SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product Identifier
Product Description: Malonaldehyde bis(diethyl acetal)
Cat No. 156730000; 156730050; 156731000
Synonyms 1,1,3,3-Tetraethoxypropane

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 Pharmaceuticaal 3a
2440 Geel, Belgium
E-mail address begel.sdsdesk@thermofisher.com

Emergency Telephone Number
For information in the US, call: 001-800-ACROS-01
For information in Europe, call: +32 14 57 52 11
Emergency Number, Europe: +32 14 57 52 99
Emergency Number, US: 001-201-796-7100
CHEMTREC Phone Number, US: 001-800-424-9300
CHEMTREC Phone Number, Europe: 001-703-527-3887

SECTION 2. HAZARDS IDENTIFICATION

Classification of the substance or mixture
REGULATION (EC) No 1272/2008
Acute oral toxicity Category 4

Classification according to EU Directives 67/548/EEC or 1999/45/EC
For the full text of the R-phrases and H-Statements mentioned in this Section, see Section 16
Symbol(s) Xn - Harmful
R-phrase(s) R22 - Harmful if swallowed

Label Elements
SECTION 2. HAZARDS IDENTIFICATION

Signal Word
Warning

Hazard Statements
H302 - Harmful if swallowed

Precautionary Statements - EU (§28, 1272/2008)
P280 - Wear protective gloves/ eye protection/ face protection
P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell

Other Hazards
No information available.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
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<tr>
<td>Tetraethoxypropane</td>
<td>EEC No. 204-533-1</td>
<td>97</td>
<td>122-31-6</td>
<td>Xn; R22</td>
<td>Acute Tox. 4 (H302)</td>
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</table>

For the full text of the R-phrases and H-Statements mentioned in this Section, see Section 16

SECTION 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 soap and plenty of water while removing all contaminated clothes and shoes. Obtain medical attention.

Ingestion
Clean mouth with water. Get medical attention.
Inhalation

Remove from exposure, lie down. Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Obtain medical attention.

Notes to Physician

Treat symptomatically

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing media

Suitable Extinguishing Media

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.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation

Environmental precautions

Prevent further leakage or spillage if safe to do so

Methods and material for containment and cleaning up

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal.. Do not let this chemical enter the environment.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling

Avoid contact with skin and eyes. Do not breathe dust. Do not breathe vapors or spray mist. Do not ingest.

Conditions for safe storage, including any incompatibilities

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

Specific End Uses
### SECTION 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.

**Biological limit values**

This product, as supplied, does not contain any hazardous materials with biological 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 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.

### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
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<tbody>
<tr>
<td><strong>Physical State</strong></td>
<td>Liquid</td>
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<tr>
<td><strong>Appearance</strong></td>
<td>Yellow</td>
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<td><strong>odor</strong></td>
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<td><strong>Vapor Density</strong></td>
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<td><strong>Boiling Point/Range</strong></td>
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<tr>
<td><strong>Melting Point/Range</strong></td>
<td>-90°C / -130°F</td>
</tr>
<tr>
<td><strong>Flash Point</strong></td>
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<tr>
<td><strong>Autoignition Temperature</strong></td>
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<td><strong>Water Solubility</strong></td>
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<td><strong>Specific Gravity</strong></td>
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<td><strong>Molecular Formula</strong></td>
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### SECTION 10. STABILITY AND REACTIVITY

**Reactivity**

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ACR15673
Chemical Stability
Stable under normal conditions.

Possibility of Hazardous Reactions
Hazardous Polymerization: Hazardous polymerization does not occur.
Hazardous Reactions: No information available.

Conditions to Avoid
Incompatible products.

Incompatible Materials
Strong oxidizing agents, Strong acids.

Hazardous Decomposition Products
Carbon monoxide (CO). Carbon dioxide (CO₂).

SECTION 11. TOXICOLOGICAL INFORMATION

Information on Toxicological Effects

Acute Toxicity

Product Information
No acute toxicity information is available for this product

Component Information

<table>
<thead>
<tr>
<th>Component</th>
<th>LD50 Oral</th>
<th>LD50 Dermal</th>
<th>LC50 Inhalation</th>
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<tr>
<td>Tetraethoxypropane</td>
<td>1610 mg/kg (Rat)</td>
<td></td>
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</tbody>
</table>

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
No information available.

Other Adverse Effects
The toxicological properties have not been fully investigated. See actual entry in RTECS for complete information

Endocrine Disruptor Information
None known

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SECTION 12. ECOLOGICAL INFORMATION

Toxicity
Ecotoxicity effects
Do not empty into drains

Persistence and degradability
No information available

Bioaccumulative potential
No information available.

Mobility in soil
No information available.

Results of PBT and vPvB assessment

Other adverse effects
No information available

SECTION 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 to local recyclers for disposal

SECTION 14. TRANSPORT INFORMATION

IMDG/IMO
Not regulated

ADR
Not regulated

IATA
Not regulated
SECTION 15. REGULATORY INFORMATION

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

International Inventories

<table>
<thead>
<tr>
<th>Component</th>
<th>EINECS</th>
<th>ELINCS</th>
<th>NLP</th>
<th>TSCA</th>
<th>DSL</th>
<th>NDSL</th>
<th>PICCS</th>
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<td>X</td>
<td>X</td>
<td>X</td>
<td>-</td>
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Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
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

SECTION 16. OTHER INFORMATION

Full text of R-phrases referred to under sections 2 and 3

R22 - Harmful if swallowed

Revision Date 21-Feb-2012
Revision Summary Not applicable
This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

Disclaimer

The information provided on this Safety Data Sheet 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