SAFETY DATA SHEET

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

Product identifier
Product name: Eastman(TM) Dimethyl Terephthalate, Molten

Product No.: EAN 906580. P1225SNZ

Synonyms, Trade Names: 1225-00

Additional identification
Chemical name: dimethyl 1,4-benzenedicarboxylate
CAS-No.: 120-61-6

Relevant identified uses of the substance or mixture and uses advised against
Identified uses: Chemical Intermediate
Uses advised against: None known.

Details of the supplier of the safety data sheet
Manufacturer / Supplier
Eastman Chemical Company
200 South Wilcox Drive
Kingsport, TN 37660-5280 US
+14232292000

Visit our website at www.EASTMAN.com or email emnmsds@eastman.com

Emergency telephone number:
For emergency health, safety, and environmental information, call 1-423-229-4511 or 1-423-229-2000.

For emergency transportation information, in the United States: call CHEMTREC at 800-424-9300 or call 423-229-2000.

SECTION 2: Hazards identification

Hazard classification:

OSHA Specified Hazards:
Combustible dust
May form combustible dust concentrations in air.

Warning label items including precautionary statement:

Signal words: WARNING!

Hazard Statement(s): May form combustible dust concentrations in air.

Precautionary statement:

Prevention: P210: Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P243: Take precautionary measures against static discharge.

Disposal: P501: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.
Hazard(s) not otherwise classified (HNOC): None known.

**SECTION 3: Composition/information on ingredients**

**Substances / Mixtures**

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Concentration</th>
<th>Additional identification</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>dimethyl terephthalate</td>
<td>100%</td>
<td>CAS-No.: 120-61-6</td>
<td>#</td>
</tr>
</tbody>
</table>

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.
This substance has workplace exposure limit(s).

**SECTION 4: First aid measures**

**Description of first aid measures**

**Inhalation:** Move to fresh air. Treat symptomatically. Get medical attention if symptoms persist.

**Eye contact:** If molten material contacts the eye, immediately flush with plenty of water for at least 15 minutes. Get medical attention immediately. In case of irritation from airborne exposure, move to fresh air. Get medical attention if symptoms persist.

**Skin contact:** If burned by contact with hot material, cool molten material adhering to skin as quickly as possible with water, and see a physician for removal of adhering material and treatment of burn.

**Ingestion:** Seek medical advice.

**Most important symptoms and effects, both acute and delayed:** None known.

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

**Hazards:** None known.

**Treatment:** Treat symptomatically.

**SECTION 5: Firefighting measures**

**General fire hazards:** Use water spray to keep fire-exposed containers cool.

**Extinguishing media**

**Suitable extinguishing media:** Water spray. Dry chemical. Carbon Dioxide.

**Unsuitable extinguishing media:** No data available.
Special hazards arising from the substance or mixture:
Molten DMT, upon cooling, can crust over and still be a molten thermal hazard beneath the solid surface. Molten DMT will burn if ignited. Molten DMT readily sublimes to solid particles of variable size which may form flammable/explosive mixtures with air. Sublimed DMT will layer out and build up on surfaces. Powdered material may form explosive dust-air mixtures.

Advice for firefighters
Special fire fighting procedures:
Fight fire from a protected location. Minimize dust generation and accumulation.

Special protective equipment for fire-fighters:
Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures:
Wear appropriate personal protective equipment.

Environmental precautions:
Avoid release to the environment.

Methods and material for containment and cleaning up:
Eliminate sources of ignition. Molten DMT, upon cooling, can crust over and still be a molten thermal hazard beneath the solid surface. Shovel up and place in a container for salvage or disposal.

Notification Procedures:
In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

SECTION 7: Handling and storage:

Precautions for safe handling:
Avoid contact with molten material. Avoid breathing dust or vapor from heated material. Use only with adequate ventilation. Wash thoroughly after handling. Residual vapors may explode on ignition; do not cut, drill, grind, or weld on or near this container.

Conditions for safe storage, including any incompatibilities:
Keep container tightly closed and in a well-ventilated place.

Specific end use(s):
Chemical Intermediate

SECTION 8: Exposure controls/personal protection

Control parameters
Occupational exposure limits

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Type</th>
<th>Exposure Limit values</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimethyl terephthalate - Total dust.</td>
<td>TWA</td>
<td>5 mg/m3</td>
<td>US. AIHA Workplace Environmental Exposure Level (WEEL) Guides (2009)</td>
</tr>
</tbody>
</table>

Country specific exposure limits have not been established or are not applicable unless listed below.
Exposure controls

Appropriate engineering controls: Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

General information: Eye bath. Washing facilities.

Eye/face protection: Wear safety glasses with side shields (or goggles). Wear a face shield when working with molten material.

Skin protection
Hand protection: When material is heated, wear gloves to protect against thermal burns.

Other: No data available.

Respiratory Protection: If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. In the United States of America, if respirators are used, a program should be instituted to assure compliance with OSHA Standard 63 FR 1152, January 8, 1998. Respirator type: Air-purifying respirator with an appropriate, government approved (where applicable), air-purifying filter, cartridge or canister. Contact health and safety professional or manufacturer for specific information.

Hygiene measures: Observe good industrial hygiene practices.

Environmental Controls: No data available.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Solid</td>
</tr>
<tr>
<td>Physical State</td>
<td>solid (crystal)</td>
</tr>
<tr>
<td>Color</td>
<td>White</td>
</tr>
<tr>
<td>Odor</td>
<td>slight</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No data available.</td>
</tr>
<tr>
<td>pH</td>
<td>No data available.</td>
</tr>
<tr>
<td>Melting Point</td>
<td>140.6 °C</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>288 °C</td>
</tr>
<tr>
<td>Flash Point</td>
<td>151 °C (Setaflash closed cup)</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>No data available.</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flammability Limit - Upper (%)–:</td>
<td>No data available.</td>
</tr>
<tr>
<td>Flammability Limit - Lower (%)–:</td>
<td>No data available.</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>&lt; 1.1 Pa (20 °C)</td>
</tr>
</tbody>
</table>
**Vapor density (air=1):** 6.7  
**Specific Gravity:** 1.3673  
**Solubility(ies):**  
  - Solubility in Water: 0.031 g/l (20 °C)  
  - Solubility (other): No data available.  
**Partition coefficient (n-octanol/water):** log Pow: 2.25  
**Autoignition Temperature:** Not applicable, non-combustible solid.  
**Decomposition Temperature:** No data available.  
**Dynamic Viscosity:** Not applicable  
**Kinematic viscosity:** Not applicable  
**Explosive properties:** Not classified  
**Oxidizing properties:** Not classified

**SECTION 10: Stability and reactivity**

**Reactivity:** None known.  
**Chemical stability:** Stable  
**Possibility of hazardous reactions:** Can decompose at elevated temperatures.  
**Conditions to avoid:** Incompatible materials. Heat, sparks, flames.  
**Incompatible materials:** Strong oxidizing agents.  
**Hazardous decomposition products:** Carbon Dioxide. Carbon Monoxide.

**SECTION 11: Toxicological information**

**Information on likely routes of exposure**

- **Inhalation:** None known.  
- **Ingestion:** None known.  
- **Skin contact:** No data available.  
- **Eye contact:** None known.

**Information on toxicological effects**

**Acute Toxicity**

- **Oral**  
  - Product: No data available.  
  - Specified substance(s): Dimethyl terephthalate  
    - Oral LD-50: (Rat): > 7,500 mg/kg  

- **Dermal**  
  - Product: No data available.
Specified substance(s)  
Dimethyl terephthalate

Dermal LD-50: (Guinea Pig): > 5,000 mg/kg

Inhalation
Product:  
Specified substance(s)  
Dimethyl terephthalate

LC50 (Rat, 2 h): > 6 mg/l

Repeated dose toxicity
Product:  
Specified substance(s)  
Dimethyl terephthalate

NOAEL (Rat, in feed, 96 d): 500 mg/kg  
NOAEL (Rat, Inhalation, 90 d): > 0.086 mg/l

Skin corrosion/irritation:  
Product:  
Specified substance(s)  
Dimethyl terephthalate

(Rabbit, 4 h): none  
(Guinea Pig, 24 h): slight

Serious eye damage/eye irritation:  
Product:  
Specified substance(s)  
Dimethyl terephthalate

(Rabbit): none  
(Rabbit): slight

Respiratory or skin sensitization:  
Product:  
Specified substance(s)  
Dimethyl terephthalate

Skin Sensitization:; (Guinea Pig) - non-sensitizing

Mutagenicity

In vitro
Product:  
Specified substance(s)  
Dimethyl terephthalate

Mutagenicity - Bacterial: negative +/- activation  
Chromosomal aberration, : negative +/- activation  
Mutagenicity - Mammalian, : negative +/- activation

In vivo
Product:  
Specified substance(s)  
Dimethyl terephthalate

Chromosomal aberration intraperitoneal injection (Mouse): negative

Carcinogenicity
Product:  
Specified substance(s)  
Dimethyl terephthalate

No data available.
Reproductive toxicity
Product: No data available.
Specified substance(s) Dimethyl terephthalate No data available.

Specific target organ toxicity - single exposure
Product: No data available.
Specified substance(s) Dimethyl terephthalate No data available.

Specific target organ toxicity - repeated exposure
Product: No data available.
Specified substance(s) Dimethyl terephthalate No data available.

Aspiration hazard
Product: No data available.
Specified substance(s) Dimethyl terephthalate No data available.

Other adverse effects: No data available.

SECTION 12: Ecological information

Toxicity

Acute toxicity
Fish
Product: No data available.
Specified substance(s) Dimethyl terephthalate LC-50 (Fish, 96 h): 13 mg/l

Aquatic invertebrates
Product: No data available.
Specified substance(s) Dimethyl terephthalate EC-50 (daphnid, 48 h): > 23.5 mg/l (limit of solubility in fresh water)

Chronic Toxicity
Fish
Product: No data available.
Specified substance(s) Dimethyl terephthalate No data available.

Aquatic invertebrates
Product: No data available.
Specified substance(s) Dimethyl terephthalate NOEC: (daphnid, 21 d): 1.72 mg/l

Toxicity to Aquatic Plants
Product: No data available.
Specified substance(s) Dimethyl terephthalate

EC-50 (Alga, 72 h): > 29 mg/l (limit of solubility in fresh water)

### Persistence and degradability

**Biodegradation**
Product: No data available.
Specified substance(s) Dimethyl terephthalate

84 % (14 d, Ready Biodegradability: Modified MITI Test (I)) Readily biodegradable

**Biological Oxygen Demand:**
Product: No data available.
Specified substance(s) Dimethyl terephthalate

No data available.

**Chemical Oxygen Demand:**
Product: No data available.
Specified substance(s) Dimethyl terephthalate

No data available.

**BOD/COD ratio**
Product: No data available.
Specified substance(s) Dimethyl terephthalate

No data available.

**Mobility in soil:**
log Koc: 1.49 - 2.7

**Results of PBT and vPvB assessment:**
Dimethyl terephthalate

Not fulfilling PBT (persistent/bioaccumulative/toxic) criteria

**Other adverse effects:**
No data available.

### SECTION 13: Disposal considerations

**Waste treatment methods**

General information: No data available.

Disposal methods: Dispose of waste and residues in accordance with local authority requirements. Incinerate. Since emptied containers retain product residue, follow label warnings even after container is emptied. Residual vapors may explode on ignition; do not cut, drill, grind, or weld on or near this container.

### SECTION 14: Transport information
Important Note: Shipping descriptions may vary based on mode of transport, quantities, package size, and/or origin and destination. Consult your company’s Hazardous Materials/Dangerous Goods expert for information specific to your situation.

**DOT**

Class 3, Packing Group III when liquid has a flash point at or above 37.8°C and is offered for transport or is transported, in bulk packaging, at or above its flash point; otherwise, not regulated.

Possible Shipping Description(s):

- UN 3256 Elevated temperature liquid, flammable, n.o.s. (molten polymer intermediates) 3 III

**IMDG - International Maritime Dangerous Goods Code**

Class 3, Packing Group III when liquid has a flash point at or above 61°C and is offered for transport or is transported at or above its flash point; otherwise, not regulated.

Possible Shipping Description(s):

- UN 3256 ELEVATED TEMPERATURE LIQUID, FLAMMABLE, N.O.S. (molten polymer intermediates) 3 III

**IATA**

Class Forbidden on aircraft when liquid has a flash point at or above 60.5°C and is offered for transport or is transported at or above its flash point; otherwise, not regulated.

### SECTION 15: Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture:

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

**WHMIS (Canada) Status:** noncontrolled

**SARA 311-312 Hazard Classification(s):**
- immediate (acute) health hazard
- fire hazard

**US EPCRA (SARA Title III) Section 313 - Toxic Chemical List**

**NONE**

**OSHA:** hazardous
TSCA (US Toxic Substances Control Act): This product is listed on the TSCA inventory. Any impurities present in this product are exempt from listing.

DSL (Canadian Domestic Substances List) and CEPA (Canadian Environmental Protection Act): This product is listed on the DSL or otherwise complies with CEPA new substance notification requirements.

AICS / NICNAS (Australian Inventory of Chemical Substances and National Industrial Chemicals Notification and Assessment Scheme): This product is listed on AICS or otherwise complies with NICNAS.

MITI (Japanese Handbook of Existing and New Chemical Substances): This product is listed in the Handbook or has been approved in Japan by new substance notification.

SECTION 16: Other information

HMIS® Hazard Ratings:  Health - 1, Flammability - 1, Chemical Reactivity - 0

HMIS® rating involves data interpretations that may vary from company to company. They are intended only for rapid, general identification of the magnitude of the specific hazard. To deal adequately with the safe handling of this material, all the information contained in this MSDS must be considered.

Revision Information: Not relevant.
Key literature references and sources for data: No data available.
Training information: No data available.
Issue date: 10/21/2014
SDS No.:  
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