

# FLUORESCEIN

## Safety Data Sheet

according to Regulation (EU) 2015/830

Issue date: 2/9/2021 Revision date: 2/9/2024

Version: 1.1



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

#### 1.1. Product identifier

Trade name	: FLUORESCEIN
EC-No.	: 219-031-8
CAS-No.	: 2321-07-5
Product code	: FLUORESCEIN
Type of product	: Pure substance
Formula	: C <sub>20</sub> H <sub>12</sub> O <sub>5</sub>
Synonyms	: 11712 yellow / 2-(6-hydroxy-3-oxo-(3H)-xanthen-9-yl)benzoic acid / 2-(6-hydroxy-3-oxo-3H-xanthen-9-yl)benzoic acid / 3',4'-dehydroxyfluoran / 3',6'-dihydroxyfluoran / 3',6'-dihydroxyfluorane / 3',6'-dihydroxyspiro(isobenzofuran-1(3H),9(9H)-xanthen-3-one) / 3,6-dihydroxyspiro(xanthene-9,3'-phthalide) / 3',6'-dihydroxyspiro[isobenzofuran-1(3H),9'-xanthen]-3-one / 3,6-fluorandiol / 3',6'-fluorandiol / 3H-xanthen-3-one, 9-(o-carboxyphenyl)-6-hydroxy- / 9-(o-carboxyphenyl)-6-hydroxy-3H-xanthen-3-one / 9-(o-carboxyphenyl)-6-hydroxy-3-isoxanthenone / 9-(o-carboxyphenyl)-6-hydroxy-3-isoxanthenone / acid yellow 73 / angiofluor / benzoic acid, o-(6-hydroxy-3-oxo-3H-xanthen-9-yl)- / C.I. 43530 / C.I. acid yellow 73 / CI 45350 / CI 45350 (free acid) / CI 45350 free acid / CI 45350.1 / CI 45350A / CI solvent yellow 94 / D and C yellow No 7 / D&C yellow No. 7 / D+C yellow No.7 / dihydroxyfluorane / disodium 2-(oxido-3-oxo-3H-xanthen-9-yl)benzoate / Fluorescein sodium / fluoran, 3',6'-dihydroxy- / fluorescein acid / fluorescein red / fluorescite / hidacid fluorescein / japan yellow 201 / resorcinolphthalein / S. No. 880 / soap yellow / soap yellow F / soap Yellow F / solvent yellow 94 / solvent Yellow 94 / spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 3',6'-dihydroxy- / spiro[isobenzofuran-1(3H,9'-[9H]xanthen)-3-one,3',6'-dihydroxy- / yellow fluorescein
Product group	: Raw material

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

##### 1.2.1. Relevant identified uses

Use of the substance/mixture : Research and development

##### 1.2.2. Uses advised against

No additional information available

#### 1.3. Details of the supplier of the safety data sheet

ImproChem(Pty) Ltd T/A AECI Water  
1 Wharhirst Road  
Umbogintwini - South Africa  
T +27(31) 949 8200

#### 1.4. Emergency telephone number

Emergency number : 0800 SPILLS or 0800 774557

### SECTION 2: Hazards identification

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

##### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Acute toxicity (inhal.), Category 4 H332

Acute toxicity (dermal), Category 4 H312

Acute toxicity (oral), Category 4 H302

Full text of H statements : see section 16

##### Adverse physicochemical, human health and environmental effects

Harmful in contact with skin. Harmful if inhaled. Harmful if swallowed.

# FLUORESCEIN

## Safety Data Sheet

according to Regulation (EU) 2015/830

### 2.2. Label elements

#### Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS07

Signal word (CLP) :

Warning

Hazard statements (CLP) :

H332 - Harmful if inhaled.  
H312 - Harmful in contact with skin.  
H302 - Harmful if swallowed.

Precautionary statements (CLP) :

P261.BIG - Avoid breathing dust.  
P270 - Do not eat, drink or smoke when using this product.  
P280 - Wear goggles, gloves, clothing and respiratory protection protective gloves, protective clothing  
P322 - Specific measures (see information on this label).  
P363 - Wash contaminated clothing before reuse.  
P304+P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

### 2.3. Other hazards

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

This mixture does not contain any substances to be mentioned according to the criteria of section 3.2 of REACH Annex II

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

First-aid measures general :

Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with laboured breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital. Call a poison center or a doctor if you feel unwell.

First-aid measures after inhalation :

Remove person to fresh air and keep comfortable for breathing. Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service. Call a poison center or a doctor if you feel unwell.

First-aid measures after skin contact :

Rinse with water. Take victim to a doctor if irritation persists. Wash skin with plenty of water. Take off contaminated clothing.

First-aid measures after eye contact :

Rinse immediately with plenty of water. Do not apply neutralizing agents. Take victim to an ophthalmologist if irritation persists. Rinse eyes with water as a precaution.

First-aid measures after ingestion :

Rinse mouth with water. Call Poison Information Centre ([www.big.be/antigif.htm](http://www.big.be/antigif.htm)). Consult a doctor/medical service if you feel unwell. Ingestion of large quantities: immediately to hospital. Rinse mouth. Call a poison center or a doctor if you feel unwell.

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

Symptoms/effects :

No data available.

Symptoms/effects after inhalation :

No effects known.

Symptoms/effects after skin contact :

No effects known.

Symptoms/effects after eye contact :

Irritation of the eye tissue.

Symptoms/effects after ingestion :

No effects known.

Symptoms/effects upon intravenous administration :

No effects known.

Chronic symptoms :

No effects known.

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

Treat symptomatically.

# FLUORESCEIN

## Safety Data Sheet

according to Regulation (EU) 2015/830

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

- Suitable extinguishing media : Water spray. Polyvalent foam. Alcohol-resistant foam. Polymer foam. ABC powder. Carbon dioxide. Water spray. Dry powder. Foam.
- Unsuitable extinguishing media : No unsuitable extinguishing media known.

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

- Fire hazard : DIRECT FIRE HAZARD. Combustible. INDIRECT FIRE HAZARD. Temperature above flashpoint: higher fire/explosion hazard.
- Explosion hazard : DIRECT EXPLOSION HAZARD. No data available on direct explosion hazard. INDIRECT EXPLOSION HAZARD. No data available on indirect explosion hazard.
- Hazardous decomposition products in case of fire : Toxic fumes may be released.

#### 5.3. Advice for firefighters

- Precautionary measures fire : Exposure to fire/heat: keep upwind. Exposure to fire/heat: have neighbourhood close doors and windows.
- Firefighting instructions : No specific fire-fighting instructions required.
- Protection during firefighting : Heat/fire exposure: compressed air/oxygen apparatus. Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

### SECTION 6: Accidental release measures

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

##### 6.1.1. For non-emergency personnel

- Protective equipment : Gloves. Safety glasses. Protective clothing. Dust cloud production: compressed air/oxygen apparatus.
- Emergency procedures : Ventilate spillage area. Mark the danger area. Prevent dust cloud formation, e.g. by wetting. No naked flames. Wash contaminated clothes. Avoid contact with skin, eyes and clothing. Avoid breathing dust/fume/gas/mist/vapours/spray.
- Measures in case of dust release : In case of dust production: keep upwind. Dust production: have neighbourhood close doors and windows. Dust production: stop engines and no smoking. In case of dust production: no naked flames or sparks. Dust: spark-/explosionproof appliances/lighting equipment.

##### 6.1.2. For emergency responders

- Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

#### 6.2. Environmental precautions

Avoid release to the environment.

#### 6.3. Methods and material for containment and cleaning up

- For containment : Contain released substance, pump into suitable containers. Plug the leak, cut off the supply. Knock down/dilute dust cloud with water spray. Powdered form: no compressed air for pumping over spills.
- Methods for cleaning up : Mechanically recover the product. Stop dust cloud by humidifying with water. Scoop solid spill into closing containers. Powdered: do not use compressed air for pumping over spills. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling.
- Other information : Dispose of materials or solid residues at an authorized site.

#### 6.4. Reference to other sections

For further information refer to section 13.

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

- Precautions for safe handling : Comply with the legal requirements. Clean contaminated clothing. Powdered form: no compressed air for pumping over. Avoid raising dust. Keep away from naked flames/heat. Finely divided: spark- and explosionproof appliances. Finely divided: keep away from ignition sources/sparks. Reduce/avoid exposure and/or contact. Keep container tightly closed. Observe normal hygiene standards. Carry operations in the open/under local exhaust/ventilation or with respiratory protection. Do not get in eyes, on skin, or on clothing. Wear personal protective equipment. Use only outdoors or in a well-ventilated area. Avoid breathing dust/fume/gas/mist/vapours/spray.
- Hygiene measures : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

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

- Technical measures : Facilities: shower, eye shower. Ensure adequate ventilation, especially in confined areas.
- Storage conditions : Store in a well-ventilated place. Keep cool.

# FLUORESCEIN

## Safety Data Sheet

according to Regulation (EU) 2015/830

Heat and ignition sources	: KEEP SUBSTANCE AWAY FROM: heat sources. ignition sources.
Information on mixed storage	: KEEP SUBSTANCE AWAY FROM: oxidizing agents.
Storage area	: Store in a dry area. Meet the legal requirements.
Special rules on packaging	: SPECIAL REQUIREMENTS: closing. dry. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.
Packaging materials	: SUITABLE MATERIAL: glass. MATERIAL TO AVOID: No data available.

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

No additional information available

### 8.2. Exposure controls

Appropriate engineering controls	: Ensure good ventilation of the work station.
Personal protective equipment	: Gloves, shoulder length. Protective clothing. Protective goggles. Safety Boots. Insufficient ventilation: wear respiratory protection.
Materials for protective clothing	: GIVE EXCELLENT RESISTANCE: No data available. GIVE GOOD RESISTANCE: No data available. GIVE LESS RESISTANCE: No data available. GIVE POOR RESISTANCE: No data available
Hand protection	: Protective gloves
Eye protection	: Protective goggles
Skin and body protection	: Protective clothing
Respiratory protection	: Dust production: dust mask with filter type P1. [In case of inadequate ventilation] wear respiratory protection.



Environmental exposure controls : Avoid release to the environment.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Crystalline powder.
Molecular mass	: 332.31 g/mol
Colour	: Yellow-red.
Odour	: No data available on odour.
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: 315 °C
Freezing point	: Not applicable
Boiling point	: No data available
Flash point	: Not applicable
Auto-ignition temperature	: Not applicable
Decomposition temperature	: 315 °C
Flammability (solid, gas)	: Non flammable.
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: Not applicable
Solubility	: Insoluble in water. Soluble in acetone. Soluble in bases. Water: insoluble
Partition coefficient n-octanol/water (Log Pow)	: 3.35 (Estimated value)

# FLUORESCEIN

## Safety Data Sheet

according to Regulation (EU) 2015/830

Viscosity, kinematic	: Not applicable
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: Not applicable

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Upon combustion: CO and CO<sub>2</sub> are formed.

### 10.2. Chemical stability

No data available.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

### 10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

### 10.5. Incompatible materials

No additional information available

### 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Harmful if inhaled. Harmful in contact with skin. Harmful if swallowed.

ATE CLP (oral)	500 mg/kg bodyweight
ATE CLP (dermal)	1100 mg/kg bodyweight
ATE CLP (gases)	4500 ppmv/4h
ATE CLP (vapours)	11 mg/l/4h
ATE CLP (dust,mist)	1.5 mg/l/4h

Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general : Not classified due to lack of data.

Ecology - air : Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009). Not included in the list of fluorinated greenhouse gases (Regulation (EC) No 842/2006). TA-Luft Klasse 5.2.5/l.

### 12.2. Persistence and degradability

<b>FLUORESCEIN (2321-07-5)</b>	
Persistence and degradability	Biodegradability in water: no data available. No (test)data on mobility of the substance available. Photolysis in the air.

### 12.3. Bioaccumulative potential

<b>FLUORESCEIN (2321-07-5)</b>	
Partition coefficient n-octanol/water (Log Pow)	3.35 (Estimated value)

# FLUORESCEIN

## Safety Data Sheet

according to Regulation (EU) 2015/830

### FLUORESCEIN (2321-07-5)

Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).
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#### 12.4. Mobility in soil

No additional information available

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

No additional information available

#### 12.6. Other adverse effects

No additional information available

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

Product/Packaging disposal recommendations : Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Dissolve or mix with a combustible solvent. Remove to an authorized incinerator equipped with an afterburner and a flue gas scrubber with energy recovery. Do not discharge into the sewer.

Additional information : LWCA (the Netherlands): KGA category 06. Hazardous waste according to Directive 2008/98/EC.

### SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

#### 14.1. UN number

UN-No. (ADR) : Not applicable  
UN-No. (IMDG) : Not applicable  
UN-No. (IATA) : Not applicable

#### 14.2. UN proper shipping name

Proper Shipping Name (ADR) : Not applicable  
Proper Shipping Name (IMDG) : Not applicable  
Proper Shipping Name (IATA) : Not applicable

#### 14.3. Transport hazard class(es)

##### ADR

Transport hazard class(es) (ADR) : Not applicable

##### IMDG

Transport hazard class(es) (IMDG) : Not applicable

##### IATA

Transport hazard class(es) (IATA) : Not applicable

#### 14.4. Packing group

Packing group (ADR) : Not applicable  
Packing group (IMDG) : Not applicable  
Packing group (IATA) : Not applicable

#### 14.5. Environmental hazards

Dangerous for the environment : No  
Marine pollutant : No  
Other information : No supplementary information available

#### 14.6. Special precautions for user

##### - Overland transport

Transport regulations (ADR) : Not subject

# FLUORESCEIN

## Safety Data Sheet

according to Regulation (EU) 2015/830

### - Transport by sea

Transport regulations (IMDG) : Not subject

### - Air transport

Transport regulations (IATA) : Not subject

### 14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

## SECTION 15: Regulatory information

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

#### 15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

#### 15.1.2. National regulations

##### Germany

Regulatory reference : WGK 3, Highly hazardous to water (Classification according to AwSV, Annex 1)

WGK remark : Internal classification water polluting based on standard worst-case evaluation points due to insufficient data

Hazardous Incident Ordinance (12. BImSchV) : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

### 15.2. Chemical safety assessment

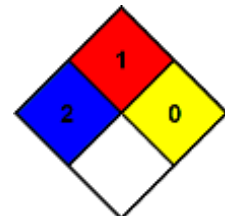
No chemical safety assessment has been carried out

## SECTION 16: Other information

NFPA health hazard : 2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.

NFPA fire hazard : 1 - Materials that must be preheated before ignition can occur.

NFPA reactivity : 0 - Material that in themselves are normally stable, even under fire conditions.



Full text of H- and EUH-statements:

Acute Tox. 4 (Dermal)	Acute toxicity (dermal), Category 4
Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H332	Harmful if inhaled.

SDS EU AECI Improchem

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