

Material Safety Data Sheet

Section 1 - Chemical Product and Company Identification

MSDS Name: (S)-(+)- Mandelic acid
Synonyms: (S)-2-Hydroxy-2-phenylacetic acid
Company Identification: PI Chemicals Ltd.
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Zhangjiang Hi-Tech Park
Pudong New Area, Shanghai China, 201203
Telephone Number: 86-21-58953700
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Section 2 - Product Information

Catalog Number: PI-10351
CAS Number: 17199-29-0
MDL Number: MFCD00004495
EC Number: 241-240-8
Purity: 98%

Section 3 - Physical and Chemical Properties

Physical state: Powder
Color: White crystalline
Odor: Not available
Molecular Formula: C₈H₈O₃
Molecular Weight: 152.15
Freezing/Melting Point: 131 - 134 °C
Boiling Point: Not available
Flash Point: Not available
Autoignition Temperature: Not available
Refractive Index (n_D20): Not available
Density: Not available
Decomposition Temperature: Not available
Solubility: Not available

Section 4 - Hazards Identification

Eye: Causes eye irritation.

<i>Skin:</i>	Causes skin irritation. Harmful if absorbed through the skin.
<i>Ingestion:</i>	May cause irritation of the digestive tract. Toxic if swallowed.
<i>Inhalation:</i>	May be harmful if inhaled. Causes respiratory tract irritation.

Section 5 - First Aid Measures

<i>Eye:</i>	Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.
<i>Skin:</i>	Get medical aid. Flush skin with plenty of water and soap for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops and persists.
<i>Ingestion:</i>	Get medical aid immediately. Wash mouth out with water.
<i>Inhalation:</i>	Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Section 6 - Stability and Reactivity

<i>Chemical Stability:</i>	Stable under recommended temperatures and pressures.
<i>Materials to avoid:</i>	Strong oxidizing agents, Strong acids.
<i>Conditions to Avoid:</i>	Incompatible materials.
<i>Hazardous Decomposition Products:</i>	Carbon oxides.
<i>Hazardous Polymerization:</i>	Has not been reported.

Section 7 - Handling and Storage

<i>Handling:</i>	Avoid breathing dust, vapor, mist, or gas. Keep container tightly closed. Avoid contact with skin and eyes. Wash thoroughly after handling. Mechanical exhaust required.
<i>Storage:</i>	Store in a cool, dry place. Store in a tightly closed container.

Section 8 - Personal Protection

<i>Eyes:</i>	Wear appropriate protective eyeglasses.
<i>Skin:</i>	Wear appropriate protective gloves to prevent skin exposure.
<i>Clothing:</i>	Wear appropriate protective clothing to prevent skin exposure.
<i>Respirators:</i>	Use an approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 - Fire and Explosion Hazard Data

<i>General Information:</i>	As in any fire, wear a self-contained breathing apparatus, MSHA/NIOSH (approved or equivalent) and protective clothing to prevent contact with skin and eyes.
<i>Extinguishing Media:</i>	Use water spray, dry chemical, carbon dioxide, or appropriate foam.

Section 10 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Vacuum or sweep up material and place into a suitable disposal container.

Section 11 - Toxicological Information

RTECS#: CAS# 17199-29-0: Not available.

LD50/LC50: RTECS: Not available.

Carcinogenicity: (S)-(+)- Mandelic acid - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

Section 12 - Environmental information

Not available

Section 13 - Disposal Consideration

Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state and local environmental regulations.

Section 14 - Transport Information

IATA: This substance is considered to be non-hazardous for transport.

IMO: This substance is considered to be non-hazardous for transport.

RID/ADR: This substance is considered to be non-hazardous for transport.

Section 15 - Regulatory Information

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: Xi

Indication of Danger: Irritant

Risk Phrases:

R 36/37/38: Irritating to eyes, respiratory system and skin.

Safety Phrases:

S 22: Do not breathe dust.

S 24/25: Avoid contact with skin and eyes.

WGK (Water Danger/Protection)

CAS# 17199-29-0: 3

Canada

CAS# 17199-29-0: Not available

US Federal

TSCA

CAS# 17199-29-0 is not listed on the TSCA Inventory. It is for research and development use only.

Section 16 - Additional Information

MSDS Creation Date: March 17, 2009

Update: April 08, 2009

The above information is believed to be accurate and represents the best knowledge available to us currently. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no way shall PI Chemicals, be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, even if PI Chemicals has been advised of the possibility of such damages.