Section 1 - Product and Company Information

Product Name                        DL-MANDELIC ACID FREE ACID
Product Number                     M2625
Brand                               SIGMA
Company                             Sigma-Aldrich Canada, Ltd
Street Address                      2149 Winston Park Drive
City, State, Zip, Country           Oakville ON L6H 6J8 CA
Technical Phone:                   9058299500
Emergency Phone:                   800-424-9300
Fax:                                 9058299292

Section 2 - Composition/Information on Ingredient

Substance Name                      BENZYL-DL(+-)-MANDELATE
CAS #                               90-64-2
SARA 313                           No

Formula                            C8H8O3
Synonyms                           Acido mandelico (Italian) * Amygdalic acid *
                                  Glycolic acid, phenyl- *
                                  alpha-Hydroxyphenylacetic acid *
                                  alpha-Hydroxy-alpha-toluic acid * Kyselina
                                  2-fenyl-2-hydroxyethanova (Czech) * Kyselina
                                  mandlova (Czech) * Paramandelic acid *
                                  Phenylglycolic acid * Phenylhydroxyacetic acid *
                                  Racemic mandelic acid * alpha-Toluic acid,
                                  alpha-hydroxy- * Uromaline

RTECS Number:                      OO6300000

Section 3 - Hazards Identification

EMERGENCY OVERVIEW
Caution: Avoid contact and inhalation.

HMIS RATING
HEALTH: 1
FLAMMABILITY: 0
REACTIVITY: 1

NFPA RATING
HEALTH: 1
FLAMMABILITY: 0
REACTIVITY: 1

For additional information on toxicity, please refer to Section 11.

Section 4 - First Aid Measures

ORAL EXPOSURE
If swallowed, wash out mouth with water provided person is conscious. Call a physician.
INHALATION EXPOSURE
   If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.

DERMAL EXPOSURE
   In case of contact, immediately wash skin with soap and copious amounts of water.

EYE EXPOSURE
   In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

Section 5 - Fire Fighting Measures

FLASH POINT
   N/A

AUTOIGNITION TEMP
   N/A

FLAMMABILITY
   N/A

EXTINGUISHING MEDIA
   Suitable: Water spray. Carbon dioxide, dry chemical powder, or appropriate foam.

FIREFIGHTING
   Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes. Specific Hazard(s): Emits toxic fumes under fire conditions.

Section 6 - Accidental Release Measures

PROCEDURE(S) OF PERSONAL PRECAUTION(S)
   Exercise appropriate precautions to minimize direct contact with skin or eyes and prevent inhalation of dust.

METHODS FOR CLEANING UP
   Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

Section 7 - Handling and Storage

HANDLING
   User Exposure: Avoid inhalation. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

STORAGE
   Suitable: Keep tightly closed.

SPECIAL REQUIREMENTS
   Light sensitive.

Section 8 - Exposure Controls / PPE

ENGINEERING CONTROLS
   Safety shower and eye bath. Mechanical exhaust required.

PERSONAL PROTECTIVE EQUIPMENT
Respiratory: Wear dust mask.
Hand: Protective gloves.
Eye: Chemical safety goggles.

GENERAL HYGIENE MEASURES
Wash thoroughly after handling.

Section 9 - Physical/Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
<th>At Temperature or Pressure</th>
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<tbody>
<tr>
<td>Molecular Weight</td>
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<td>Freezing Point</td>
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<tr>
<td>Solubility</td>
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</table>

N/A = not available

Section 10 - Stability and Reactivity

STABILITY
Stable: Stable.
Conditions of Instability: May discolor on exposure to light.
Materials to Avoid: Strong oxidizing agents, Strong bases, Strong reducing agents.

HAZARDOUS DECOMPOSITION PRODUCTS
Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide.

HAZARDOUS POLYMERIZATION
Hazardous Polymerization: Will not occur

Section 11 - Toxicological Information

ROUTE OF EXPOSURE
Skin Contact: May cause skin irritation.
Skin Absorption: May be harmful if absorbed through the skin. 
Eye Contact: May cause eye irritation. 
Inhalation: May be harmful if inhaled. Material may be irritating to mucous membranes and upper respiratory tract. 
Ingestion: May be harmful if swallowed.

SIGNS AND SYMPTOMS OF EXPOSURE
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

TOXICITY DATA

Intraperitoneal Rat
4100 MG/KG
LD50

Intramuscular Rat
>300 MG/KG
LD50

Section 12 - Ecological Information
No data available.

Section 13 - Disposal Considerations

APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION
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 equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.

Section 14 - Transport Information

DOT
Proper Shipping Name: None
Non-Hazardous for Transport: This substance is considered to be non-hazardous for transport.

IATA
Non-Hazardous for Air Transport: Non-hazardous for air transport.

Section 15 - Regulatory Information

EU ADDITIONAL CLASSIFICATION
S: 22 24/25
Safety Statements: Do not breathe dust. Avoid contact with skin and eyes.

US CLASSIFICATION AND LABEL TEXT
US Statements: Caution: Avoid contact and inhalation.

UNITED STATES REGULATORY INFORMATION
SARA LISTED: No
TSCA INVENTORY ITEM: Yes

CANADA REGULATORY INFORMATION
WHMIS Classification: This product has been classified in
accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.

DSL: Yes  
NDSL: No

Section 16 - Other Information

DISCLAIMER
For R&D use only. Not for drug, household or other uses.

WARRANTY
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. Sigma-Aldrich Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. Copyright 2005 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.