

# 5/6-Carboxyfluorescein NHS ester, mixed isomers (5/6-FAM-SE)

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Issue date: 4/24/2014 Revision date: 6/28/2023

Supersedes version of: 8/19/2022 Version: 2.1

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

#### 1.1. Product identifier

Product form	: Substance
Trade name	: 5/6-Carboxyfluorescein NHS ester, mixed isomers (5/6-FAM-SE)
CAS-No.	: 117548-22-8
Product code	: AF-0101
Type of product	: Synthesis Reagent
Formula	: C <sub>25</sub> H <sub>15</sub> NO <sub>9</sub>
Synonyms	: 5/6-Carboxyfluorescein-N-hydroxysuccinimide ester; 5-(and-6)-Carboxyfluorescein succinimidyl ester, mixed isomers; 5/6-FAM-NHS, mixed isomers; 5/6-FAM-SE, mixed isomers
Product group	: End product

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

##### 1.2.1. Relevant identified uses

Main use category	: Industrial use, Laboratory chemical
Industrial/Professional use spec	: For professional use only Industrial
Use of the substance/mixture	: Laboratory chemicals Substance manufacture
Function or use category	: Laboratory chemicals

##### 1.2.2. Uses advised against

No additional information available

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

emp Biotech GmbH  
Robert-Rössle-Str. 10  
13125 Berlin - Deutschland  
T +49 (0)30 94 89 22 01 (Monday-Friday, 9:00 am-5:00 pm) - F +49 (0)30 94 89 32 01  
[info@empbiotech.com](mailto:info@empbiotech.com) - [www.empbiotech.com](http://www.empbiotech.com)

#### 1.4. Emergency telephone number

Emergency number	: Giftnotruf Berlin +49 30 30686700 (Beratung in Deutsch), 24 Stunden, 7 Tage/Woche; International: INFOTRAC +1-352-323-3500 (Phone) or in the US 800-535-5053 (toll-free), 24 hours/day, 7 days/week
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### SECTION 2: Hazards identification

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

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

Not classified

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

No additional information available

#### 2.2. Label elements

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

##### Labelling according to Directive 67/548/EEC or 1999/45/EC

#### 2.3. Other hazards

Other hazards which do not result in classification	: This substance / mixture does not contain any components of 0.1% or higher that are either classified as persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB).
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### SECTION 3: Composition/information on ingredients

#### 3.1. Substances

Substance type : Mono-constituent

Name	Product identifier	%
1-[[[3',6'-dihydroxy-3-oxospiro-[isobenzofuran-1(3H), 9'-[9H]xanthen]-5(or 6)-yl]carbonyl]oxy]-2,5-Pyrrolidine-dione	(CAS-No.) 117548-22-8	100

Full text of H-statements: see section 16

#### 3.2. Mixtures

Not applicable

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

First-aid measures general	: Consult a doctor. Show this safety data sheet to the doctor in attendance.
First-aid measures after inhalation	: Move person to fresh air and ensure comfortable breathing. Give oxygen or artificial respiration if necessary. If experiencing respiratory symptoms: Call a poison center or a doctor.
First-aid measures after skin contact	: Gently wash with plenty of soap and water.
First-aid measures after eye contact	: Ask for medical advice. Rinse cautiously with water for several minutes.
First-aid measures after ingestion	: Rinse mouth out with water. Do not give an unconscious person anything to drink.

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

Symptoms/effects : The most important known symptoms and effects are described on the label (see 2.2) and / or in section 11.

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

No additional information available

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

Suitable extinguishing media : Dry chemical, CO<sub>2</sub>, alcohol-resistant foam or waterspray.

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

Hazardous decomposition products in case of fire : Carbon oxides. Nitrous gases (NO<sub>x</sub>). In case of fire: hazardous combustion gases or vapors possible.

#### 5.3. Advice for firefighters

Protection during firefighting : Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable 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 : For personal protection see section 8.  
Emergency procedures : Avoid creating or spreading dust. Do not breathe vapour, mist or gas. Ensure adequate ventilation, observe emergency procedures, consult an expert.

##### 6.1.2. For emergency responders

Protective equipment : Wear recommended personal protective equipment.  
Emergency procedures : Ventilate area.

#### 6.2. Environmental precautions

Avoid release to the environment.

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

Methods for cleaning up : Shovel or sweep up and put in a closed container for disposal.

#### 6.4. Reference to other sections

Information on exposure controls/personal protective equipment and on Instructions for disposal can be found in sections 8 and 13.

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

Precautions for safe handling : Provide appropriate exhaust ventilation at places of dust forming. Avoid contact with skin, eyes and clothing. Avoid dust formation.

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Hygiene measures : Take off immediately all contaminated clothing and wash it before reuse. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

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

Storage conditions : Keep container tightly closed in a well-ventilated, dry place. Store in cool place. Keep contents under inert gas. Protect from moisture.  
Storage temperature : -20 °C  
Storage area : Storage class (TRGS 510): See section 15.1.2.

### 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

#### 5/6-Carboxyfluorescein NHS ester, mixed isomers (5/6-FAM-SE) (117548-22-8)

Germany	Contains no substances with occupational exposure limits
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### 8.2. Exposure controls

#### Hand protection:

The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it. 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.

#### Eye protection:

Wear closed safety glasses. EN 166

#### Skin and body protection:

The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. Flame retardant antistatic protective clothing

#### Respiratory protection:

Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or EN (EU).



#### Environmental exposure controls:

No special environmental precautions required.

## SECTION 9: Physical and chemical properties

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

Physical state : Solid  
Appearance : Powders.  
Molecular mass : 473.4 g/mol  
Colour : Light red to Orange.  
Odour : No data available  
Odour threshold : No data available  
pH : No data available  
Relative evaporation rate (butylacetate=1) : No data available  
Melting point : No data available  
Freezing point : No data available  
Boiling point : No data available  
Flash point : No data available  
Auto-ignition temperature : No data available

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Decomposition temperature	: No data available
Flammability	: No data available
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Solubility	: No data available
Partition coefficient n-octanol/water (Log Pow)	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

### 9.2. Other information

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No additional information available

### 10.2. Chemical stability

Stable under the specified storage conditions.

### 10.3. Possibility of hazardous reactions

No additional information available

### 10.4. Conditions to avoid

Moisture. Light sensitive.

### 10.5. Incompatible materials

Strong oxidizing agents. Water. Strong bases. Amines.

### 10.6. Hazardous decomposition products

In the event of fire: see section 5.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity	: Not classified
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

Other information : To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

## SECTION 12: Ecological information

### 12.1. Toxicity

No additional information available

### 12.2. Persistence and degradability

No additional information available

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### 12.3. Bioaccumulative potential

No additional information available

### 12.4. Mobility in soil

No additional information available

### 12.5. Results of PBT and vPvB assessment

#### 5/6-Carboxyfluorescein NHS ester, mixed isomers (5/6-FAM-SE) (117548-22-8)

Results of PBT 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

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Waste treatment methods : Offer surplus and non-recyclable solutions to a licensed disposal company.  
Product/Packaging disposal recommendations : Contaminated packaging to be disposed as unused product.

## SECTION 14: Transport information

In accordance with ADR / IMDG / IATA

ADR	IMDG	IATA
<b>14.1. UN number</b>		
Not applicable	Not applicable	Not applicable
<b>14.2. UN proper shipping name</b>		
Not applicable	Not applicable	Not applicable
<b>14.3. Transport hazard class(es)</b>		
Not applicable	Not applicable	Not applicable
Not applicable	Not applicable	Not applicable
<b>14.4. Packing group</b>		
Not applicable	Not applicable	Not applicable
<b>14.5. Environmental hazards</b>		
Not applicable	Not applicable	Not applicable
No supplementary information available		

### 14.6. Special precautions for user

#### - Overland transport

Not applicable

#### - Transport by sea

Not applicable

#### - Air transport

Not applicable

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

## SECTION 15: Regulatory information

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

#### 15.1.1. EU-Regulations

No REACH Annex XVII restrictions

5/6-Carboxyfluorescein NHS ester, mixed isomers (5/6-FAM-SE) is not on the REACH Candidate List

5/6-Carboxyfluorescein NHS ester, mixed isomers (5/6-FAM-SE) is not on the REACH Annex XIV List

#### 15.1.2. National regulations

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### Germany

Regulatory reference	: WGK 2, Significantly hazardous to water
WGK remark	: internal company classification
Storage class (LGK, TRGS 510)	: LGK 13 - Non-combustible solids
Employment restrictions	: Observe restrictions according Act on the Protection of Working Mothers (MuSchG) Observe restrictions according Act on the Protection of Young People in Employment (JArbSchG)
Hazardous Incident Ordinance (12. BImSchV)	: Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

### 15.2. Chemical safety assessment

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

## SECTION 16: Other information

MSDS (Reach Anhang II) EMP

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.*