MATERIAL SAFETY DATA SHEET

Methyl-3-Aminocrotonate

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Methyl-3-Aminocrotonate
SYNONYM: Methyl-3-amino-2-butenoate
MOLECULAR FORMULA: C₅H₉NO₂
MOLECULAR WEIGHT: 115.13 g/mol

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CREATION DATE: Mar 02 2007
REVISION DATE: Jan 13 2016

2. HAZARDS IDENTIFICATION

Eye:
Causes eye irritation.

Skin:
Causes skin irritation. Harmful if absorbed through the skin.

Ingestion:
May cause irritation of the digestive tract. Harmful if swallowed

Inhalation:
May be harmful if inhaled. Causes respiratory tract irritation.
3. COMPOSITION, INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>EC No.</th>
<th>Chemical Name</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>14205-39-1</td>
<td>238-056-5</td>
<td>METHYL-3-AMINO CROTONATE</td>
<td>&gt;98</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

**Eye:** Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

**Skin:** 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 persist.

**Ingestion:** Get medical aid immediately. Wash mouth out with water.

**Inhalation:** Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

5. STABILITY AND REACTIVITY

**Chemical Stability:** Stable under normal temperatures and pressures

**Materials to Avoid:** Strong oxidizing agents

**Condition to Avoid:** Incompatible materials

**Hazardous Decomposition Products:** Carbon monoxide, carbon dioxide, nitrogen oxides, hydrogen chloride.

**Hazardous Polymerization:** Has not been reported.

6. HANDLING AND STORAGE

**Handling:** Avoid breathing dust, vapour, mist, or gas. Keep container tightly closed. Avoid contact with skin and eyes. Wash thoroughly after handling. Mechanical exhaust required.

**Storage:** Store in a cool, dry place. Store in a tightly closed container.
7. PERSONAL PROTECTION

**Precaution:** Exercise appropriate precautions to minimize direct contact with skin or eyes and prevent inhalation dust. Wear appropriate protective gloves to prevent skin exposure.

**Method of:** Sweep up, place in a bag and hold for waste dispose raising dust.

**Cleaning up** Ventilate area and wash spill site after pickup is complete.

8. FIRE AND EXPLOSION HAZARD DATA

**General Information:** 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.

**Extinguishing Media:** Use water spray, dry chemical, carbon dioxide or appropriate foam.

9. PHYSICAL AND CHEMICAL PROPERTIES

**Physical State:** Pale Yellow Crystalline Powder

**Colour:** Pale Yellow

**Melting Point:** 81°C to 83°C

**Solubility:** Partly soluble in Methanol and Ethanol

**Boiling Point:** 112°C at 42mm, 194.1°C at 760mmHg

**Flash Point:** 91°C - Closed cup

**Solubility in water:** Not Available

**Auto ignition Temperature:** Not Available
Decomposition Temp. : Not Available

10. TOXICOLOGICAL INFORMATION

Skin contact: May cause skin irritation
Skin absorption: May be harmful if absorbed through skin
Eye contact: May cause eye irritation
Inhalation: May be harmful if inhaled. Material may be irritating to mucous membrane and upper respiratory tract.
Sign & symptom Of exposure: Exposure can cause headache, diarrhoea, dizziness, constipation, abdominal discomfort, acne, itching, rash, and tinnitus. To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.

Toxicology Data: Oral rat LD50: 1760 mg/kg

11. ECOLOGICAL INFORMATION

No data available

12. DISPOSAL CONSIDERATION

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 state, and local environmental regulations.

13. TRANSPORT INFORMATION

DOT - Transport: This substance is considered to be non-hazardous for transport
IATA – Air Transport: Non-hazardous for air transport
14. REGULATORY INFORMATION

**International Regulations**

**Hazard symbols** : Xn

**Indication of Danger** : Harmful, Dangerous for the environment

**Risk Phrases** : R22 Harmful if swallowed, R36/37/38 Irritating to eye, irritating respiratory system, Irritating to skin

**Safety Phrases** : S26 In case of contact with eyes, rinse immediately with Plenty of water and seek medical advice. S37/39 Take off immediately all contaminated clothing. After contact with skin, wash immediately with plenty of soapsuds. Avoid contact and inhalation. Wear suitable gloves. Wear eye/face protection

15. OTHER INFORMATION

The information in this safety data sheet is based on data and samples provided. The sheet was written to the best of our ability and according to the state of knowledge at that time. The safety data sheet only constitutes a guideline for the safe handling, use, consumption, storage, transport and disposal of the substances/preparations/mixtures mentioned under point 1. New safety data sheets are written from time to time. Only the most recent versions may be used. Old versions must be destroyed. Unless indicated otherwise word for word on the safety data sheet, the information does not apply to substances/preparations/mixtures in purer form, mixed with other substances or in processes. The safety data sheet offers no quality specification for the substances/preparations/mixtures in question. Compliance with the instructions in this safety data sheet does not release the user from the obligation to take all measures dictated by common sense, regulations and recommendations or which are necessary and/or useful based on the real applicable circumstances. Godavari Biorefineries Limited does not guarantee the accuracy or exhaustiveness of the information provided.