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Revision Number 1

## 1. PRODUCT AND COMPANY IDENTIFICATION

### Product Identifier

#### Product Description:

L-Tyrosine

#### Cat No.

140640000; 140640010; 140640025; 140640050; 140641000

#### Synonyms

3-(4-Hydroxyphenyl)-L-alanine; Tyr

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

#### Recommended Use

Laboratory chemicals

#### Uses advised against

No Information available

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

#### Company

Acros Organics BVBA  
Janssen Pharmaceuticaaan 3a  
2440 Geel, Belgium

#### E-mail address

begel.sdsdesk@thermofisher.com

#### Emergency Telephone Number

For information in the US, call: 800-ACROS-01

For information in Europe, call: +32 14 57 52 11

Emergency Number, Europe: +32 14 57 52 99

Emergency Number, US: 201-796-7100

CHEMTREC Phone Number, US: 800-424-9300

CHEMTREC Phone Number, Europe: 703-527-3887

## 2. HAZARDS IDENTIFICATION

### Classification of the substance or mixture

#### REGULATION (EC) No 1272/2008

Skin Corrosion / irritation	Category 2
Serious Eye Damage/Eye Irritation	Category 2A
Specific target organ systemic toxicity (single exposure)	Category 3

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

For the full text of the R phrases mentioned in this Section, see Section 16

#### Symbol(s)

Xi - Irritant

#### R -phrase(s)

none

#### Risk Combination Phrases

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

### Label Elements

(Too many files)

#### Signal Word

Warning

#### Hazard Statements

H335 - May cause respiratory irritation

H319 - Causes serious eye irritation

H315 - Causes skin irritation

**Precautionary Statements - EU (§28, 1272/2008)**

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray

P302+ P352 - IF ON SKIN: Wash with plenty of soap and water

P280 - Wear protective gloves/protective clothing/eye protection/face protection

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

**Other Hazards**

No information available.

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Component	EC No.	Weight %	CAS-No	Classification	GHSCLAS
L-Tyrosine	EEC No. 200-460-4	>95	60-18-4	Xi; R36/37/38	STOT SE 3 (H335) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319)

For the full text of the R phrases mentioned in this Section, see Section 16

**4. FIRST AID MEASURES****Description of first aid measures****Eye Contact**

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes Obtain medical attention

**Skin Contact**

Wash off immediately with plenty of water for at least 15 minutes Obtain medical attention

**Ingestion**

Do not induce vomiting Obtain medical attention

**Inhalation**

Move to fresh air If breathing is difficult, give oxygen Obtain medical attention

**Notes to Physician**

Treat symptomatically

**5. FIRE-FIGHTING MEASURES****Extinguishing media****Suitable Extinguishing Media**

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

**Extinguishing media which must not be used for safety reasons**

No information available.

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

Thermal decomposition can lead to release of irritating gases and vapors

**Advice for fire-fighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear Thermal decomposition can lead to release of irritating gases and vapors

## 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation Use personal protective equipment Avoid dust formation

### Environmental precautions

Should not be released into the environment

### Methods and material for containment and cleaning up

Sweep up or vacuum up spillage and collect in suitable container for disposal Avoid dust formation

## 7. HANDLING AND STORAGE

### Precautions for Safe Handling

Wear personal protective equipment Ensure adequate ventilation Do not get in eyes, on skin, or on clothing Avoid ingestion and inhalation Avoid dust formation

### Conditions for safe storage, including any incompatibilities

Keep containers tightly closed in a dry, cool and well-ventilated place

### Specific End Uses

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### Control parameters

#### Exposure limits

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

#### Derived No Effect Level (DNEL)

No information available.

#### Predicted No Effect Concentration (PNEC)

No information available.

### Exposure controls

#### Engineering Measures

Ensure that eyewash stations and safety showers are close to the workstation location Ensure adequate ventilation, especially in confined areas

#### Personal protective equipment

##### Eye Protection

Goggles

##### Hand Protection

Protective gloves

##### Skin and body protection

Wear appropriate protective gloves and clothing to prevent skin exposure

##### Respiratory Protection

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced

#### Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice

#### Environmental exposure controls

No information available.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

#### Physical State

Solid

#### Appearance

White

#### odor

odorless

#### pH

5.5-7.0 0.4 % solution

#### Vapor Pressure

No information available.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Vapor Density	No information available.
Boiling Point/Range	No information available.
Melting Point/Range	290°C / 554°F
Flash Point	176°C / 348.8°F
Water Solubility	0.45 g/L (25°C)
Molecular Formula	C9 H11 N O3
Molecular Weight	181.19

## 10. STABILITY AND REACTIVITY

### Reactivity

#### Chemical Stability

Stable under normal conditions.

#### Possibility of Hazardous Reactions

##### Hazardous Polymerization

Hazardous polymerization does not occur.

##### Hazardous Reactions .

None under normal processing..

#### Conditions to Avoid

Incompatible products, Excess heat, Avoid dust formation, Exposure to light.

#### Incompatible Materials

Strong oxidizing agents.

#### Hazardous Decomposition Products

Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>). Nitrogen oxides (NO<sub>x</sub>).

## 11. TOXICOLOGICAL INFORMATION

### Information on Toxicological Effects

#### Acute Toxicity

##### Product Information

See actual entry in RTECS for complete information.

#### Component Information

##### Component

L-Tyrosine

	LD50 Oral	LD50 Dermal	LC50 Inhalation
L-Tyrosine	>5110 mg/kg (rat)		

#### Chronic Toxicity

##### Carcinogenicity

There are no known carcinogenic chemicals in this product

##### Sensitization

No information available.

##### Mutagenic Effects

No information available

##### Reproductive Effects

No information available.

##### Developmental Effects

No information available.

##### Target Organs

Skin Respiratory system Eyes

##### Other Adverse Effects

The toxicological properties have not been fully investigated.

##### Endocrine Disruptor Information

None known

## 12. ECOLOGICAL INFORMATION

**Toxicity****Ecotoxicity effects**

Do not empty into drains

**Persistence and degradability**

No information available

**Bioaccumulative potential**

No information available.

Component	log Pow
L-Tyrosine	-2.26

**Mobility in soil**

No information available.

**Results of PBT and vPvB assessment****Other adverse effects**

No information available

## 13. DISPOSAL CONSIDERATIONS

**Waste treatment methods****Waste from Residues / Unused Products**

Dispose of in accordance with local regulations

**Contaminated Packaging**

Empty containers should be taken for local recycling, recovery or waste disposal

## 14. TRANSPORT INFORMATION

**IMDG/IMO**

Not regulated

**ADR**

Not regulated

**IATA**

Not regulated

## 15. REGULATORY INFORMATION

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

Component	EINECS	ELINCS	NLP	TSCA	DSL	NDSL	PICCS	ENCS	CHINA	AICS	KECL
L-Tyrosine	200-460-4	-		X	X	-	X	X	X	X	KE-01396 X

**Legend****TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory**EINECS/ELINCS** - European Inventory Lists**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**ENCS** - Japan Existing and New Chemical Substances  
**CHINA** - China Inventory of Existing Chemical Substances  
**AICS** - Inventory of Chemical Substances  
**KECL** - Existing and Evaluated Chemical Substances

### Chemical Safety Assessment

## 16. OTHER INFORMATION

### Text of R phrases mentioned in Section 2-3

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

Revision Date 01-Nov-2010

Revision Summary Not applicable

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

### Disclaimer

The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text

End of Safety Data Sheet