

according to UK REACH Regulation

### SZCZEPANIK Polychrom-Lösung (Zytologische Schnellfärbung)

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

#### 1.1. Product identifier

SZCZEPANIK Polychrom-Lösung (Zytologische Schnellfärbung)

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

#### Use of the substance/mixture

Staining of tissue samples (ready to use solution)

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

Manufacturer

Company name: MORPHISTO GmbH GIZ
Street: Schumannstr. 142/144
Place: D-63069 Offenbach
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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: info@morphisto.de
Internet: http://www.morphisto.de

Supplier

Company name: MORPHISTO GmbH GIZ 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: info@morphisto.de

Internet: http://www.morphisto.de

**1.4. Emergency telephone** Poison Information Center Mainz, Germany, Tel: +49(0)6131/19240

number:

#### **SECTION 2: Hazards identification**

### 2.1. Classification of the substance or mixture

### **GB CLP Regulation**

Hazard categories:

Flammable liquid: Flam. Liq. 2 Acute toxicity: Acute Tox. 4 Acute toxicity: Acute Tox. 4 Acute toxicity: Acute Tox. 4

Serious eye damage/eye irritation: Eye Irrit. 2

Specific target organ toxicity - single exposure: STOT SE 1

Hazard Statements:

Highly flammable liquid and vapour.

Harmful if swallowed.

Harmful in contact with skin.

Harmful if inhaled.

Causes serious eye irritation. Causes damage to organs.

### 2.2. Label elements



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#### **GB CLP Regulation**

### Hazard components for labelling

methanol

ethanediol, ethylene glycol

Signal word: Danger

Pictograms:







#### **Hazard statements**

H225 Highly flammable liquid and vapour.

H302+H312+H332 Harmful if swallowed, in contact with skin or if inhaled.

H319 Causes serious eye irritation. H370 Causes damage to organs.

## **Precautionary statements**

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No

smoking.

P243 Take action to prevent static discharges.

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing

protection.

P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with

water or shower.

P312 Call a POISON CENTER/doctor if you feel unwell.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P312 Call a POISON CENTER/doctor if you feel unwell.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if

present and easy to do. Continue rinsing.

P308+P311 IF exposed or concerned: Call a POISON CENTER/doctor.

P403+P235 Store in a well-ventilated place. Keep cool.

P405 Store locked up.

### 2.3. Other hazards

In case of insufficient ventilation and/or through use, explosive/highly flammable mixtures may develop. The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

### **SECTION 3: Composition/information on ingredients**

## 3.2. Mixtures



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### **Hazardous components**

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	GHS Classification		•	
64-17-5	ethanol, ethyl alcohol			70 - < 75 %
	200-578-6	603-002-00-5	01-2119457610-43	
	Flam. Liq. 2, Eye Irrit. 2; H225 H	319		
67-56-1	methanol			20 - < 25 %
	200-659-6	603-001-00-X	01-2119433307-44	
	Flam. Liq. 2, Acute Tox. 3, Acute	Tox. 3, Acute Tox. 3, STOT	SE 1; H225 H331 H311 H301 H370	
107-21-1	ethanediol, ethylene glycol		1 - < 5 %	
	203-473-3	603-027-00-1	01-2119456816-28	
	Acute Tox. 4, STOT RE 2; H302	H373	•	
78-93-3	butanone; ethyl methyl ketone			< 1 %
	201-159-0	606-002-00-3	01-2119457290-43	
	Flam. Liq. 2, Eye Irrit. 2, STOT S	E 3; H225 H319 H336 EUH(	066	
64-19-7	Acetic acid 99 %			< 1 %
	200-580-7	607-002-00-6	01-2119475328-30	
	Flam. Liq. 3, Met. Corr. 1, Skin C	orr. 1A; H226 H290 H314	•	

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	
64-17-5	200-578-6	ethanol, ethyl alcohol	70 - < 75 %
	inhalation: LC	50 = 124,7 mg/l (vapours); oral: LD50 = >5000 mg/kg	
67-56-1	200-659-6	methanol	20 - < 25 %
		E = 3 mg/l (vapours); inhalation: ATE = 0,5 mg/l (dusts or mists); dermal: ATE = ll: ATE = 100 mg/kg	
107-21-1	203-473-3	ethanediol, ethylene glycol	1 - < 5 %
	oral: LD50 = 7	712 mg/kg	
78-93-3	201-159-0	butanone; ethyl methyl ketone	< 1 %
	dermal: LD50	= >2000 mg/kg	
64-19-7	200-580-7	Acetic acid 99 %	< 1 %
		310 mg/kg Skin Corr. 1A; H314: >= 90 - 100 Skin Corr. 1B; H314: >= 25 - < 90 15: >= 10 - < 25 Eye Irrit. 2; H319: >= 10 - < 25	

### **Further Information**

Product does not contain listed SVHC substances > 0,1 % according to Regulation (EC) No. 1907/2006 Article 59 (REACH)

## **SECTION 4: First aid measures**

#### 4.1. Description of first aid measures

#### **General information**

First aider: Pay attention to self-protection! Remove contaminated, saturated clothing immediately. Remove affected person from the danger area and lay down. In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).



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#### After inhalation

Provide fresh air. When in doubt or if symptoms are observed, get medical advice. If breathing is irregular or stopped, administer artificial respiration. Where appropriate artificial ventilation. Call a physician immediately. In the case of lung irritation: Primary treatment using corticoide spray, eg. Auxiloson spray, Pulmicort-dosage-spray. (Auxiloson and Pulmicort are registered trademarks.)

#### After contact with skin

Wash with plenty of water. Immediately remove any contaminated clothing, shoes or stockings. Medical treatment necessary. In case of skin irritation, seek medical treatment.

#### 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. Rinse immediately carefully and thoroughly with eye-bath or water. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

#### After ingestion

If accidentally swallowed rinse the mouth with plenty of water (only if the person is conscious) and obtain immediate medical attention. Rinse mouth thoroughly with water. Let water be drunken in little sips (dilution effect). Afterwards let drink one glas of water with 100 ml of ca. 40% ethanol (dose for adults). Afterwards let drink one glas of water with 100 ml of ca. 40% ethanol (dose for adults). Never give anything by mouth to an unconscious person or a person with cramps. Call a physician immediately.

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

Acute effects: Mucous membrane irritation after eye contact or inhalation.

Delayed effects: Impairment of inhibitory functions of the central nervous system, skin redness, nausea after ingestion of large amounts.

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

Treat symptomatically.

Percutaneously absorbed and inhaled substance causes next to irritation of affected mucous membranes only an indicated impairment of the inhibitory functions of the central nervous system, clinically recognizable as the beginning of a euphoric stage. At the same time face and skin redness is caused by dilation of peripheral blood vessels in the body.

## **SECTION 5: Firefighting measures**

## 5.1. Extinguishing media

### Suitable extinguishing media

Carbon dioxide (CO2). Dry extinguishing powder. alcohol resistant foam. Atomized water.Co-ordinate fire-fighting measures to the fire surroundings.

### Unsuitable extinguishing media

High power water jet.

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

Highly flammable. Vapours can form explosive mixtures with air. Vapours are heavier than air and will spread at floor level.

Can be released in case of fire: Carbon monoxide Carbon dioxide (CO2). Nitrogen oxides (NOx).

### 5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing. Full protection suit. In case of fire: Wear self-contained breathing apparatus. In case of fire and/or explosion do not breathe fumes.

#### **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



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#### 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. Special danger of slipping by leaking/spilling product.

Use a positive-pressure air-supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air-purifying respirators may not provide adequate protection.

### For non-emergency personnel

Do not breathe gas/fumes/vapour/spray. Ventilate affected area. Remove all sources of ignition. Avoid contact with skin, eyes and clothes.

### For emergency responders

Move undamaged containers from immediate hazard area if it can be done safely. Stop and contain spill/release if it can be done safely. If this cannot be done, allow fire to burn under control.

#### 6.2. Environmental precautions

Do not allow uncontrolled discharge of product into the environment. Explosion risk. Discharge into the environment must be avoided. Prevent spread over a wide area (e.g. by containment or oil barriers). Cover 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

Prevent spread over a wide area (e.g. by containment or oil barriers). Cover drains. In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

#### For cleaning up

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

#### 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 as well as local exhaustion at critical locations. Use extractor hood (laboratory). If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray. Do not breathe gas/fumes/vapour/spray. In case of insufficient ventilation and/or through use, explosive/highly flammable mixtures may develop. Avoid contact with skin, eyes and clothes. Wear personal protection equipment. (See section 8.). Always close containers tightly after the removal of product.

#### 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. Flammable vapours can accumulate in head space of closed systems. Heating causes rise in pressure with risk of bursting. Fire extinguishing equipment shall be provided. Ground and bond container and receiving equipment.

### 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. Always close containers tightly after the removal of product. Remove contaminated clothing immediatley and dispose off safely. Wash contaminated clothing prior to re-use. Used working clothes should not be worn outside the work area. Street clothing should be stored seperately from work clothing.

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



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#### 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 exhaustion 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. Keep/Store only in original container. Protect against direct sunlight.

Ensure adequate ventilation of the storage area. Concentrated vapours are heavier than air.

Suitable material for Container: Stainless steel. (1.4301 (V2), 1.4401 (V4)); iron. solvent resistant plastics.

Unsuitable materials for Container: Aluminium. Rubber. various plastics.

Make sure spills can be contained (e.g. sump pallets or kerbed areas).

### Hints on joint storage

Do not store together with: Gas. Explosives. Flammable solids. Pyrophoric liquids and solids. Self-heating substances and mixtures. Substances or mixtures which, in contact with water, emit flammable gases. Oxidizing liquids. Oxidizing solids. ammonium nitrate. Self-reactive substances and mixtures. Organic peroxides. Non-combustible toxic substances. Radioactive substances. Infectious substances. Oxidizing agent. Pyrophoric or self-heating substances

### Further information on storage conditions

Recommended storage temperature: 7-23°C Protect against: UV-radiation/sunlight. heat. Cold.

### 7.3. Specific end use(s)

See section 1.

### **SECTION 8: Exposure controls/personal protection**

### 8.1. Control parameters

### **Exposure limits (EH40)**

CAS No	Substance	ppm	mg/m³	fibres/ml	Category	Origin
64-19-7	Acetic acid	10	25		TWA (8 h)	WEL
		20	50		STEL (15 min)	WEL
78-93-3	Butan-2-one (methyl ethyl ketone)	200	600		TWA (8 h)	WEL
		300	899		STEL (15 min)	WEL
107-21-1	Ethane-1,2-diol, vapour	20	52		TWA (8 h)	WEL
		40	104		STEL (15 min)	WEL
64-17-5	Ethanol	1000	1920		TWA (8 h)	WEL
67-56-1	Methanol	200	266		TWA (8 h)	WEL
		250	333		STEL (15 min)	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



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## **DNEL/DMEL values**

CAS No	Substance			
DNEL type		Exposure route	Effect	Value
64-17-5	ethanol, ethyl alcohol			
Worker DNEI	_, acute	inhalation	local	1900 mg/m³
Worker DNEI	_, long-term	dermal	systemic	343 mg/kg bw/day
Worker DNEI	_, long-term	inhalation	systemic	950 mg/m³
Consumer Di	NEL, acute	inhalation	local	950 mg/m³
Consumer Di	NEL, long-term	dermal	systemic	206 mg/kg bw/day
Consumer Di	NEL, long-term	inhalation	systemic	114 mg/m³
Consumer Di	NEL, long-term	oral	systemic	87 mg/kg bw/day
67-56-1	methanol			
Worker DNEI	_, acute	inhalation	local	260 mg/m³
Worker DNEI	_, acute	dermal	systemic	40 mg/kg bw/day
Worker DNEI	_, acute	inhalation	systemic	260 mg/m³
Worker DNEI	_, long-term	inhalation	local	260 mg/m³
Worker DNEI	_, long-term	dermal	systemic	40 mg/kg bw/day
Worker DNEI	_, long-term	inhalation	systemic	260 mg/m³
107-21-1	ethanediol, ethylene glycol			
Worker DNEI	_, long-term	inhalation	local	35 mg/m³
Worker DNEI	_, long-term	dermal	systemic	106 mg/kg bw/day
67-63-0	propan-2-ol; isopropyl alcohol; isopropanol			
Worker DNEI	_, long-term	inhalation	systemic	500 mg/m³
Consumer Di	NEL, long-term	inhalation	systemic	89 mg/m³
Worker DNEI	_, long-term	dermal	systemic	888 mg/kg bw/day
Consumer DI	NEL, long-term	oral	systemic	26 mg/kg bw/day
Consumer Di	NEL, long-term	dermal	systemic	319 mg/kg bw/day
64-19-7	Acetic acid 99 %			
Worker DNEL	_, long-term	inhalation	local	25 mg/m³
Worker DNEL	_, acute	inhalation	local	25 mg/m³
Consumer DI	NEL, long-term	inhalation	local	25 mg/m³
Consumer Di	NEL, acute	inhalation	local	25 mg/m³



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## **PNEC** values

CAS No	Substance	
Environmenta	al compartment	Value
64-17-5	ethanol, ethyl alcohol	
Freshwater	0,96 mg/l	
Freshwater (intermittent releases)		2,75 mg/l
Marine water	r	0,79 mg/l
Marine water	r (intermittent releases)	2,75 mg/l
Freshwater s	sediment	3,6 mg/kg
Marine sedim	nent	2,9 mg/kg
Secondary po	oisoning	0,72 mg/kg
Micro-organis	sms in sewage treatment plants (STP)	580 mg/l
Soil		0,63 mg/kg
67-56-1	methanol	
Freshwater		20,8 mg/l
Marine water	r	2,08 mg/l
Marine water	r (intermittent releases)	1540 mg/l
Freshwater s	sediment	77 mg/kg
Marine sedim	nent	7,7 mg/kg
Micro-organis	sms in sewage treatment plants (STP)	100 mg/l
Soil		3,18 mg/kg
107-21-1	ethanediol, ethylene glycol	
Freshwater		10 mg/l
Freshwater (i	intermittent releases)	10 mg/l
Marine water	r	1 mg/l
Freshwater s	sediment	37 mg/kg
Marine sedim	nent	37 mg/kg
Micro-organis	sms in sewage treatment plants (STP)	199,5 mg/l
Soil		1,53 mg/kg
67-63-0	propan-2-ol; isopropyl alcohol; isopropanol	
Freshwater		140,9 mg/l
Marine water	r	140,9 mg/l
Freshwater s	sediment	552 mg/kg
Marine sedim	nent	552 mg/kg
Secondary po	oisoning	160 mg/kg
Soil		28 mg/kg
64-19-7	Acetic acid 99 %	
Freshwater		3,058 mg/l
Freshwater (i	intermittent releases)	30,58 mg/l
Marine water	r	0,306 mg/l
Freshwater s	sediment	11,36 mg/kg
Marine sedim	ment	1,136 mg/kg
Micro organia	sms in sewage treatment plants (STP)	85 mg/l



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Soil 0,47 mg/kg

#### 8.2. Exposure controls











### Appropriate engineering controls

Technical measures and the application of suitable work processes have priority over personal protection equipment. Provide adequate ventilation as well as local exhaustion at critical locations. Process within closed systems. Use extractor hood (laboratory). If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

### Individual protection measures, such as personal protective equipment

#### Eye/face protection

Suitable eye protection: Tightly sealed safety glasses. Eye glasses with side protection. DIN 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. In case of prolonged or frequently repeated skin contact:

Tested protective gloves are to be worn:

Suitable material:

Butyl rubber. (0,7 mm, Breakthrough time >=480 min, penetration time (maximum wearing period): 160 min): NBR (Nitrile rubber). (0,4 mm, Breakthrough time >=120 min, penetration time (maximum wearing period): 40 min)

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

Before using check leak tightness / impermeability.

#### Skin protection

Protective clothing. lab coat (fire retardant.). Wear anti-static footwear and clothing Minimum standard for preventive measures while handling with working materials are specified in the TRGS 500 (D).

### Respiratory protection

Respiratory protection necessary at: Insufficient ventilation. exceeding exposure limit values.

Suitable respiratory protective equipment: gas filtering equipment (EN 141). Type. 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

Flame-retardant protective clothing. Wear anti-static footwear and clothing

### **Environmental exposure controls**

Do not allow to enter into surface water or drains.

### **SECTION 9: Physical and chemical properties**

## 9.1. Information on basic physical and chemical properties

Physical state: liquid

Colour: green, yellow.
Odour: alcoholic

### Changes in the physical state

Melting point/freezing point: not determined



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Boiling point or initial boiling point and

64,7 °C

boiling range:

Sublimation point:

Softening point:

Pour point:

Plash point:

not determined
not determined
not determined
not determined

**Flammability** 

Solid/liquid: not applicable
Gas: not applicable

**Explosive properties** 

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

develop.

Lower explosion limits: 3,5 vol. %
Upper explosion limits: 50 vol. %
Auto-ignition temperature: 400 °C

Self-ignition temperature

Gas: not determined Decomposition temperature: not determined pH-Value (at 20 °C): 7-8 Viscosity / dynamic: not determined Viscosity / kinematic: not determined Flow time: not determined Water solubility: completely miscible

Solubility in other solvents

not determined

Partition coefficient n-octanol/water:

Vapour pressure:

129 hPa

Density (at 20 °C):

0,80 g/cm³

Relative vapour density:

not determined

9.2. Other information

Information with regard to physical hazard classes

Sustaining combustion: Sustaining combustion

Oxidizing properties

none

Other safety characteristics

Solvent separation test:

Solvent content:

99,28 %

Solid content:

0,35 %

Evaporation rate:

not determined

not determined

**Further Information** 

### **SECTION 10: Stability and reactivity**

## 10.1. Reactivity

Highly flammable. Thermal decomposition. Heating may cause a fire or explosion. Vapours can form explosive mixtures with air.



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#### 10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

#### 10.3. Possibility of hazardous reactions

Explosion risk in contact with: Oxidizing agents, strong. nitric acid. Hydrogenium peroxide.

Exothermic reactions with: Alkali metals. Alkaline earth metals. Reducing agents, strong.

#### 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 against direct sunlight. Protect from moisture. In use may form flammable/explosive vapour-air mixture.

Heating causes rise in pressure with risk of bursting.

#### 10.5. Incompatible materials

Alkali metals. Oxidizing agents. Strong acid, Base. Strong acid, Alkaline earth metals. Phosphorus oxides (e.g. P2O5) Nitrogen oxides (NOx). peroxides, e.g. hydrogen peroxide. Nitric acid. hydrochloric acid. Sulfuric acid. Perchlorates. Chromium oxides. Acid chlorides.

#### 10.6. Hazardous decomposition products

Can be released in case of fire: Carbon monoxide Carbon dioxide (CO2). Nitrogen oxides (NOx).

### **SECTION 11: Toxicological information**

#### 11.1. Information on hazard classes as defined in GB CLP Regulation

#### Toxicocinetics, metabolism and distribution

#### Adsorption.

Ethanol has a low molecular weight and has a good water and fat solubility. Therefor it can be adsorbed well in the entire gastrointestinal tract, lungs and the skin. After swallowing approximately 90% is taken up via the gastrointestinal tract. When inhaled, this value is 61%. Because of the rapid evaporation of ethanol the dermal adsorption is very limited; theoretically 21% can be accommodated, however, the absorption rate of uncovered skin is only 1 to 2%.

### Distribution:

Regardless of the exposure pathway ethanol is distributed via the bloodstream throughout the body, comparable to the distribution of water. Highly perfused organs (brain, lung and liver) are passed quickly. An equal distribution between tissue and blood is reached after 1 to 1.5 h.

### metabolism:

Even before the absorption a small proportion of ethanol is enzymatically metabolized in the stomach (alcohol dehydrogenase). After absorption ethanol is preferably metabolized in the liver (92-95%) and partly in the kidneys and lungs. Metabolism occurs usually in three steps: 1. oxidation of ethanol to acetaldehyde; 2. oxidation of acetaldehyde to acetate; 3. oxidation of acetate to carbon dioxide and water

### elimination:

The vast majority of ethanol is eliminated by metabolism, the excretion via breath, urine and sweat plays a minor role. The maximum elimination of ethanol is estimated on the 127 mg / kgbw / h.

## Acute toxicity

Harmful if swallowed.

Harmful in contact with skin.

Harmful if inhaled.

### ATEmix calculated

ATE (oral) 420,8 mg/kg; ATE (dermal) 1290,3 mg/kg; ATE (inhalation vapour) 12,90 mg/l; ATE (inhalation aerosol) 2,151 mg/l



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CAS No	Chemical name	Chemical name							
	Exposure route	Dose		Species	Source	Method			
64-17-5	ethanol, ethyl alcohol				·				
	oral	LD50 mg/kg	>5000	Rat	ECHA Dossier				
	inhalation (4 h) vapour	LC50 mg/l	124,7	Rat	ECHA Dossier				
67-56-1	methanol								
	oral	ATE mg/kg	100						
	dermal	ATE mg/kg	300						
	inhalation vapour	ATE	3 mg/l						
	inhalation aerosol	ATE	0,5 mg/l						
107-21-1	ethanediol, ethylene glyc	ol							
	oral	LD50 mg/kg	7712	Rat	ECHA Dossier				
78-93-3	butanone; ethyl methyl k	etone							
	dermal	LD50 mg/kg	>2000	Rabbit	ECHA Dossier				
64-19-7	Acetic acid 99 %								
	oral	LD50 mg/kg	3310	Rat	GESTIS				

## Irritation and corrosivity

Causes serious eye irritation.

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

Irritant effect on the skin: slightly irritant but not relevant for classification.

Ethanol.: Specific concentration limit (SCL): Eye Irrit. 2 > 50%

#### Sensitising effects

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

The product is: not sensitising. The statement is derived form the properties of the components.

Carcinogenic/mutagenic/toxic effects for reproduction



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### SZCZEPANIK Polychrom-Lösung (Zytologische Schnellfärbung)

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

Ethanol. (CAS-No.: 64-17-5):

In-vitro mutagenicity: No experimental indications of mutagenicity in-vitro exist.

Reproductive toxicity:

Exposure time: 18 weeks; Species: CD-1 Mouse.

Method: OECD Guideline 416; Result: NOAEL = 20700 mg/kg/day

Developmental toxicity/teratogenicity:

Exposure time: 19d; Species: Sprague-Dawley Rat.

Method: OECD Guideline 414; Result: NOAEL = 16000 ppm (maternal toxicity)
Result: NOAEL >= 20000 ppm (teratogenicity); Literature information: ECHA Dossier

ethanediol; ethylene glycol (CAS No. 107-21-1):

In-vitro mutagenicity:

Method: OECD Guideline 471 (Bacterial Reverse Mutation Assay) 1997; Result: negative.

Carcinogenicity: Method: (oral.)

Species: Mouse. ; Exposure time: 2 years

Result: NOAEL = 1500 mg/kg Developmental toxicity/teratogenicity:

Method: -; Species: Mouse.; Exposure time: 20 d.

Result: NOAEC = 2500 mg/m3;Literature information: ECHA Dossier

Methanol: Germ cell mutagenicity: Method: OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test).

Species: Mouse.. Result: negative.. Literature information: ECHA Dossier

Carcinogenicity: Method: OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies). Length

of test: 18 m. Species: Mouse.; Result: NOAEC = 1,3 mg/l. Literature information: ECHA Dossier

Reproductive toxicity: Method: OECD Guideline 416 (Two-Generation Reproduction Toxicity Study). Species:

Rat.. Result: NOAEC = 1,3 mg/l. Literature information: ECHA Dossier

Developmental toxicity/teratogenicity: Method: OECD Guideline 414 (Prenatal Developmental Toxicity Study).

Species: Rabbit; Result: NOAEL = 1000 mg/kg.

#### STOT-single exposure

Causes damage to organs. (methanol)

#### STOT-repeated exposure

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

Ethanol. (CAS-No.: 64-17-5): Subchronic oral toxicity

Exposure time: 90d; Species: Sprague-Dawley Rat.

Method: OECD Guideline 408

Result: NOAEL = 1280 mg/kg; Literature information: ECHA Dossier

ethanediol; ethylene glycol (CAS No. 107-21-1):

Subacute oral toxicity:

Method: OECD Guideline 410 (Repeated Dose Dermal Toxicity: 21/28-Day Study)

Species: Dog.; Exposure time: 28 d.

Result: NOAEL = 2200 mg/kg(bw)/day ; Literature information: ECHA Dossier

Methanol: Chronic inhalative toxicity:

Method: OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies). Length of test: 12 m . Exposure time: 20 h/d. Species: Rat.; Result: NOAEC = 1,3 mg/l. literature infomation: ECHA Dossier

#### **Aspiration hazard**

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

## Specific effects in experiment on an animal

There are no data available on the preparation/mixture itself.

### 11.2. Information on other hazards

#### Other information

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 fatique.



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## SZCZEPANIK Polychrom-Lösung (Zytologische Schnellfärbung)

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#### **Further information**

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

## **SECTION 12: Ecological information**

### 12.1. Toxicity

Ethanol. (CAS-No.: 64-17-5):

Acute earthworm toxicity: LC50 (48h) = <1mg/cm2 (Eisenia fetida, non-guideline study)

Acute plant toxicity: EC50 (6d) = 11800 mg/l (Allium cepa, non-guideline study) Sediment organisms: LC59 (18h) = 8200 mg/l (Hyallela sp, non-guideline study)

CAS No	Chemical name							
	Aquatic toxicity	Dose		[h]   [d]	Species	Source	Method	
64-17-5	ethanol, ethyl alcohol							
	Acute fish toxicity	LC50 mg/l	14200	96 h	Pimephales promelas	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	ECHA Dossier		
	Crustacea toxicity	NOEC	9,6 mg/l	9 d	Daphnia magna	ECHA Dossier		
67-56-1	methanol							
	Acute fish toxicity	LC50 mg/l	15400	96 h	Lepomis macrochirus	ECHA Dossier		
	Acute algae toxicity	ErC50 mg/l	22000	96 h	Pseudokirchnerella subca	ECHA Dossier		
	Acute crustacea toxicity	EC50 mg/l	18260	48 h	Daphnia magna	ECHA Dossier		
107-21-1	ethanediol, ethylene glycol							
	Acute fish toxicity	LC50 mg/l	72860	96 h	Pimephales promelas	ECHA Dossier		
	Acute crustacea toxicity	EC50 mg/l	>100	48 h	Daphnia magna	ECHA Dossier		
78-93-3	butanone; ethyl methyl ketone							
	Acute fish toxicity	LC50 mg/l	1656	96 h	Pimephales promelas	ECHA Dossier		
	Acute algae toxicity	ErC50 mg/l	1982	72 h	Pseudokirchnerella subcapitata	ECHA Dossier		
	Acute crustacea toxicity	EC50	308 mg/l	48 h	Daphnia magna	ECHA Dossier		
64-19-7	Acetic acid 99 %							
	Acute fish toxicity	LC50 mg/l	>300	96 h	Oncorhynchus mykiss	ECHA Dossier		
	Acute algae toxicity	ErC50 mg/l	>300	72 h	Skeletonema costatum	ECHA Dossier		
	Acute crustacea toxicity	EC50 mg/l	>300	48 h	Daphnia magna	ECHA Dossier		

## 12.2. Persistence and degradability

Ethanol. (CAS-No.: 64-17-5):

Chemical Oyxgen Demand (COD): CSB = 1900 mg/g Biochemical oxygen demand (BOD): BSB5 = 1000 mg/g

Abiotic degradation in water: Hydrolysis t 1/2 (20°C, pH 7) = >1 - <36 a. Abiotic degradation in Air t 1/2 (Air.) = 38 d; 1/2 (Air. 100 ppm NO2) = 11,5 h



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CAS No	Chemical name			
	Method	Value	d	Source
	Evaluation	-	-	•
64-17-5	ethanol, ethyl alcohol			
	other guideline	84%	20	ECHA Dossier
	Biodegradable.			
67-56-1	methanol			
	other guideline	76%	20	ECHA Dossier
	Product is biodegradable.			
107-21-1	ethanediol, ethylene glycol			
	OECD 301A / ISO 7827 / EEC 92/69 annex V, C.4-A	90-100%	10	ECHA Dossier
	Readily biodegradable (according to OECD criteria).	•		
78-93-3	butanone; ethyl methyl ketone			
	@1203.B120931	98%	28	ECHA Dossier
	Readily biodegradable (according to OECD criteria).	•		
64-19-7	Acetic acid 99 %			
	Other guideline	96%	20	ECHA Dossier
	Biodegradable.			

### 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, ethyl alcohol	-0,31
67-56-1	methanol	-0,7
107-21-1	ethanediol, ethylene glycol	-1,36
78-93-3	butanone; ethyl methyl ketone	0,3
64-19-7	Acetic acid 99 %	-0,17

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

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

#### **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. Consult the local waste disposal expert about waste disposal. Non-contaminated packages may be recycled. According to (EWC) European Waste Catalogue, allocation of waste identity numbers/waste descriptions must be carried out in a specific way for every industry and process. Control report for waste code/ waste marking according to (EWC) European Waste Catalogue:

## List of Wastes Code - residues/unused products

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing hazardous substances,

including mixtures of laboratory chemicals; hazardous waste

#### List of Wastes Code - used product

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and

discarded chemicals; laboratory chemicals, consisting of or containing hazardous substances,

including mixtures of laboratory chemicals; hazardous waste



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### SZCZEPANIK Polychrom-Lösung (Zytologische Schnellfärbung)

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### List of Wastes Code - contaminated packaging

WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND 150110

> 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.

### **SECTION 14: Transport information**

### Land transport (ADR/RID)

UN 1987 14.1. UN number or ID number:

14.2. UN proper shipping name: ALCOHOLS, N.O.S. (Ethanol; Methanol)

14.3. Transport hazard class(es): 14.4. Packing group: П Hazard label: 3



Classification code:

274 601 640D **Special Provisions:** 

Limited quantity: 1 L Excepted quantity: E2 Transport category: Hazard No: 33 Tunnel restriction code: D/E

Inland waterways transport (ADN)

UN 1986 14.1. UN number or ID number:

ALCOHOLS, FLAMMABLE, TOXIC, N.O.S. (Ethanol; Methanol) 14.2. UN proper shipping name:

14.3. Transport hazard class(es): 14.4. Packing group: Ш Hazard label:

3+6.1



Classification code: FT1 **Special Provisions:** 274 802 Limited quantity: 1 L Excepted quantity: E2

Marine transport (IMDG)

UN 1986 14.1. UN number or ID number:

14.2. UN proper shipping name: ALCOHOLS, FLAMMABLE, TOXIC, N.O.S. (Ethanol; Methanol)

14.3. Transport hazard class(es): 3 14.4. Packing group: Ш Hazard label: 3+6.1





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### SZCZEPANIK Polychrom-Lösung (Zytologische Schnellfärbung)

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Marine pollutant:

Special Provisions:

Limited quantity:

Excepted quantity:

E2

EmS:

NO

274

1 L

E2

E75-D

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number: UN 1986

14.2. UN proper shipping name: ALCOHOLS, FLAMMABLE, TOXIC, N.O.S. (Ethanol; Methanol)

14.3. Transport hazard class(es):314.4. Packing group:IIHazard label:3+6.1



Special Provisions:A3Limited quantity Passenger:1 LPassenger LQ:Y341Excepted quantity:E2

IATA-packing instructions - Passenger:352IATA-max. quantity - Passenger:1 LIATA-packing instructions - Cargo:364IATA-max. quantity - Cargo:60 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

### **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 69

2010/75/EU (VOC): 96,723 % (773,781 g/l) 2004/42/EC (VOC): 99,283 % (794,261 g/l)

Information according to 2012/18/EU

(SEVESO III):

H3 STOT SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE

Additional information: P5c

#### **Additional information**

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

REACH 1907/2006 Appendix XVII, No (mixture): 3, 40

## 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. Observe employment restrictions for women of

child-bearing age.





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Water hazard class (D): 2 - obviously hazardous to water

Skin resorption/Sensitization: Permeates easily through outer skin and causes poisoning.

#### 15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

#### **SECTION 16: Other information**

#### Changes

Rev. 1.00; 07.09.2016, Initial release

Rev. 2.00; 20.12.2017, Changes in chapter: 1 -16. Rev. 3.00; 17.12.2021; Changes in chapter: 1 -16.

#### Abbreviations and acronyms

ADR: Accord européen sur le transport des marchandises dangereuses par Route

CAS Chemical Abstracts Service DNEL: Derived No Effect Level

IARC: INTERNATIONAL AGENCY FOR RESEARCH ON CANCER

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 GefStoffV: Gefahrstoffverordnung (Ordinance on Hazardous Substances, Germany)

LOAEL: Lowest observed adverse effect level

LOAEC: Lowest observed adverse effect concentration

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

NOAEL: No observed adverse effect level NOAEC: No observed adverse effect level

NTP: National Toxicology Program

N/A: not applicable

OSHA: Occupational Safety and Health Administration

PNEC: predicted no effect concentration PBT: Persistent bioaccumulative toxic

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de

fer (Regulations Concerning the International Transport of Dangerous Goods by Rail )

SARA: Superfund Amendments and Reauthorization Act

SVHC: substance of very high concern TRGS Technische Regeln fuerGefahrstoffe

TSCA: Toxic Substances Control Act VOC: Volatile Organic Compounds

VwVwS: Verwaltungsvorschrift wassergefaehrdender Stoffe

WGK: Wassergefaehrdungsklasse

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%



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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)

EmS: Emergency Schedules MFAG: Medical First Aid Guide

MARPOL: International Convention for the Prevention of Marine Pollution from Ships

IBC: Intermediate Bulk Container

For abbreviations and acronyms, see table at http://abbrev.esdscom.eu

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

Classification	Classification procedure
Flam. Liq. 2; H225	On basis of test data
Acute Tox. 4; H302	Calculation method
Acute Tox. 4; H312	Calculation method
Acute Tox. 4; H332	Calculation method
Eye Irrit. 2; H319	Calculation method
STOT SE 1; H370	Calculation method

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

H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H290	May be corrosive to metals.
<b>⊔</b> 201	Toxic if swallowed

H301 Toxic if swallowed. H302 Harmful if swallowed.

H302+H312+H332 Harmful if swallowed, in contact with skin or if inhaled.

H311 Toxic in contact with skin.
H312 Harmful in contact with skin.

H314 Causes severe skin burns and eye damage.

H319 Causes serious eye irritation.

H331 Toxic if inhaled. H332 Harmful if inhaled.

H336 May cause drowsiness or dizziness.

H370 Causes damage to organs.

H373 May cause damage to organs (kidneys) through prolonged or repeated exposure.

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. Classification according EC regulation 1272/2008 (CLP): -

Classification procedure: Health hazards: Calculation method.

Environmental hazards: Calculation method.

Physical hazards: On basis of test data and / or calculated and / or estimated.

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





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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 hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)