

MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Material name Anticoagulant sodium citrate solution, USP
Version # 01
Revision date 06-16-2010
CAS # Mixture
Product use Anticoagulant.
Synonym(s) Anticoagulant Citrate Solution, USP, Anticoagulant Citrate Solution, 4% Sodium Citrate Anticoagulant , 4% Sodium Citrate Solution, AC Solution, Sodium Citrate Solution, USP, Anticoagulant Sodium Citrate Solution
Supplier Fenwal Inc.
Three Corporate Drive
Lake Zurich
IL
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US
Contact person Arlene Farrar, Fenwal, Inc., Environmental Health and Safety.
General Information: 1-847 550-2300

2. Hazards Identification

Physical state Liquid.
Emergency overview No special precautionary health measures should be needed under anticipated conditions of use.
OSHA regulatory status This product is considered not hazardous under 29 CFR 1910.1200 (Hazard Communication).
Potential health effects
Routes of exposure Skin contact. Eye contact.
Eyes May cause temporary eye irritation. May cause redness and pain.
Skin Prolonged contact may cause dryness of the skin.
Inhalation Under normal conditions of intended use, this material is not expected to be an inhalation hazard.
Ingestion May cause discomfort if swallowed.
Target organs No specific target organs noted.
Chronic effects None known.
Signs and symptoms May cause redness and pain.
Potential environmental effects The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

3. Composition / Information on Ingredients

Components	CAS #	Percent
Sodium citrate, dihydrate, EP	6132-04-3	4
Water	7732-18-5	Approx. 95

Composition comments All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First Aid Measures

First aid procedures
Eye contact Rinse with water. Get medical attention if irritation persists after washing.
Skin contact Rinse skin with water/shower. Get medical attention if irritation persists after washing.
Inhalation No specific first aid measures noted.
Ingestion Rinse mouth. Large quantities: Get medical attention if symptoms occur.
Notes to physician No specific indications.
General advice No recommendation given.

5. Fire Fighting Measures

Flammable properties	The product is non-combustible. During fire, gases hazardous to health may be formed.
Extinguishing media	
Suitable extinguishing media	Use fire-extinguishing media appropriate for surrounding materials.
Unsuitable extinguishing media	None.
Protection of firefighters	
Protective equipment and precautions for firefighters	Selection of respiratory protection for fire fighting: follow the general fire precautions indicated in the workplace.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
Hazardous combustion products	Carbon Dioxide. Carbon monoxide.

6. Accidental Release Measures

Personal precautions	Avoid prolonged or repeated contact with skin. See Section 8 of the MSDS for Personal Protective Equipment.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.
Methods for containment	Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible.
Methods for cleaning up	Absorb spillage with suitable absorbent material. For waste disposal, see section 13 of the MSDS.

7. Handling and Storage

Handling	Avoid prolonged or repeated contact with skin. Observe good industrial hygiene practices.
Storage	Store in closed original container in a dry place. Store away from incompatible materials.

8. Exposure Controls / Personal Protection

Occupational exposure limits	No exposure limits noted for ingredient(s).
Engineering controls	Provide adequate ventilation.
Personal protective equipment	
Eye / face protection	Not normally needed. Risk of splashes: Wear approved safety goggles.
Skin protection	For prolonged or repeated skin contact use suitable protective gloves. Suitable gloves can be recommended by the glove supplier. Risk of splashes: Use skin protection.
Respiratory protection	No personal respiratory protective equipment normally required.
General hygiene considerations	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical & Chemical Properties

Color	Not available.
Odor	Not available.
Odor threshold	Not available.
Physical state	Liquid.
Form	Liquid.
pH	Not available.
Melting point	Not available.
Freezing point	Not available.
Boiling point	Not available.
Flash point	Not available.
Evaporation rate	Not available.
Flammability	Not available.
Flammability limits in air, upper, % by volume	Not available.
Flammability limits in air, lower, % by volume	Not available.

Vapor pressure	Not available.
Vapor density	Not available.
Specific gravity	1.0247 (25°C)
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.

10. Chemical Stability & Reactivity Information

Chemical stability	Material is stable under normal conditions.
Conditions to avoid	Excessive heat. Freezing. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	Carbon Dioxide. Carbon monoxide.
Possibility of hazardous reactions	Will not occur.

11. Toxicological Information

Acute effects	No additional adverse health effects noted.
Sensitization	Not a skin sensitizer.
Chronic effects	No additional adverse health effects noted.
Carcinogenicity	Not classified.
Mutagenicity	Not classified.
Reproductive effects	Not classified.
Teratogenicity	Not classified.

12. Ecological Information

Ecotoxicological data

Components

Test Results

Sodium citrate, dihydrate, EP (6132-04-3)	EC50 Water flea (Ceriodaphnia dubia): 655 - 825.9 mg/l 48 hours
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Ecotoxicity	The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
Persistence and degradability	No data available.
Bioaccumulation / Accumulation	No data available.
Partition coefficient (n-octanol/water)	Not available.
Mobility in environmental media	No data available.

13. Disposal Considerations

Disposal instructions	This product, in its present state, when discarded or disposed of, is not a hazardous waste according to Federal regulations (40 CFR 261.4 (b)(4)). Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the product meets RCRA criteria for hazardous waste. Disposal recommendations are based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal.
Waste from residues / unused products	Dispose in accordance with all local, State and Federal regulations.

14. Transport Information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

TDG

Not regulated as dangerous goods.

15. Regulatory Information**US federal regulations**

This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. Regulated by FDA under Compassionate Use regulations.
 CERCLA/SARA Hazardous Substances - Not applicable.
 This material is not listed on the US TSCA 8(b) Inventory, therefore it may only be used for TSCA Exempt purposes such as R&D or Drug use.

CERCLA (Superfund) reportable quantity (lbs)

None

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
 Immediate Hazard - No
 Delayed Hazard - No
 Fire Hazard - No
 Pressure Hazard - No
 Reactivity Hazard - No

Section 302 extremely hazardous substance
 No

Section 311 hazardous chemical
 No

Drug Enforcement Agency (DEA)
 Not controlled

WHMIS status
 Non-controlled

Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

State regulations

This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

16. Other Information**Further information**

HMIS® is a registered trade and service mark of the NPCA.

Other information

For approved FDA drug use. Keep out of reach of children.

HMIS® ratings

Health: 0
 Flammability: 0
 Physical hazard: 0

NFPA ratings

Health: 0
 Flammability: 0
 Instability: 0

Disclaimer

The information in this MSDS was obtained for sources which we believe are reliable. However, the information is provided without any representation or warranty, express or implied, regarding its accuracy or correctness.

Issue date

06-16-2010