogen

Component	EU	UK	Germany	IARC
Ethyl alcohol				Group 1

(g) reproductive toxicity; No data available**(h) STOT-single exposure;** Category 2**(i) STOT-repeated exposure;** No data available**Target Organs** None known.**(j) aspiration hazard;** No data available

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**Symptoms / effects,
both acute and delayed**

Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

SECTION 12: ECOLOGICAL INFORMATION**12.1. Toxicity****Ecotoxicity effects**

Component	Freshwater Fish	Water Flea	Freshwater Algae	Microtox
Ethyl alcohol	Fathead minnow (Pimephales promelas) LC50 = 14200 mg/l/96h	EC50 = 9268 mg/L/48h EC50 = 10800 mg/L/24h	EC50 (72h) = 275 mg/l (Chlorella vulgaris)	Photobacterium phosphoreum:EC50 = 34634 mg/L/30 min Photobacterium phosphoreum:EC50 = 35470 mg/L/5 min
Methyl alcohol	Pimephales promelas: LC50 > 10000 mg/L 96h	EC50 > 10000 mg/L 24h		EC50 = 39000 mg/L 25 min EC50 = 40000 mg/L 15 min EC50 = 43000 mg/L 5 min

12.2. Persistence and degradability**Persistence**

Miscible with water, Persistence is unlikely, based on information available.

12.3. Bioaccumulative potential

Bioaccumulation is unlikely

Component	log Pow	Bioconcentration factor (BCF)
Ethyl alcohol	-0.32	No data available
Methyl alcohol	-0.74	10 (fish)

12.4. Mobility in soil

The product is water soluble, and may spread in water systems. . Will likely be mobile in the environment due to its water solubility. Highly mobile in soils.

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

No data available for assessment

12.6. Other adverse effects**Endocrine Disruptor Information**

This product does not contain any known or suspected endocrine disruptors

Persistent Organic Pollutant

This product does not contain any known or suspected substance

Ozone Depletion Potential

This product does not contain any known or suspected substance

SECTION 13: DISPOSAL CONSIDERATIONS**13.1. Waste treatment methods****Waste from Residues / Unused
Products**

Waste is classified as hazardous. Dispose of in accordance with the European Directives on waste and hazardous waste. Dispose of in accordance with local regulations.

Contaminated Packaging

Dispose of this container to hazardous or special waste collection point.. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep product and empty container away from heat and sources of ignition.

European Waste Catalogue (EWC)

According to the European Waste Catalogue, Waste Codes are not product specific, but application specific.

Other Information

Waste codes should be assigned by the user based on the application for which the product was used. Do not dispose of waste into sewer. Can be incinerated, when in compliance with local regulations.

SECTION 14: TRANSPORT INFORMATION**IMDG/IMO**

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14.1. UN number	UN1170
14.2. UN proper shipping name	Ethanol (Ethyl alcohol) (Mixture)
14.3. Transport hazard class(es)	3
14.4. Packing group	II

ADR

14.1. UN number	UN1170
14.2. UN proper shipping name	Ethanol (Ethyl alcohol) (Mixture)
14.3. Transport hazard class(es)	3
14.4. Packing group	II

IATA

14.1. UN number	UN1170
14.2. UN proper shipping name	Ethanol solution (Mixture)
14.3. Transport hazard class(es)	3
14.4. Packing group	II

14.5. Environmental hazards	No hazards identified
14.6. Special precautions for user	No special precautions required
14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable, packaged goods

SECTION 15: REGULATORY INFORMATION**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

International Inventories X = listed

Component	EINECS	ELINCS	NLP	TSCA	DSL	NDSL	PICCS	ENCS	CHINA	AICS	KECL
Ethyl alcohol	200-578-6	-		X	X	-	X	X	X	X	X
Methyl alcohol	200-659-6	-		X	X	-	X	X	X	X	X
Methyl Red sodium salt	212-682-9	-		X	X	-	X	-	X	X	X
1(3H)-Isobenzofuranone, 3,3-bis(4-hydroxyphenyl)-, disodium salt	208-254-6	-		X	X	-	-	-	-	-	-
Phenol, 4,4'-(3H-2,1-benzoxathiol-3-ylidene)bis[2-bromo-3-methyl-6-(1-methylethyl)-, S,S-dioxide, monosodium salt	252-169-7	-		X	X	-	X	-	X	X	-
Water	231-791-2	-		X	X	-	X	-	X	X	X

Component	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements
Methyl alcohol	500 tonne	5000 tonne

National Regulations

WGK Classification Water endangering class = 1 (self estimation)

Component	Germany - Water Classification (VwVwS)	Germany - TA-Luft Class
Ethyl alcohol	WGK 1	
Methyl alcohol	WGK 1	

Component	France - INRS (Tables of occupational diseases)
Ethyl alcohol	Tableaux des maladies professionnelles (TMP) - RG 84
Methyl alcohol	Tableaux des maladies professionnelles (TMP) - RG 84

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Take note of Control of Substances Hazardous to Health Regulations (COSHH) 2002 and 2005 Amendment

Take note of Dir 94/33/EC on the protection of young people at work

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

15.2. Chemical safety assessment

Chemical Safety Assessment/Reports (CSA/CSR) are not required for mixtures

SECTION 16: OTHER INFORMATION**Full text of R-phrases referred to under sections 2 and 3**

R11 - Highly flammable

R20/21/22 - Harmful by inhalation, in contact with skin and if swallowed

R68/20/21/22 - Harmful: possible risk of irreversible effects through inhalation, in contact with skin and if swallowed

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

H225 - Highly flammable liquid and vapor

H301 - Toxic if swallowed

H311 - Toxic in contact with skin

H331 - Toxic if inhaled

H370 - Causes damage to organs

Legend**CAS** - Chemical Abstracts Service**EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances**PICCS** - Philippines Inventory of Chemicals and Chemical Substances**IECSC** - China Inventory of Existing Chemical Substances**KECL** - Existing and Evaluated Chemical Substances**WEL** - Workplace Exposure Limit**ACGIH** - American Conference of Industrial Hygiene**DNEL** - Derived No Effect Level**RPE** - Respiratory Protective Equipment**LC50** - Lethal Concentration 50%**NOEC** - No Observed Effect Concentration**PBT** - Persistent, Bioaccumulative, Toxic**ADR** - European Agreement Concerning the International Carriage of Dangerous Goods by Road**IMO/IMDG** - International Maritime Organization/International Maritime Dangerous Goods Code**OECD** - Organisation for Economic Co-operation and Development**BCF** - Bioconcentration factor**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List**ENCS** - Japan Existing and New Chemical Substances**AICS** - Australian Inventory of Chemical Substances**NZIoC** - New Zealand Inventory of Chemicals**TWA** - Time Weighted Average**IARC** - International Agency for Research on Cancer**PNEC** - Predicted No Effect Concentration**LD50** - Lethal Dose 50%**EC50** - Effective Concentration 50%**POW** - Partition coefficient Octanol:Water**vPvB** - very Persistent, very Bioaccumulative**ICAO/IATA** - International Civil Aviation Organization/International Air Transport Association**MARPOL** - International Convention for the Prevention of Pollution from Ships**ATE** - Acute Toxicity Estimate**VOC** - Volatile Organic Compounds**Key literature references and sources for data**

Suppliers safety data sheet,

Chemadvisor - LOLI,

Merck index,

RTECS

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:**Physical hazards** On basis of test data**Health Hazards** Calculation method**Environmental hazards** Calculation method

Full range indicator, pH range 1-13

Training Advice

Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.

Use of personal protective equipment, covering appropriate selection, compatibility, breakthrough thresholds, care, maintenance, fit and standards.

First aid for chemical exposure, including the use of eye wash and safety showers.

Chemical incident response training.

Fire prevention and fighting, identifying hazards and risks, static electricity, explosive atmospheres posed by vapours and dusts.

Creation Date 24-Nov-2010

Revision Date 13-Mar-2014

Revision Summary Update to Format, (M)SDS sections updated, 4, 8, 11, 12, 13, 15, 16.

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

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End of Safety Data Sheet