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According to 1907/2006/EC, Article 31

Revised on: 31.05.2019 Giemsa stain solution for microscopy

Created on: 31.05.2019

#### 1. Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

**Trade name:** Giemsa stain solution for microscopy

Article number: 1092

REACH Registration Number: This product is a mixture. REACH Registration Number see section 3.

1.2. Relevant identified uses of the substance or mixture

Identified uses: In vitro diagnostic reagent, Reagent for analysis

1.3. Details of the supplier of the safety data sheet

**Manufacturer/Supplier**: Further information obtainable from:

neoFroxx GmbH Dep. Quality Control

Marie-Curie-Str. 3 D-64683 Einhausen info@neofroxx.com

1.4. Emergency telephone number

+49 (6251) 989 24 - 0 (during normal business hours)

#### 2. Hazards identification

#### 2.1. Classification of the substance or the mixture

#### Classification (REGULATION (EC) No 1272/2008):

Flammable liquid, Category 2, H225

Acute toxicity, Category 3, Oral, H301

Acute toxicity, Category 3, Inhalation, H331

Acute toxicity, Category 3, Dermal, H311

Specific target organ toxicity - single exposure, Category 1, Eyes, H370

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

#### 2.2. Label elements

#### Labelling (REGULATION (EC) No 1272/2008):

#### **Hazard pictograms:**







Signal word: Danger Hazard statements:

H225 Highly flammable liquid and vapour.

H301 + H311 + H331 Toxic if swallowed, in contact with skin or if inhaled.

H370 Causes damage to organs (Eyes).

Precautionary statements

#### Prevention:

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.

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Response:

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.

P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for

breathing.

P308 + P310 IF exposed or concerned: immediately call a POISON CENTER or doctor/ physician.

Storage:

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

#### 2.3. Other hazards

None known.

#### 3. Composition / information on ingredients

Chemical nature: Mixture of organic compounds

#### 3.1. Substance

Not applicable

#### 3.2. Mixture

#### Hazardous components (REGULATION (EC) No 1272/2008:

Chemical name (Concentration): Methanol (>= 25 % - < 50 % )

Substance does not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006,

Annex XIII.

CAS-No.: 67-56-1

Registration number: 01-2119433307-44-XXXX

Classification:

Flammable liquid, Category 2, H225

Acute toxicity, Category 3, H301

Acute toxicity, Category 3, H331 Acute toxicity, Category 3, H311

Specific target organ toxicity - single exposure, Category 1, H370

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

#### 4. First aid measures

#### 4.1. Description of first aid measures

General advice: First aider needs to protect himself.

**After inhalation:** fresh air. Immediately call in physician. If breathing stops: immediately apply artificial respiration, if necessary also oxygen.

**In case of skin contact:** Take off immediately all contaminated clothing. Rinse skin with water/ shower. Call a physician immediately.

**After eye contact:** rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses. **After swallowing:** fresh air. Make victim drink ethanol (e.g. 1 drinking glass of a 40% alcoholic beverage). Call a doctor immediately (mention methanol ingestion). Only in exceptional cases, if no medical care is available within one hour, induce vomiting (only in fully conscious persons) and make victim drink ethanol again (approx. 0.3 ml of a 40% alcoholic beverage/kg body weight/hour).

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

irritant effects, Drowsiness, Dizziness, inebriation, Headache, blindness, agitation, spasms, Impairment of vision, narcosis, Coma

Drying-out effect resulting in rough and chapped skin.

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4.3. Indication of any immediate medical attention and special treatment needed No information available.

#### 5. Firefighting measures

#### 5.1. Extinguishing media

#### Suitable extinguishing media:

Foam, Carbon dioxide (CO2), Dry powder

#### Unsuitable extinguishing media:

For this substance/mixture no limitations of extinguishing agents are given.

Special hazards arising from the substance or mixture Combustible.

Vapours are heavier than air and may spread along floors.

Forms explosive mixtures with air at ambient temperatures.

Pay attention to flashback.

Development of hazardous combustion gases or vapours possible in the event of fire.

#### 5.3. Advice for firefighters

#### Special protective equipment for firefighters:

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

#### Further information:

Remove container from danger zone and cool with water. Prevent fire extinguishing water from contaminating surface water or the ground water system.

#### 6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Do not breathe vapours, aerosols. Avoid substance contact.

Ensure adequate ventilation. Keep away from heat and sources of ignition. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders:

Protective equipment see section 8.

#### 6.2. Environmental precautions

Do not let product enter drains. Risk of explosion.

6.3. Methods and material for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully with liquid-absorbent material. Dispose of properly. Clean up affected area.

#### 6.4. Reference to other sections

Indications about waste treatment see section 13.



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#### 7. Handling and storage

#### 7.1. Precautions for safe handling:

#### Advice on safe handling:

Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols.

Observe label precautions.

#### Advice on protection against fire and explosion:

Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.

#### Hygiene measures:

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

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

#### Storage conditions:

Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition. Keep locked up or in an area accessible only to qualified or authorized persons.

Recommended storage temperature: see product label.

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

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

#### 8. Exposure controls / personal protection

#### 8.1. Control parameters

#### Derived No Effect Level (DNEL):

Methanol (67-56-1)

Worker DNEL, acute Systemic effects dermal 40 mg/kg Body weight

Worker DNEL, acute Systemic effects inhalation 260 mg/m<sup>3</sup>

Worker DNEL, acute Local effects inhalation 260 mg/m<sup>3</sup>

Worker DNEL, longterm Systemic effects dermal 40 mg/kg Body weight

Worker DNEL, longterm Systemic effects inhalation 260 mg/m<sup>3</sup>

Worker DNEL, longterm Local effects inhalation 260 mg/m<sup>3</sup>

Consumer DNEL, acute Systemic effects dermal 8 mg/kg Body weight

Consumer DNEL, acute Systemic effects inhalation 50 mg/m<sup>3</sup>

Consumer DNEL, acute Systemic effects oral 8 mg/kg Body weight

Consumer DNEL, acute Local effects inhalation 50 mg/m<sup>3</sup>

Consumer DNEL, longterm Systemic effects dermal 8 mg/kg Body weight

Consumer DNEL, longterm Systemic effects inhalation 50 mg/m³

Consumer DNEL, longterm Systemic effects oral 8 mg/kg Body weight

Consumer DNEL, longterm Local effects inhalation 50 mg/m<sup>3</sup>

#### **Predicted No Effect Concentration (PNEC):**

#### Methanol (67-56-1)

PNEC Fresh water 154 mg/l

PNEC Fresh water sediment 570,4 mg/kg

PNEC Marine water 15,4 mg/l

PNEC Soil 23,5 mg/kg

PNEC Sewage treatment plant 100 mg/l

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# 8.2. Exposure controls **Engineering measures:**

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

See section 7.1.

#### Individual protection measures:

Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the respective supplier.

Eye/face protection: Safety glasses

Hand protection: full contact: Glove material: butyl-rubber Glove thickness: 0,7 mm Break through time: > 480 min

Splash contact:

Glove material: Viton (R)
Glove thickness: 0,70 mm
Break through time: > 120 min

The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374, for example KCL 898 Butoject® (full contact), KCL 890 Vitoject® (splash contact).

The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types.

This recommendation applies only to the product stated in the safety data sheet<(>,<)> supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Other protective equipment: Flame retardant antistatic protective clothing.

#### Respiratory protection:

required when vapours/aerosols are generated.

Recommended Filter type: ABEK-filter

The entrepeneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

#### **Environmental exposure controls:**

Do not let product enter drains.

Risk of explosion.

#### 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Form: liquid
Colour: blue

Odour: of methanol

Odour Threshold: No information available.

**pH:** 6,1 - 7,0 at 20 °C (undiluted)

Melting point: No information available.

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Boiling point/boiling range: > 65 °C at 1.013 hPa

Flash point: ca. 18 °C

Evaporation rate: No information available.

Flammability (solid, gas): No information available.

**Lower explosion limit:** 5,5 %(V) Methanol **Upper explosion limit:** 44 %(V) Methanol **Vapour pressure:** No information available.

Relative vapour density: No information available.

Density: 0,99 g/cm3 at 20 °C

Relative density: No information available.

Water solubility at 20 °C: soluble Partition coefficient: n-octanol/water

**Auto-ignition temperature:** No information available. **Decomposition temperature:** No information available.

**Viscosity, dynamic:** No information available. **Explosive properties:** Not classified as explosive.

Oxidizing properties: none

9.2. Other data

Ignition temperature: ca. 455 °C

#### 10. Stability and reactivity

#### 10.1. Reactivity

Vapours may form explosive mixture with air.

#### 10.2. 1Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

#### 10.3. Possibility of hazardous reactions

#### Risk of explosion with:

Oxidizing agents, perchloric acid, perchlorates, salts of oxyhalogenic acids, chromium(VI) oxide, halogen oxides, nitrogen oxides, nonmetallic oxides, chromosulfuric acid, chlorates, hydrides, zinc diethyl, halogens, magnesium, hydrogen peroxide, Nitric acid, peroxi compounds, Nitriles

#### **Exothermic reaction with:**

acid halides, Acid anhydrides, Reducing agents, acids, Oxides of phosphorus, chromium(VI) oxide, phosphorus halides

Acetic anhydride, with, phosphorous oxichloride

ANILINE, with, Nitrobenzene

#### Generates dangerous gases or fumes in contact with:

Alkaline earth metals, Alkali metals

#### Risk of ignition or formation of inflammable gases or vapours with:

Potassium permanganate, Calcium hypochlorite, Oxides of phosphorus

Fluorine, with, Lead oxides

#### Generates dangerous gases or fumes in contact with:

Alkaline earth metals, Alkali metals

#### 10.4. Conditions to avoid:

warming

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10.5. Incompatible materials:

various plastics, Aluminium, zinc alloys, magnesium

10.6. Hazardous decomposition products:

no information available

#### 11. Toxicological information

#### 11.1. Information on toxicological effects

#### **Mixture**

#### Acute oral toxicity:

Acute toxicity estimate: 201,24 mg/kg

Calculation method

Symptoms: Nausea, Vomiting Acute inhalation toxicity

Acute toxicity estimate: 6,04 mg/l; vapour

Calculation method

Symptoms: Irritation symptoms in the respiratory tract.

Acute dermal toxicity:

Acute toxicity estimate: 603,72 mg/kg

Calculation method **Skin irritation:** 

Drying-out effect resulting in rough and chapped skin.

Eye irritation:

Possible damages: slight irritation

Sensitisation:

This information is not available.

Germ cell mutagenicity:

This information is not available.

Carcinogenicity:

This information is not available.

Reproductive toxicity:

This information is not available.

Teratogenicity:

This information is not available.

Specific target organ toxicity - single exposure:

Mixture causes damage to organs.

Target Organs: Eyes

Specific target organ toxicity - repeated exposure:

This information is not available.

**Aspiration hazard:** 

This information is not available.

#### 11.2. Further information

#### Systemic effects:

acidosis, drop in blood pressure, agitation, spasms, inebriation, Dizziness, Drowsiness, Headache, Impairment of vision, blindness, narcosis, Coma

Symptoms may be delayed.

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Damage to:

Liver, Kidney, Cardiac, Irreversible damage of the optical nerve.

Other dangerous properties can not be excluded.

This substance should be handled with particular care.

Components:

Methanol

Acute oral toxicity:

LDLO human: 143 mg/kg (RTECS) Acute toxicity estimate: 100,1 mg/kg

Expert judgement

Acute inhalation toxicity:

LC50 Rat: 131,25 mg/l; 4 h; vapour (ECHA)

Acute dermal toxicity:

LD50 Rabbit: ca. 17.100 mg/kg (External MSDS)

Acute toxicity estimate: 300,1 mg/kg

Expert judgement **Skin irritation:** 

Rabbit

Result: No skin irritation (ECHA)

Eye irritation:

Rabbit

Result: No eye irritation (ECHA)

Sensitisation:

Sensitisation test: Guinea pig

Result: negative

Method: OECD Test Guideline 406

Repeated dose toxicity:

Rat

male and female

Inhalation vapour 28 d

daily

NOAEL: 6,66 mg/l

OECD Test Guideline 412

Subacute toxicity:

Rat

male and female

Inhalation 365 d daily

NOAEL: 0,13 mg/l LOAEL: 1,3 mg/l

**OECD Test Guideline 453** 

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Germ cell mutagen

### Germ cell mutagenicity Genotoxicity in vivo:

Micronucleus test

Mouse

male and female

Intraperitoneal injection

Result: negative

Method: OECD Test Guideline 474

#### Genotoxicity in vitro:

Ames test

Salmonella typhimurium

Result: negative

Method: OECD Test Guideline 471

In vitro mammalian cell gene mutation test

Result: negative

Method: OECD Test Guideline 476

#### 12. Ecological information

#### Mixture:

#### 12.1. Toxicity

No information available.

#### 12.2. Persistence and Degradability

No information available.

#### 12.3. Bioaccumulative potential

No information available.

#### 12.4. Mobility in soil

No information available.

#### 12.5. Assessment PBT and MPMB

Substance(s) in the mixture do(es) not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII, or a PBT/vPvB assessment was not conducted.

### 12.6. Other adverse effects

#### Additional ecological information:

Discharge into the environment must be avoided.

#### Components:

#### Methanol

#### Toxicity to fish:

flow-through test LC50 Lepomis macrochirus (Bluegill sunfish): 15.400 mg/l; 96 h US-EPA

#### Toxicity to daphnia and other aquatic invertebrates:

EC5 E.sulcatum: > 10.000 mg/l; 72 h (Lit.)

EC50 Daphnia magna (Water flea): > 10.000 mg/l; 48 h (IUCLID)

#### Toxicity to algae:

static test EC50 Pseudokirchneriella subcapitata (green algae): ca. 22.000 mg/l; 96 h OECD Test

Guideline 201

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Created on: 31.05.2019 **Toxicity to bacteria:** 

EC5 Pseudomonas fluorescens: 6.600 mg/l; 16 h (IUCLID)

static test IC50 activated sludge: > 1.000 mg/l; 3 h Analytical monitoring: yes OECD Test Guideline 209

**Toxicity to fish (Chronic toxicity):** 

NOEC Oryzias latipes (Orange-red killifish): 7.900 mg/l; 200 h (External MSDS)

**Biodegradability:** 

99 %; 30 d

OECD Test Guideline 301D

Readily biodegradable

**Biochemical Oxygen Demand (BOD):** 

600 - 1.120 mg/g (5 d)

(IUCLID)

**Chemical Oxygen Demand (COD):** 

1.420 mg/g

(IUCLID)

Theoretical oxygen demand (ThOD):

1.500 mg/g

(Lit.)

Ratio BOD/ThBOD:

BOD5 76 %

Closed Bottle test

Partition coefficient: n-octanol/water:

log Pow: -0,77 (experimental)

(Lit.) Bioaccumulation is not expected.

Substance does not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006,

Annex XIII.

Stability in water:

2,2 yr

reaction with hydroxyl radicals (IUCLID)

#### 13. Disposal considerations

#### 13.1. Waste treatment methods

#### **Recommendation:**

Chemicals must be disposed of in compliance with the respective national regulations.

#### **Uncleaned packaging:**

#### Recommendation:

Disposal must be made according to official regulations.

Packagings that may not be cleansed are to be disposed of in the same manner as the product.

Recommended cleansing agents: Water, if necessary together with cleansing agents.

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### 14. Transport information

14.1. Land transport (ADR/RID)

UN number: UN 1230

Proper shipping name: METHANOL SOLUTION

Class: 3 (6.1) Packing group: II

Environmentally: hazardous --Special precautions for user: yes Tunnel restriction code: D/E

#### 14.2. Inland waterway transport (ADN)

Not relevant

#### 14.3. Air transport (IATA) UN number: UN 1230

Proper shipping name: METHANOL SOLUTION

Class: 3 (6.1) Packing group: II

Environmentally hazardous: -- Special precautions for user: no

### 14.4. Sea transport (IMDG)

UN number: UN 1230

Proper shipping name: METHANOL SOLUTION

Class: 3 (6.1) Packing group: II

Environmentally hazardous: --Special precautions for user: yes

EmS F-E S-D

#### 14.5. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not relevant

#### 15. Regulatory information

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

EU regulations:

Major Accident Hazard: SEVESO III

Legislation: ACUTE TOXIC

H2

Quantity 1: 50 t Quantity 2: 200 t SEVESO III

FLAMMABLE LIQUIDS

P5c

Quantity 1: 5.000 t Quantity 2: 50.000 t

SEVESO III Methanol

22

Quantity 1: 500 t Quantity 2: 5.000 t

#### Occupational restrictions:

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Take note of Dir 94/33/EC on the protection of young people at work. Observe work restrictions regarding maternity protection in accordance to Dir 92/85/EEC or stricter national regulations where applicable.

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer:

not regulated

Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC:

not regulated

#### Substances of very high concern (SVHC):

This product does not contain substances of very high concern according to Regulation (EC) No 1907/2006 (REACH), Article 57 above the respective regulatory concentration limit of  $\geq$  0.1 % (w/w).

National legislation:

Storage: class 3

15.2. Chemical safety assessment

For this product a chemical safety assessment was not carried out.

#### 16. Other information

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

H225 Highly flammable liquid and vapour.

H301 Toxic if swallowed.

H311 Toxic in contact with skin.

H331 Toxic if inhaled.

H370 Causes damage to organs.

#### **Hazard statements:**

H225 Highly flammable liquid and vapour.

H301 + H311 + H331 Toxic if swallowed, in contact with skin or if inhaled.

H370 Causes damage to organs (Eyes).

#### **Precautionary statements:**

#### Prevention:

P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.

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P240 Ground/bond container and receiving equipment.

P280 Wear protective gloves/ protective clothing.