

# Safety data sheet

According to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU



## FISHopt® (FISH FIXATION SOLUTION)

article number: 1

Version: 1.1 GENERIC EU MSDS – NO COUNTRY SPECIFIC DATA – NO OEL DATA

date of compilation: 2020-1218

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

- 1.1 Product identifier
- |                               |   |
|-------------------------------|---|
| Product name                  | FISHopt® (FISH FIXATION SOLUTION)           |
| Identification of the mixture | PBS-Buffer, Ethanol >24%, Formaldehyde <24% |
| Article number                | 1   |
| Registration number (REACH)   | not relevant (mixture)                      |
- 1.2 Relevant identified uses of the substance or mixture and uses advised against
- |                 |                     |
|-----------------|---------------------|
| Identified uses | laboratory chemical |
|-----------------|---------------------|
- 1.3 Details of the supplier of the safety data sheet
- MoKi Analytics GmbH  
Marienplatz 9  
12207 Berlin  
Germany  
Telephone: +49 – 1778586566  
email: infor@moki-analytics.com
- |  |  |
|--|--|
| Competent person responsible for the safety data sheet | Department of Health, Safety and Environment |
|--|--|
- 1.4 Emergency telephone number
- |                               |                                       |
|-------------------------------|---------------------------------------|
| Emergency information service | Poison Centre Munich: +49/(0)89 19240 |
|-------------------------------|---------------------------------------|

### SECTION 2: Hazard Identification

#### 2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 (CLP)

Hazard class (category)	Hazard statement
flammable liquids (2)	H225
germ cell mutagenicity (2)	H341
Carcinogenicity (1B)	H350
skin sensitization (1)	H317
serious eye damage/eye irritation (2)	H319

Remarks: For full text of H-phrases: see SECTION 16

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

R-phrases)

T	Toxic	R45	May cause cancer.
Xn	Harmful	R68	Possible risk of irreversible effects.
Xi	Irritant	R43	may cause sensitization by skin contact.

S-phrases)

S53	Avoid exposure – obtain special instructions before use.
S36/37	Wear suitable protective clothing and gloves.
S45	In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Supplemental Hazard Statements none

#### 2.2 Label elements

Labeling according to Regulation (EC) No 1272/2008 (CLP)

Signal Word Danger

Pictograms



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#### Hazard statement(s)

H302	Harmful if swallowed.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H225	Highly flammable liquid and vapor.
H341	Suspected of causing genetic defects.
H350	May cause cancer.

#### Precautionary statement(s)

P201	Obtain special instructions before use.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233	Keep container tightly closed.
P280	Wear protective gloves/protective clothing/ eye protection/ face protection.

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

P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.





#### Precautionary statements – response

P305 + P351 + P338 IF IN EYES: rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Restricted to professional users.

## SECTION 3: Composition /information on ingredients

### 3.2 Mixtures

Name of substance	Identifier	wt%	Classification acc. to 1272/2008/EC	Pictograms
ethyl alcohol (ethanol)	CAS No 64-17-5 EC No 200-578-6 Index No 603-002-00-5 REACH Reg. No 01-2119457610-43-XXXX	>50	Flam. Liq. 2 Eye Irrit. 2 H225, H319	 
formaldehyde (synonyms: formalin formaldehyde solution)	CAS No 50-00-0 EC No 200-001-8 Index No 605-001-00-5 REACH Reg. No. 01-2119488953-20-XXXX	>=3-<5%	Acute Tox. 3 / H302 Skin Sens. 1 / H317 Muta. 2 / H341 Carc. 1B / H350	 

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

#### General advice

Take off contaminated clothing. Consult a physician. Show this safety data sheet to the doctor in attendance.

#### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

#### In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

#### In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

#### If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

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

Irritation, Vertigo, Nausea, Abdominal pain, Vomiting, Breathing difficulties, Narcosis.

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

None

### SECTION 5: Firefighting measures

#### 5.1 Extinguishing media

Suitable extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings.

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable extinguishing media

water jet

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

Combustible. In case of insufficient ventilation and/or in use, may form flammable/explosive vapor-air mixture. Carbon oxides.

Hazardous combustion products

May produce toxic fumes of carbon monoxide if burning.

#### 5.3 Advice for firefighters

Vapors are heavier than air. Beware of reignition. Fight fire with normal precautions from reasonable distance. Wear self-contained breathing apparatus for firefighting if necessary.

### SECTION 6: Accidental release measures

#### 6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid breathing vapors, mist or gas. Avoid contact with skin and eyes. Removal of ignition sources. Ensure adequate ventilation. Evacuate personnel to safe areas. For personal protection see SECTION 8.

#### 6.2 Environmental precautions

Keep away from drains, surface and ground water. Explosive properties. Prevent further leakage or spillage if safe to do so.

#### 6.3 Methods and materials for containment and cleaning up

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal. Ventilate affected area.

#### 6.4 Reference to other sections

Hazardous combustion products: see SECTION 5. Personal protective equipment: see SECTION 8. Incompatible materials: see SECTION 10. Disposal considerations: see SECTION 13. For disposal see SECTION 13.

### SECTION 7: Handling and storage

#### 7.1 Precautions for safe handling

Avoid exposure - obtain special instructions before use. Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. For precautions see SECTION 2.2. Provision of sufficient ventilation. Keep container tightly closed.

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Measures to prevent fire as well as aerosol and dust generation  
Keep away from sources of ignition – No smoking.  
Take precautionary measures against static discharge.

Advice on general occupational hygiene  
Do not eat, drink or smoke when using this product. Wash hands before breaks and after work. Use barrier cream.

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

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Protect from sunlight. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Storage class (TRGS 510): Non-combustible, acute toxic Cat.3 / toxic hazardous materials or hazardous materials causing chronic effects.  
Recommended storage temperature: 2-10°C

#### 7.3 Specific end use(s)

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

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

Components with workplace control parameters

### 8.2 Exposure controls

Appropriate engineering controls. Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection

Tightly fitting safety goggles. Face shield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it (material thickness 0.7 mm, breakthrough times of the glove material >480 minutes, permeation level 6)

Body Protection

Complete suit protecting against chemicals that are flame-retardant. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

- |                     |                   |
|---------------------|-------------------|
| a) Appearance Form: | clear, liquid     |
| Colour:             | colourless        |
| b) Odour            | like: alcohol     |
| c) Odour Threshold  | No data available |

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d) pH	Neutral
e) Melting point/freezing point	-114°C (data apply to main component)
f) Initial boiling point and boiling range	78°C (data apply to main component)
g) Flash point	>22°C (data apply to main component)
h) Evaporation rate	No data available
i) Flammability (solid, gas)	not relevant (fluid)
j) Upper/lower flammability or explosive limits	
Lower explosion limit (LEL)	3.5 vol% (data apply to main component)
Upper explosion limit (UEL)	15 vol% (data apply to main component)
k) Vapour pressure	59 hPa (data apply to main component)
l) Vapour density	No data available
m) Relative density	0,88g/cm <sup>3</sup> (data apply to main component)
n) Water solubility	miscible in any proportion
o) Partition coefficient: noctanol/water	No data available
p) Auto-ignition temperature	425°C (data apply to main component)
q) Decomposition temperature	No data available
r) Viscosity	1.2 mPa s at 20°C (data apply to main component)
s) Explosive properties	none
t) Oxidizing properties	none

#### 9.2 Other safety information

There is no additional information.

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

Risk of ignition, vapors can form explosive mixtures with air

### 10.2 Chemical stability

Stable under recommended storage conditions.

### 10.3 Possibility of hazardous reactions

Violent reaction with: Alkali metals, Alkaline earth metal, Acetic anhydride, Peroxides, Phosphorus oxides (e.g. P<sub>2</sub>O<sub>5</sub>), Strong oxidiser, Nitric acid, Nitrate, Perchlorates, => Explosive properties

### 10.4 Conditions to avoid

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

### 10.5 Incompatible materials

Strong bases, Strong oxidizing agents, Amines, Strong acids, Acid anhydrides, Peroxides, Isocyanates, Phenol, Aniline, plastic and rubber

### 10.6 Hazardous decomposition products

Hazardous combustion products: see SECTION 5.

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## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

This mixture does not meet the criteria for classification in accordance with Regulation No 1272/2008/EC.

Acute toxicity

Acute toxicity of components of the mixture

Name of substance	CAS No	Exposure route	Endpoint	Value	Species
Ethyl alcohol	64-17-5	Inhalation: vapor	LC50	95.6 mg/l/4h	Rat
		Oral	LD50	7060 mg/kg	Rat
Formaldehyde	50-00-0	Inhalation	LC50	0.578 mg/l	Rat
		Oral	LD50	100 mg/kg	Rat
		Dermal	LD50	270 mg/kg	Rabbit

Skin corrosion/irritation

May cause an allergic skin reaction.

Serious eye damage/eye irritation

Causes serious eye irritation.

Respiratory or skin sensitization

May cause sensitisation by skin contact.

Muta. 2, Carc. 1B

Germ cell mutagenicity

Suspected of causing genetic defects.

Carcinogenicity

IARC: 1 - Group 1: Carcinogenic to humans (Formaldehyde)

May cause cancer.

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

Additional Information

None

Symptoms related to the physical, chemical and toxicological characteristics:

Spasm, inflammation and edema of the larynx, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, burning sensation, cough, wheezing, laryngitis, shortness of breath, headache, abdominal pain, nausea, vomiting, causes serious eye irritation, vertigo, inebriation, breathing difficulties, narcosis, repeated skin contact may cause dermatitis (skin inflammation)  
Liver - Irregularities - Based on Human Evidence (formaldehyde), causes damage to liver through prolonged or repeated exposure if swallowed (alcohol)

## SECTION 12: Ecological information

### 12.1 Toxicity

No data available

### 12.2 Persistence and degradability

No data available

### 12.3 Bioaccumulative potential

No data available

### 12.4 Mobility in soil

No data available

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#### 12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

#### 12.6 Other adverse effects

No data available

### SECTION 13: Disposal considerations

#### 13.1 Waste treatment methods

This material and its container must be disposed of as hazardous waste. Dispose of contents/container in accordance with local/regional/national/international regulation. Do not empty into drains.

##### Product

Offer surplus and non-recyclable solutions to a licensed disposal company.

##### Contaminated packaging

Dispose of as unused product.

### SECTION 14: Transport information

14.1 UN number	1170
14.2 UN proper shipping name	ETHANOL SOLUTION
14.3 Transport hazard class(es)	3 (flammable liquid)
14.4 Packaging group	II (substance presenting medium danger)
14.5 Environmental hazards	none
14.6 Special precautions for user	Provisions for dangerous goods (ADR) should be complied within the premises.

### SECTION 15: Regulatory information

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

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

No data available

#### 15.2 Chemical Safety Assessment

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

### SECTION 16: Other information

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

Acute Tox.	Acute toxicity
Carc.	Carcinogenicity
Eye Dam.	seriously damaging to the eye
Eye Irrit.	irritant to the eye
H302	Harmful if swallowed.
H317	May cause an allergic skin reaction.
H319	causes serious eye irritation
H225	highly flammable liquid and vapour
H341	Suspected of causing genetic defects.
H350	May cause cancer.
Muta.	Germ cell mutagenicity
Skin Sens.	Skin sensitisation
Full text of R-phrases referred to under SECTIONS 2 and 3	
T	Toxic
R43	May cause sensitisation by skin contact.
R45	May cause cancer.
R68	Possible risk of irreversible effects.

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The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material. MoKi Analytics and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product.