

# SAFETY DATA SHEET

According to 1907/2006/EC, Article 31



**Tos-Gly-Pro-Arg-ACP·AcOH**

**602-01**

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

### 1.1 Product identifier

Trade name Tos-Gly-Pro-Arg-ACP·AcOH  
Article number 602-01

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

Application of the substance / the mixture 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 substance 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: Substances

#### Description

Tos-Gly-Pro-Arg-4-amido-2-chlorophenol acetate salt

#### Additional information

CAS number: 289055-13-6 (net peptide)

Chemical formula:  $C_{26}H_{34}ClN_7O_6S$  (net peptide)

Molecular weight: 608.1 g/mol (net peptide)

Free 4-Amino-2-Chlorophenol is harmful if swallowed, is harmful in contact with skin, is harmful if inhaled, causes skin irritation, causes serious eye irritation, and may cause respiratory irritation. The toxic and irritating properties of 4-Amino-2-Chlorophenol may be present also when bound to a peptide. Amperometric substrates are per se not volatile.

#### SVHC

According to current knowledge no SVHC contained.

## 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 or 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 or doctor.

### 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

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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 particle 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.

### 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.

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### 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**

A limit value has not been defined.

#### **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.

Respiratory protection must be compliant with the specifications of Directive 89/686/EEC and be in accordance with the EN standards resulting thereof.

#### **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 product to reach sewage system or any water course.

## 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 off-white with a slight shade of red
Odour	Not determined.
Odour threshold	Not determined.
<b>pH-value</b>	Not determined.
<b>Change in condition</b>	
Melting point/Melting range	Not determined.
Boiling point/Boiling range	Not determined.
<b>Flash point</b>	Not applicable.
<b>Flammability (solid, gaseous)</b>	Not determined.
<b>Ignition temperature</b>	
Decomposition temperature	Not determined.
<b>Self-igniting</b>	Product is not self-igniting.
<b>Danger of explosion</b>	Product does not present an explosion hazard.
<b>Explosion limits</b>	
Lower	Not determined.
Upper	Not determined.
Oxidising properties	Not determined.
<b>Vapour pressure</b>	Not applicable.
<b>Density</b>	
Relative density	Not determined.
Vapour density	Not determined.
Evaporation rate	Not applicable.
<b>Solubility in / Miscibility with</b>	
Water	Not determined.

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Partition coefficient (n-octanol/water)	Not determined.
<b>Viscosity</b>	
Dynamic	Not applicable.
Kinematic	Not applicable.
<b>Solvent content</b>	
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

4-Amino-2-Chlorophenol

## 11 Toxicological information

### 11.1 Information on toxicological effects

#### **Acute toxicity**

Non-classification of the product is based on the calculation method and the total concentration of 4-Amino-2-Chlorophenol (free and bound to the peptide). The health hazards for 4-Amino-2-Chlorophenol bound to the peptide have not been thoroughly investigated.

May be harmful by inhalation, ingestion, or skin absorption.

#### **Skin corrosion/irritation**

Skin irritation possible. The health hazards for 4-Amino-2-Chlorophenol bound to the peptide have not been thoroughly investigated.

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### **Serious eye damage/irritation**

Serious eye irritation possible. The health hazards for 4-Amino-2-Chlorophenol bound to the peptide have not been thoroughly investigated.

### **Respiratory or skin sensitization**

The sensitizing properties of this product have not been thoroughly investigated.

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. Free 4-Amino-2-Chlorophenol is harmful if swallowed, is harmful in contact with skin, is harmful if inhaled, causes skin irritation, causes serious eye irritation, and may cause respiratory irritation. The toxic and irritating properties of 4-Amino-2-Chlorophenol may be present also when bound to a peptide.

### **Germ cell mutagenicity**

Based on available data, the classification criteria are not met.

### **Carcinogenicity**

Based on available data, the classification criteria are not met.

### **Reproductive toxicity**

Based on available data, the classification criteria are not met.

### **STOT-single exposure**

Respiratory irritation possible. The health hazards for 4-Amino-2-Chlorophenol bound to the peptide have not been thoroughly investigated.

### **STOT-repeated exposure**

Based on available data, the classification criteria are not met.

### **Aspiration hazard**

Based on available data, the classification criteria are not met.

## 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.

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**PBT**

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

**vPvB**

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

No further relevant information available.

### 13.1 Waste treatment methods

Recommendation: Disposal must be made according to official regulations.

## European waste catalogue

The Swiss waste code is identical

In Switzerland codes for hazardous waste are marked with an „S“ (“Sonderabfall”) instead of an asterisk.

18 00 00	WASTES FROM HUMAN OR ANIMAL HEALTH CARE AND/OR RELATED RESEARCH (except kitchen and restaurant wastes not arising from immediate health care)
18 01 00	wastes from natal care, diagnosis, treatment or prevention of disease in humans
18 01 06*	chemicals consisting of or containing dangerous substances

\* = hazardous waste

### Uncleaned packaging

Recommendation: Disposal must be made according to official regulations.

## 14 Transport information

### 14.1 UN-number

ADR, ADN, ADN, IMDG, IATA Void

## 14.2 UN Proper shipping name

ADR, ADN, ADN, IMDG, IATA Void

### 14.3 Transport hazard class(es)

ADR, ADN, ADN, IMDG, IATA Class	Void
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## 14.4 Packing group

ADR, ADN, IMDG, IATA Void



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**14.5 Environmental hazards** Not applicable.

**14.6 Special precautions for user** Not applicable.

**14.7 Transport in bulk according to Annex II of Marpol and the IBC Code** Not applicable.

### Transport/Additional information

#### ADR/AND

Remarks Not classified.

#### IMDG

Remarks Not classified.

#### IATA

Remarks Not classified.

UN "Model Regulation" Void

## 15 Regulatory information

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

### Directive 2012/18/EU

#### Named dangerous substances - ANNEX I

Substance is not listed.

#### National regulations

#### Waterhazard class

Water hazard 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.

### 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

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

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

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VOC: Volatile Organic Compounds (USA, EU)

PBT: Persistent, Bioaccumulative and Toxic

SVHC: Substances of Very High Concern

vPvB: very Persistent and very Bioaccumulative

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