

**L-Malic acid**

Date 29.1.2009

Previous date: -

**1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING****1.1 Identification of the substance or preparation****1.1.1 Commercial Product Name**

L-Malic acid

**1.1.2 Product code**

984310

**1.2 Use of the Substance/Preparation****1.2.1 Expressed in writing**

Reagent for analysis of food, beverages and other sample material.

**1.3 Company/undertaking identification****1.3.1 Supplier**

Thermo Fisher Scientific Oy, Clinical Diagnostics Finland

**1.3.2 Contact information:**

Ratastie 2, P.O.Box 100

FI-01621 Vantaa

FINLAND

+358-9-329 100

+358-9-3291 0300

FI0921547-0

**Email**

info.cdx.fi@thermofisher.com

**2. HAZARDS IDENTIFICATION**

Dangerous properties cannot be excluded. However, risks are not to be expected, when the product is handled by qualified and authorized personnel with the necessary precautions for chemicals / diagnostic reagents.

**3. COMPOSITION/INFORMATION ON INGREDIENTS****3.1.7 Other information**

In accordance to the EC Directive 1999/45/EC this product has not to be classified as dangerous preparation.

**4. FIRST AID MEASURES****4.2 Inhalation**

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**4.3 Skin contact**

Wash off with plenty of water. Remove contaminated clothing. If irritation develops, get medical attention.

**4.4 Eye contact**

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

**4.5 Ingestion**

Drink plenty of water. Get medical attention if symptoms occur.

**4.6 Information to doctor or other trained persons giving first aid**

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**5. FIRE-FIGHTING MEASURES**

The product itself does not burn.

**6. ACCIDENTAL RELEASE MEASURES**

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- 6.1 Personal precautions**  
Ensure adequate ventilation.
- 6.2 Environmental precautions**  
Try to prevent the material from entering drains or water courses.
- 6.3 Methods for cleaning up**  
Soak up with inert absorbent material. After cleaning, flush away traces with water.

**7. HANDLING AND STORAGE**

- 7.1 Handling**  
No special handling advice required.
- 7.2 Storage**  
Keep at temperatures between 2 and 8 °C. Protect from frost.

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

- 8.2 Exposure controls**
- 8.2.1 Occupational exposure controls**  
Avoid contact with skin, eyes and clothing.
- 8.2.1.1 Respiratory protection**  
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- 8.2.1.2 Hand protection**  
Protective gloves.
- 8.2.1.3 Eye protection**  
Safety glasses.
- 8.2.1.4 Skin and body protection**  
Lab coat.
- 8.2.2 Environmental exposure controls**  
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**9. PHYSICAL AND CHEMICAL PROPERTIES**

- 9.1 General Information (appearance, odour)**  
Colourless aqueous solution. Odourless.
- 9.2 Important Health Safety and Environmental Information**
- 9.2.1 pH** R1: 10.3, R2: 2.6, R3: 8.0 (25 °C)
- 9.2.2 Boiling point/range** -
- 9.2.3 Flash point** -
- 9.2.5 Explosive properties**
- 9.2.5.1 Lower explosion limit** -
- 9.2.5.2 Upper explosion limit** -
- 9.2.7 Vapour pressure** -
- 9.2.8 Relative density** R1: 1.013 g/ml; R2: 1.010 g/ml, R3: 1.0 (20 °C)
- 9.2.9 Solubility**
- 9.2.9.1 Water solubility** -
- 9.2.9.2 Fat solubility (solvent - oil to be specified)** -
- 9.2.10 Partition coefficient (n-octanol/water)** -

**10. STABILITY AND REACTIVITY**

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- 10.1 Conditions to avoid**  
None.
- 10.2 Materials to avoid**  
None.
- 10.3 Hazardous decomposition products**  
None.

**11. TOXICOLOGICAL INFORMATION**

- 11.1 Acute toxicity**  
Quantitative data about the toxicity of the product are not available. Dangerous properties cannot be ruled out. However, risks are not to be expected, if the product is handled by qualified and authorized personnel with the necessary precautions for chemicals / diagnostic reagents.
- 11.2 Primary irritation**  
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- 11.3 Sensitisation**  
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- 11.4 Subacute, subchronic and prolonged toxicity**  
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- 11.5 Human experience**  
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**12. ECOLOGICAL INFORMATION**

- 12.1 Ecotoxicity**
- 12.1.1 Aquatic toxicity**  
Quantitative data on ecological effects of the product are not available.
- 12.1.2 Toxicity to other organisms**  
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- 12.3 Persistence and degradability**
- 12.3.1 Biodegradation**  
Quantitative data on ecological effects of the product are not available.
- 12.3.2 Chemical degradation**  
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- 12.4 Bioaccumulative potential**  
Quantitative data on ecological effects of the product are not available.

**13. DISPOSAL CONSIDERATIONS**

The product has to be disposed of as laboratory chemical in accordance with local regulations.

**14. TRANSPORT INFORMATION**

- 14.1 UN-No** The product is not subject to current regulations for transportation of hazardous goods (ADR/GGVS, RID/GGVE, IMDG, IATA/ICAO).
- 14.5 Air transport**
- 14.5.3 Further Information** -

**15. REGULATORY INFORMATION**

In accordance to the EC Directive 1999/45/EC no marking is required.

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- 15.1 Information on the warning label**
- 15.1.1 Letter code of the warning symbol and indications of danger for the preparation**  
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- 15.1.2 Names of the ingredients given on the warning label**  
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- 15.1.3 R-phrases(s)**  
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- 15.1.4 S-phrases(s)**  
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**16. OTHER INFORMATION**

- 16.4 Additional information available from:**  
Code of the Safety Data Sheet: D07178-01-01-SDS-L-Malic acid-EN  
Corporation mentioned in point 1.3.  
The information in this datasheet is to our best knowledge correct and complete, and is offered in good faith as accurate. It characterizes the product with regard to the appropriate safety precautions. It does not guarantee properties of the product.
- 16.5 Literary reference**  
  
This product has been evaluated in accordance with the directives 1967/548/EEC, 1999/45/EC and 2001/58/EC. The MSDS of the manufacturer.

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