

# SAFETY DATA SHEET

According to 1907/2006/EC, Article 31



**Pefafluor® tPA**

**091-06**

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

### 1.1 Product identifier

Trade name Pefafluor® tPA  
Article number 091-06

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

Application of the substance / the mixture Fluorogenic peptide substrate  
Diagnostic reagent

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

Manufacturer/Supplier DSM Nutritional Products Ltd Branch Pentapharm  
Dornacherstrasse 112  
CH- 4147 Aesch BL / Switzerland  
Phone +41 61 706 48 48  
Fax +41 61 706 48 00  
Further information obtainable from pentapharm@pentapharm.com

### 1.4 Emergency telephone number

Tox Info Suisse : +41 44 251 51 51 (24h; 7 days a week)

## 2 Hazards identification

### 2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008  
The product is not classified according to the CLP regulation.

### 2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 Void  
Hazard pictograms Void  
Signal word Void  
Hazard statements Void

#### Additional information

The health hazards for this substance have not been thoroughly investigated.

### 2.3 Other hazards

#### Results of PBT and vPvB assessment

PBT: According to current knowledge, the product contains no PBT substance.

vPvB: According to current knowledge, the product contains no vPvB substance.

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## 3 Composition/information on ingredients

### 3.1 Chemical characterization

#### Description

Fluorogenic peptide substrate bound to 7-Amino-4-methylcoumarin group (AMC). Free AMC is classified as irritating. The irritating properties of AMC may be present also when bound to a peptide.

#### Chemical characterization

CH<sub>3</sub>SO<sub>2</sub>-D-Phe-Gly-Arg-AMC · AcOH

#### Name

amino(((S)-5-((4-methyl-2-oxo-2H-chromen-7-yl)amino)-4-(2-((R)-2-(methylsulfonamido)-3-phenylpropanamido)acetamido)-5-oxopentyl)amino)methaniminium acetate

| Dangerous components |                                                                                                                                            |          |
|----------------------|--------------------------------------------------------------------------------------------------------------------------------------------|----------|
| CAS: 26093-31-2      | 7-amino-4-methylcoumarin                                                                                                                   | 0,1 - 1% |
| EINECS: 247-454-8    |  Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335 |          |

#### SVHC

According to current knowledge no SVHC contained.

#### Additional information

For the wording of the listed risk phrases refer to section 16.

## 4 First aid measures

### 4.1 Description of first aid measures

#### General information

No special measures required.

#### After inhalation

Remove person to fresh air and keep comfortable for breathing.

If experiencing respiratory symptoms: Call a POISON CENTER/doctor.

#### After skin contact

Wash with plenty of soap and water.

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

#### After eye contact

Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical advice/attention.

#### After swallowing

Immediately call a POISON CENTRE/doctor.

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

No further relevant information available.

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

No further relevant information available.

## 5 Firefighting measures

### 5.1 Extinguishing media

Suitable extinguishing agents

CO<sub>2</sub>, dry chemical powder, or appropriate foam.

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

No further relevant information available.

### 5.3 Advice for firefighters

Protective equipment

Wear self-contained respiratory protective device.

Wear protective clothing to prevent contact with skin and eyes.

## 6 Accidental release measures

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

Avoid skin and eye contact and aerosol inhalation.

### 6.2 Environmental precautions

Do not allow product to reach sewage system or any water course.

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

Pick up mechanically.

Collect in suitable containers.

Clean the affected area carefully and ensure adequate ventilation.

Avoid dust formation.

### 6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

## 7 Handling and storage

### 7.1 Precautions for safe handling

Avoid skin and eye contact and particle inhalation.

**Information about fire - and explosion protection**

No special measures required.

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

#### **Storage**

##### **Requirements to be met by storerooms and receptacles**

No special requirements.

##### **Information about storage in one common storage facility**

Not required.

##### **Further information about storage conditions**

Store the product in a dry place protected from light at a temperature between +2 to +8°C.

### 7.3 Specific end use(s)

No further relevant information available.

## 8 Exposure controls/personal protection

### 8.1 Control parameters

#### **Ingredients with limit values that require monitoring at the workplace**

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

#### **Additional information**

The lists valid during the making were used as basis.

### 8.2 Exposure controls

#### **Personal protective equipment**

##### **General protective and hygienic measures**

The usual precautionary measures are to be adhered to when handling chemicals.

Ensure good ventilation/exhaustion at the workplace.

Wash hands before breaks and at the end of work.

##### **Respiratory protection**

Use suitable respiratory protective device in case of insufficient ventilation.

##### **Protection of hands**



Protective gloves

#### **Material of gloves**

Protective gloves must be compliant with the specifications of EU Directive 89/686/EEC and be in accordance with the standard EN374. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

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### Eye protection



Safety glasses

Protective goggles must be compliant with the specifications of Directive 89/686/EEC and be in accordance with the standard EN166.

### Limitation and supervision of exposure into the environment

Do not allow to enter sewers / surface or ground water.

## 9 Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

|                                         |                                               |
|-----------------------------------------|-----------------------------------------------|
| <b>General Information</b>              |                                               |
| <b>Appearance</b>                       |                                               |
| Form                                    | Powder.                                       |
| Colour                                  | White to slightly off-white.                  |
| Odour                                   | Odourless.                                    |
| Odour threshold                         | Not determined.                               |
| pH-value                                | Not determined.                               |
| <b>Change in condition</b>              |                                               |
| Melting point/Melting range             | Not determined.                               |
| Boiling point/Boiling range             | Not determined.                               |
| Flash point                             | Not applicable.                               |
| Flammability (solid, gaseous)           | Not determined.                               |
| <b>Ignition temperature</b>             |                                               |
| Decomposition temperature               | Not determined.                               |
| Self-igniting                           | Product is not self-igniting.                 |
| Danger of explosion                     | Product does not present an explosion hazard. |
| <b>Explosion limits</b>                 |                                               |
| Lower                                   | Not determined.                               |
| Upper                                   | Not determined.                               |
| Oxidising properties                    | Not determined.                               |
| Vapour pressure                         | Not applicable.                               |
| <b>Density</b>                          |                                               |
| Relative density                        | Not determined.                               |
| Vapour density                          | Not determined.                               |
| Evaporation rate                        | Not applicable.                               |
| <b>Solubility in / Miscibility with</b> |                                               |

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|                                         |                 |
|-----------------------------------------|-----------------|
| Water                                   | Soluble.        |
| Partition coefficient (n-octanol/water) | Not determined. |
| Viscosity                               |                 |
| Dynamic                                 | Not applicable. |
| Kinematic                               | Not applicable. |
| Solvent content                         |                 |
| VOC (EC)                                | Not determined. |
| VOCV (CH)                               | Not determined. |

### 9.2 Other information

No further relevant information available.

## 10 Stability and reactivity

### 10.1 Reactivity

No further relevant information available.

### 10.2 Chemical stability

No information available.

**Thermal decomposition / conditions to be avoided**

No decomposition if used according to specifications.

### 10.3 Possibility of hazardous reactions

No dangerous reactions known.

### 10.4 Conditions to avoid

Heat may cause this product to decompose.

### 10.5 Incompatible materials

No further relevant information available.

### 10.6 Hazardous decomposition products

7-Amino-4-methylcumarin

## 11 Toxicological information

### 11.1 Information on toxicological effects

**Acute toxicity**

No data available.

**Primary irritant effect**

**Skin corrosion/irritation**

Non-classification of the product is based on the calculation method and the total concentration of 7-Amino-4-methylcumarin (free and bound to the peptide). The health hazards for 7-Amino-4-methylcumarin bound to the peptide have not been thoroughly investigated.

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### Serious eye damage/irritation

Non-classification of the product is based on the calculation method and the total concentration of 7-Amino-4-methylcumarin (free and bound to the peptide). The health hazards for 7-Amino-4-methylcumarin bound to the peptide have not been thoroughly investigated.

### Respiratory or skin sensitisation

Sensitisation possible through inhalation.

Sensitisation possible through skin contact.

### Other information

The toxicological properties of this product have not been thoroughly investigated. Use appropriate precautions. May be harmful by inhalation, ingestion, or skin absorption.

### Repeated dose toxicity

No data available.

### CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)

No CMR effects known.

## 12 Ecological information

### 12.1 Toxicity

#### Aquatic toxicity

No further relevant information available.

### 12.2 Persistence and degradability

No further relevant information available.

### 12.3 Bioaccumulative potential

No further relevant information available.

### 12.4 Mobility in soil

No further relevant information available.

### 12.5 Results of PBT and vPvB assessment

#### PBT

According to current knowledge, the product contains no PBT substance.

#### vPvB

According to current knowledge, the product contains no vPvB substance.

### 12.6 Other adverse effects

No further relevant information available.

## 13 Disposal considerations

### 13.1 Waste treatment methods

Recommendation: Disposal must be made according to official regulations.

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\* = hazardous waste

Recommendation: Disposal must be made according to official regulations.

## UN "Model Regulation" -

None of the ingredients is listed.



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### National regulations

#### Waterhazard class

1 (Self-assessment): slightly hazardous to water.

### 15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

## 16 Other information

All information and instructions provided in this Safety Data Sheet are based on the current state of scientific and technical knowledge at the date indicated on this Safety Data Sheet. DSM Nutritional Products Ltd Branch Pentapharm shall not be held responsible for any defect in the product covered by this Safety Data Sheet, should the existence of such a defect not be detectable considering the current state of scientific and technical knowledge.

### Relevant phrases

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

### Abbreviations and acronyms

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOCV: Lenkungsabgabe auf flüchtigen organischen Verbindungen, Schweiz (Swiss Ordinance on volatile organic compounds)

VOC: Volatile Organic Compounds (USA, EU)

Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2

STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3