

Citric acid monohydrate
MSDS# 84211

Section 1 - Chemical Product and Company Identification

MSDS Name:

Citric acid monohydrate

Catalog Numbers:

12491-0000, 12491-0010, 12491-0250, 12491-2500, 38585-0000, BP/C270/71,
C/6160/53, C/6160/60, C/6160/62, C/6160/65, C/6160/68, C/6160/70,
C/6160/71
C/6170/53, C/6170/60, C/6170/62, C/6170/65, C/6180/53, C/6200/53,
C/6200/60
C/6200/62, C/6200/65, C/6200/70, C/6200/71, C/6230/53, C/P330/53,
C/P330/60

Synonyms:

2-Hydroxy-1,2,3-propanetricarboxylic acid monohydrate.

Company Identification: Fisher Scientific UK

Bishop Meadow Road, Loughborough
Leics. LE11 5RG

For information in Europe, call:(01509) 231166

Emergency Number, Europe:01509 231166

Section 2 - Composition, Information on Ingredients

CAS#: 5949-29-1
Chemical Name: Citric acid monohydrate
%: >97
EINECS#: unlisted
Hazard Symbols:
Risk Phrases:

Text for R-phrases: see Section 16

Hazard Symbols:

XI

Risk Phrases:

36/37/38

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Irritating to eyes, respiratory system and skin.

Potential Health Effects

Eye:

Causes severe eye irritation and possible injury.

Skin:

Causes skin irritation.

Ingestion:

May cause gastrointestinal irritation with nausea, vomiting and
diarrhea. Excessive intake of citric acid may cause erosion of the
teeth.

Inhalation:

Causes respiratory tract irritation.

Chronic:

Repeated exposure may cause erosion of teeth. Chronic exposure may
cause effects similar to those of acute exposure.

Section 4 - First Aid Measures

Eyes:

In case of contact, immediately flush eyes with plenty of water for
at least 15 minutes. Get medical aid immediately.

Skin:

In case of contact, flush skin with plenty of water. Remove contaminated clothing and shoes. Get medical aid if irritation develops and persists. Wash clothing before reuse.

Ingestion:

If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical aid.

Inhalation:

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Notes to Physician:

Section 5 - Fire Fighting Measures

General Information:

As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. This material in sufficient quantity and reduced particle size is

capable

of creating a dust explosion.

Extinguishing Media:

Use water spray, dry chemical, carbon dioxide, or chemical foam.

Section 6 - Accidental Release Measures

General Information:

Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks:

Vacuum or sweep up material and place into a suitable disposal container. Clean up spills immediately, observing precautions in the

Protective Equipment section. Avoid generating dusty conditions. Provide ventilation. Spill may be carefully neutralized with lime (calcium oxide, CaO).

Section 7 - Handling and Storage

Handling:

Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Minimize dust generation and accumulation. Keep container tightly closed. Avoid ingestion and inhalation. Do not get in eyes. Avoid contact with

skin

and clothing.

Storage:

Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Store protected from moisture.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

Exposure Limits

CAS# 77-92-9:

CAS# 5949-29-1:

Personal Protective Equipment

Eyes:

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face

protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin:

Wear appropriate protective gloves to prevent skin exposure.

Clothing:

Wear appropriate protective clothing to prevent skin exposure.

Respirators:

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.

Section 9 - Physical and Chemical Properties

Physical State: Crystalline powder
Color: white
Odor: Odorless.
pH: 2.2 (0.1N soln)
Vapor Pressure: 3.70E-009 mm Hg @ 25 deg C
Viscosity: Not available
Boiling Point: 175 deg C (347.00°F)
Freezing/Melting Point: 100 deg C (212.00°F)
Autoignition Temperature: 1010 deg C (1,850.00 deg F)
Flash Point: Not applicable.
Explosion Limits: Lower:Not available
Explosion Limits: Upper:Not available
Decomposition Temperature:
Solubility in water: Freely Soluble
Specific Gravity/Density: 1.542 g/cm3
Molecular Formula: C6H8O7.H2O
Molecular Weight: 210.15

Section 10 - Stability and Reactivity

Chemical Stability:

Stable under normal temperatures and pressures.

Conditions to Avoid:

Dust generation, moisture.

Incompatibilities with Other Materials

Metals, strong oxidizing agents, strong reducing agents, strong bases, metal nitrates.

Hazardous Decomposition Products

Carbon monoxide, irritating and toxic fumes and gases, carbon dioxide.

Hazardous Polymerization

Will not occur.

Section 11 - Toxicological Information

RTECS#:

CAS# 77-92-9: GE7350000

CAS# 5949-29-1: GE7810000

LD50/LC50:

RTECS: CAS# 77-92-9: Draize test, rabbit, eye: 750 ug/24H Severe; Draize test, rabbit, skin: 500 mg/24H Mild; Oral, mouse: LD50 = 5040 mg/kg; Oral, rat: LD50 = 3 gm/kg;.

RTECS: CAS# 5949-29-1:.

Carcinogenicity:

Citric acid anhydrous -

Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

Citric acid monohydrate -
Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
Other:

See actual entry in RTECS for complete information.
Section 12 - Ecological Information

Not available

Section 13 - Disposal Considerations
Dispose of in a manner consistent with federal, state, and local regulations.
Section 14 - Transport Information

IATA

Shipping Name: Not regulated.
Hazard Class:
UN Number:
Packing Group:

IMO

Shipping Name: Not regulated.
Hazard Class:
UN Number:
Packing Group:

RID/ADR

Shipping Name: Not regulated.
Hazard Class:
UN Number:
Packing Group:

Section 15 - Regulatory Information
European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: XI

Risk Phrases:

R 36/37/38 Irritating to eyes, respiratory system
and skin.

Safety Phrases:

S 26 In case of contact with eyes, rinse immediately
with plenty of water and seek medical advice.
S 37/39 Wear suitable gloves and eye/face
protection.

WGK (Water Danger/Protection)

CAS# 77-92-9: 0

CAS# 5949-29-1: 0

Canada

CAS# 77-92-9 is listed on Canada's DSL List

CAS# 5949-29-1 is listed on Canada's DSL List

US Federal

TSCA

CAS# 77-92-9 is listed on the TSCA Inventory.

CAS# 5949-29-1 is not on the TSCA Inventory because it is a hydrate.

It is considered to be listed if the CAS number for the anhydrous form in on
the

Section 16 - Other Information

Text for R-phrases from Section 2

MSDS Creation Date:

2/09/1999

Revision #9 Date

5/16/2007

The information above is believed to be accurate and represents the
best information currently available to us. However, we make no
warranty of merchantability or any other warranty, express or

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