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## MATERIAL SAFETY DATA SHEET

Orotic acid anhydrous

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

#### 1.1 Product identifiers

Product name : Orotic acid anhydrous

CAS-No. : 65-86-1

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

Identified uses : Laboratory chemicals, Manufacture of substances

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

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

Skin irritation (Category 2), H315

Eye irritation (Category 2), H319

Specific target organ toxicity-single exposure (Category 3)

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

Irritating to eyes, respiratory system and skin.

#### 2.2 Label elements

Labelling according Regulation (EC) No 1272/2008 <CLP>



Pictogram

Signal word

warning

Hazard statement(s)

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

Precautionary statement(s)

P261 Avoid breathing dust/ fume/ gas/ vapours/ spray.

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

Supplemental Hazard Statements none

According to European Directive 67/548/EEC as amended.



Hazard symbol(s)

R-phrases(s)

R36/37/38 Irritating to eyes, respiratory system and skin.

S-phrases(s)

S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S36 Wear suitable protective clothing.

Caution-substance not yet tested completely.

#### 2.3 Other hazards -none

### SECTION 3: Composition/information on ingredients

#### 3.1 Substances

Chemical characterization:

Formula :  $C_5H_4N_2O_4$

Molecular weight : 156.1 g/mol

CAS-No. : 65-86-1

## **SECTION 4: First aid measures**

### **4.1 Description of first aid measures**

#### **General advice**

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.

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

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

No data available

## **SECTION 5: Firefighting measures**

### **5.1 Extinguishing media**

#### **Suitable extinguishing media**

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

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

Carbon oxides, Nitrogen oxides (NO<sub>x</sub>)

### **5.3 Advice for firefighters**

Wear self-contained breathing apparatus for firefighting if necessary.

### **5.4 Further information**

No data available

## **SECTION 6: Accidental release measures**

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

Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personal to safe areas. Avoid breathing dust.

### **6.2 Environmental precautions**

Do not let product enter drains.

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

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

## 6.4 Reference to other sections

For disposal see section 13.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

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

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

### 7.3 Specific end use(s)

No data available.

## 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

Safety glasses with side-shields conforming to EN166. 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.

##### Body Protection

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

##### Respiratory protection

For nuisance exposures, use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

- |   |                   |
|---|-------------------|
| a) Appearance                                   | Form: powder      |
|   | Colour: white     |
| b) Odour  | No data available |
| c) Odour Threshold                              | No data available |
| d) pH   | No data available |
| e) Melting point/freezing point                 | >300°C            |
| f) Initial boiling point and boiling range      | No data available |
| g) Flash point                                  | No data available |
| h) Evaporation rate                             | No data available |
| i) Flammability (solid, gas)                    | No data available |
| j) Upper/lower flammability or explosive limits | No data available |
| k) Vapour pressure                              | No data available |
| l) Vapour density                               | No data available |
| m) Relative density                             | No data available |

- n) Water solubility No data available  
o) Partition coefficient: n- low Pow: No data available.  
octanol/water  
p) Auto-ignition temperature No data available  
q) Decomposition temperature No data available

- r) Viscosity No data available  
s) Explosive properties No data available  
t) Oxidizing properties No data available

**9.2 Other safety information**  
No data available

**SECTION 10: Stability and reactivity**

**10.1 Reactivity**

No data available

**10.2 Chemical stability**

Stable under recommended storage conditions.

**10.3 Possibility of hazardous reactions**

No data available

**10.4 Conditions to avoid**

No data available

**10.5 Incompatible materials**

Strong oxidizing agents

**10.6 Hazardous decomposition products**

Other decomposition products -No data available

In the event of fire: see section 5

**SECTION 11: Toxicological information**

**11.1 Information on toxicological effects**

**Acute toxicity**

No data available

**Skin corrosion/irritation**

No data available

**Serious eye damage/eye irritation**

No data available

**Respiratory or skin sensitisation**

No data available

**Germ cell mutagenicity**

No data available

**Carcinogenicity**

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**Reproductive toxicity**

No data available

**Specific target organ toxicity -single exposure**

Inhalation-May cause respiratory irritation.

**Specific target organ toxicity -repeated exposure**

No data available

**Aspiration hazard**

No data available

**Potential health effects**

**Inhalation**

May be harmful if inhaled. Causes respiratory tract irritation.

**Ingestion**

May be harmful if swallowed.

**Skin**  
**Eyes**

May be harmful if absorbed through skin. Causes skin irritation.  
Causes serious eyes irritation.

**Additional Information**

RTECS: not available.

**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

**12.5 Results of PBT and vPvB assessment**

No data available.

**12.6 Other adverse effects**

No data available

**SECTION 13: Disposal considerations**

**13.1 Waste treatment methods**

**Product**

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipment with an afterburner and scrubber.

**Contaminated packaging**

Dispose of as unused product.

**SECTION 14: Transport information**

**14.1 UN number**

ADR/RID: -      IMDG: -      IATA: -

**14.2 UN proper shipping name**

ADR/RID:      Not dangerous goods

IMDG:      Not dangerous goods

IATA:      Not dangerous goods

**14.3 Transport hazard class(es)**

ADR/RID: -      IMDG: -      IATA: -

**14.4 Packaging group**

ADR/RID: -      IMDG: -      IATA: -

**14.5 Environmental hazards**

ADR/RID: no      IMDG Marine pollutant: no      IATA: no

**14.6 Special precautions for user**

No data available

**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**

No data available.

**SECTION 16: Other information**

**Further information**

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.