



Anticoagulant Acid Citrate Dextrose Solution (ACD-A)

Safety Data Sheet

In accordance with The Model Work Health and Safety Regulations, and the Globally Harmonized System of Classification and Labelling of Chemicals 3rd Revised Edition.

Date of Issue: 12/04/2018

Version: 1.0

SECTION 1: PRODUCT IDENTIFIER & IDENTIFIER FOR THE CHEMICAL

Product Identifier

Product Form: Mixture

Product Name: Anticoagulant Acid Citrate Dextrose Solution (ACD-A)

Intended Use of the Product

Blood coagulation prevention

Name, Address, and Telephone of the Responsible Party

Company

Haemonetics Australia Pty. Ltd.

Level 6, 123 Epping Road

Macquarie Park, NSW 2113

AUSTRALIA

T: 1800 209 515

F: 1800 894 515

Emergency Telephone Number

Emergency Number : Contact the Health, Safety, and Environment Department – 1800 209 515
For Hazardous Materials [or Dangerous Goods] Incident
Spill, Leak, Fire, Exposure, or Accident
Call CHEMTREC Day or Night
Within Australia: +61 (02) 9037 2994

SECTION 2: HAZARDS IDENTIFICATION

Classification of the Substance or Mixture

Classification (GHS-AU)

Not classified

Label Elements

GHS-AU Labelling

No labelling applicable

Non-GHS Hazards

Not available

Other Hazards

Exposure may aggravate pre-existing eye, skin, or respiratory conditions.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Mixture

| Name | Product Identifier | %* | GHS-AU Classification |
|--------------------------------------|----------------------|-------|-----------------------|
| Water for injection | (CAS-No.) 7732-18-5 | 94.55 | Not classified |
| .alpha.-D-Glucopyranose, monohydrate | (CAS-No.) 14431-43-7 | 2.45 | Not classified |
| Trisodium citrate | (CAS-No.) 68-04-2 | 2.2 | Not classified |
| Citric acid | (CAS-No.) 77-92-9 | 0.8 | Not classified |

*Percentages are listed in weight by weight percentage (w/w%) for liquid and solid ingredients. Gas ingredients are listed in volume by volume percentage (v/v%)

Full text of H-statements: see section 16

SECTION 4: FIRST AID MEASURES

Description of First-aid Measures

General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

Inhalation: When symptoms occur: go into open air and ventilate suspected area. Obtain medical attention if breathing difficulty persists.

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Skin Contact: Remove contaminated clothing. Drench affected area with water for at least 5 minutes. Obtain medical attention if irritation develops or persists.

Eye Contact: Rinse cautiously with water for at least 5 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention if irritation develops or persists.

Ingestion: Rinse mouth. Do NOT induce vomiting. Obtain medical attention.

Personal Protection in First Aid and Measures: Use appropriate personal protective equipment (PPE).

Most Important Symptoms and Effects Both Acute and Delayed

General: Not expected to present a significant hazard under anticipated conditions of normal use.

Inhalation: Prolonged exposure may cause irritation.

Skin Contact: Prolonged exposure may cause skin irritation.

Eye Contact: May cause slight irritation to eyes.

Ingestion: Ingestion may cause adverse effects.

Chronic Symptoms: None expected under normal conditions of use.

Indication of Any Immediate Medical Attention and Special Treatment Needed

If exposed or concerned, get medical advice and attention. If medical advice is needed, have product container or label at hand.

SECTION 5: FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media: Use extinguishing media appropriate for surrounding fire.

Unsuitable Extinguishing Media: Do not use a heavy water stream. Use of heavy stream of water may spread fire.

Special Hazards Arising From the Substance or Mixture

Fire Hazard: Will not support combustion unless the water has evaporated.

Explosion Hazard: Product is not explosive.

Reactivity: Hazardous reactions will not occur under normal conditions.

Advice for Firefighters

Precautionary Measures Fire: Exercise caution when fighting any chemical fire.

Firefighting Instructions: Use water spray or fog for cooling exposed containers.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

Hazardous Combustion Products: Carbon oxides (CO, CO₂).

HAZCHEM Emergency Action Code (Australia): Not assigned

Reference to Other Sections

Refer to Section 9 for Flammability Properties

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Avoid prolonged contact with eyes, skin and clothing. Avoid breathing (vapor, mist, spray).

For Non-Emergency Personnel

Protective Equipment: Use appropriate personal protective equipment (PPE).

Emergency Procedures: Evacuate unnecessary personnel.

For Emergency Personnel

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit.

Environmental Precautions

Prevent entry to sewers and public waters.

Methods and Materials for Containment and Cleaning Up

For Containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

Methods for Cleaning Up: Clean up spills immediately and dispose of waste safely. Transfer spilled material to a suitable container for disposal. Contact competent authorities after a spill.

Reference to Other Sections

See Section 8 for exposure controls and personal protection and Section 13 for disposal considerations.

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SECTION 7: HANDLING AND STORAGE

Precautions for Safe Handling

Precautions for Safe Handling: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Avoid prolonged contact with eyes, skin and clothing. Avoid breathing vapors, mist, spray.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures.

Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Comply with applicable regulations.

Storage Conditions: Keep container closed when not in use. Store in a dry, cool place. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials.

Incompatible Materials: Strong acids, strong bases, strong oxidizers. Water reactive materials.

Specific End Use(s)

Blood coagulation prevention

SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

Control Parameters

For substances listed in section 3 that are not listed here, there are no established exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), AIHA (WEEL), and Australia OELs.

Exposure Controls

Appropriate Engineering Controls: Suitable eye/body wash equipment should be available in the vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed.

Personal Protective Equipment

Personal Protective Equipment: Gloves. Protective clothing. Protective goggles.



Materials for Protective Clothing: Chemically resistant materials and fabrics.

Hand Protection: Wear protective gloves.

Eye and Face Protection: Chemical safety goggles.

Skin and Body Protection: Wear suitable protective clothing.

Respiratory Protection: If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn. In case of inadequate ventilation, oxygen deficient atmosphere, or where exposure levels are not known wear approved respiratory protection.

Other Information: When using, do not eat, drink or smoke.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on Basic Physical and Chemical Properties

| | |
|----------------------------------|------------------|
| Physical State | : Liquid |
| Appearance | : Clear |
| Odour | : Not available |
| Odour threshold | : Not available |
| pH | : Not available |
| Evaporation Rate | : Not available |
| Melting Point | : Not available |
| Freezing Point | : Not available |
| Boiling Point | : Not available |
| Flash Point | : Not available |
| Auto-ignition Temperature | : Not available |
| Decomposition Temperature | : Not available |
| Flammability (solid, gas) | : Not applicable |
| Lower Flammable Limit | : Not available |
| Upper Flammable Limit | : Not available |
| Vapour pressure | : Not available |
| Relative vapour density at 20 °C | : Not available |

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| | |
|---------------------------------------|------------------|
| Relative Density | : Not available |
| Specific Gravity | : Not available |
| Solubility | : Water: Soluble |
| Partition Coefficient n-Octanol/Water | : Not available |
| Viscosity | : Not available |

SECTION 10: STABILITY AND REACTIVITY

Reactivity: Hazardous reactions will not occur under normal conditions.

Chemical Stability: Stable under recommended handling and storage conditions (see section 7).

Possibility of Hazardous Reactions: Hazardous polymerization will not occur.

Conditions to Avoid: Direct sunlight, extremely high or low temperatures, and incompatible materials.

Incompatible Materials: Strong acids, strong bases, strong oxidizers. Water reactive materials.

Hazardous Decomposition Products: None expected under normal conditions of use.

SECTION 11: TOXICOLOGICAL INFORMATION

Information on Toxicological Effects - Product

Acute Toxicity (Oral): Not classified

Acute Toxicity (Dermal): Not classified

Acute Toxicity (Inhalation): Not classified

LD50 and LC50 Data: Not available

Skin Corrosion/Irritation: Not classified

Serious Eye Damage/Irritation: Not classified

Respiratory or Skin Sensitization: Not classified

Germ Cell Mutagenicity: Not classified

Carcinogenicity: Not classified

Specific Target Organ Toxicity (Repeated Exposure): Not classified

Reproductive Toxicity: Not classified

Specific Target Organ Toxicity (Single Exposure): Not classified

Aspiration Hazard: Not classified

Symptoms/Injuries After Inhalation: Prolonged exposure may cause irritation.

Symptoms/Injuries After Skin Contact: Prolonged exposure may cause skin irritation.

Symptoms/Injuries After Eye Contact: May cause slight irritation to eyes.

Symptoms/Injuries After Ingestion: Ingestion may cause adverse effects.

Chronic Symptoms: None expected under normal conditions of use.

Information on Toxicological Effects - Ingredient(s)

LD50 and LC50 Data:

| Trisodium citrate (68-04-2) | |
|-----------------------------|---|
| LD50 Oral Rat | 5.4 g/kg |
| LD50 Dermal Rat | > 2000 mg/kg (Read across: Citric acid) |
| Citric acid (77-92-9) | |
| LD50 Oral Rat | 5400 mg/kg |
| LD50 Dermal Rat | > 2000 mg/kg |

SECTION 12: ECOLOGICAL INFORMATION

Toxicity

Acute Aquatic Toxicity: Not classified

Chronic Aquatic Toxicity: Not classified

Ecology - General: Not classified.

| Trisodium citrate (68-04-2) | |
|--------------------------------|---|
| LC50 Fish 1 | 18000 (18000 - 32000) mg/l (Exposure time: 96 h - Species: Poecilia reticulata) |
| EC50 Daphnia 1 | 5600 (5600 - 10000) mg/l (Exposure time: 48 h - Species: Daphnia magna) |
| EC50 Other Aquatic Organisms 1 | 18000 (18000 - 32000) mg/l (Exposure time: 96 h - Species: Chlorella vulgaris) |
| Citric acid (77-92-9) | |
| LC50 Fish 1 | 1516 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static]) |

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Persistence and Degradability

| | |
|---|---------------------------------|
| Anticoagulant Acid Citrate Dextrose Solution (ACD-A) | |
| Persistence and Degradability | Not established. |
| Citric acid (77-92-9) | |
| Persistence and Degradability | Readily biodegradable in water. |

Bioaccumulative Potential

| | |
|---|------------------|
| Anticoagulant Acid Citrate Dextrose Solution (ACD-A) | |
| Bioaccumulative Potential | Not established. |
| Citric acid (77-92-9) | |
| Log Pow | -1.72 (at 20 °C) |

Mobility in Soil Not available

Other Adverse Effects

Other Information: Avoid release to the environment.

Ozone: Not classified

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Recommendations: Dispose of contents/container in accordance with local, regional, national, and international regulations

Ecology - Waste Materials: Avoid release to the environment.

SECTION 14: TRANSPORT INFORMATION

The shipping description(s) stated herein were prepared in accordance with certain assumptions at the time the SDS was authored, and can vary based on a number of variables that may or may not have been known at the time the SDS was issued.

According to the UNRTDG and ADG Code Not regulated for transport

SECTION 15: REGULATORY INFORMATION

National Regulations

| |
|---|
| Water (7732-18-5) Listed on the AICS (Australian Inventory of Chemical Substances) Listed on the Canadian DSL (Domestic Substances List) Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China) Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances) Listed on the Korean ECL (Existing Chemicals List) Listed on NZIoC (New Zealand Inventory of Chemicals) Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances) Listed on the United States TSCA (Toxic Substances Control Act) inventory Listed on INSQ (Mexican National Inventory of Chemical Substances) Listed on the TCSI (Taiwan Chemical Substance Inventory) |
| .alpha.-D-Glucopyranose, monohydrate (14431-43-7) Listed on the AICS (Australian Inventory of Chemical Substances) Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China) Listed on NZIoC (New Zealand Inventory of Chemicals) Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances) Listed on the TCSI (Taiwan Chemical Substance Inventory) |
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Listed on the United States TSCA (Toxic Substances Control Act) inventory
Listed on INSQ (Mexican National Inventory of Chemical Substances)
Listed on Turkish inventory of chemical
Listed on the TCSI (Taiwan Chemical Substance Inventory)

Citric acid (77-92-9)

Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on the Canadian DSL (Domestic Substances List)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on the Japanese ISHL (Industrial Safety and Health Law)
Listed on the Korean ECL (Existing Chemicals List)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Listed on the Canadian IDL (Ingredient Disclosure List)
Listed on INSQ (Mexican National Inventory of Chemical Substances)
Listed on Turkish inventory of chemical
Listed on the TCSI (Taiwan Chemical Substance Inventory)

International Agreements

No additional Information available

Australia National Regulations

Water (7732-18-5)

| | |
|---------------------------------------|---------|
| High Volume Industrial Chemicals List | Present |
|---------------------------------------|---------|

Citric acid (77-92-9)

| | |
|---------------------------------------|---------|
| High Volume Industrial Chemicals List | Present |
|---------------------------------------|---------|

Australia Territory Regulations

No additional Information available

SECTION 16: ADDITIONAL INFORMATION

Date of Preparation or Latest Revision : 12/04/2018

Data Sources : Information and data obtained and used in the authoring of this safety data sheet could come from database subscriptions, official government regulatory body websites, product/ingredient manufacturer or supplier specific information, and/or resources that include substance specific data and classifications according to GHS or their subsequent adoption of GHS.

Other Information : In accordance with The Model Work Health and Safety Regulations, and the Globally Harmonized System of Classification and Labelling of Chemicals 3rd Revised Edition.

Indication of Changes No additional information available

Abbreviations and Acronyms

ACGIH – American Conference of Governmental Industrial Hygienists
ADG – Australian Dangerous Goods (Code)
AIHA – American Industrial Hygiene Association
ATE - Acute Toxicity Estimate
AU - Australia
BCF - Bioconcentration Factor
BEI - Biological Exposure Indices (BEI)
BOD – Biochemical Oxygen Demand
CAS No. - Chemical Abstracts Service Number
COD – Chemical Oxygen Demand
EC50 - Median Effective Concentration
Erc50 - EC50 in Terms of Reduction Growth Rate
EU - European Union
GHS – Globally Harmonized System of Classification and Labeling of Chemicals
IARC - International Agency for Research on Cancer
LC50 - Median Lethal Concentration

Log Pow - Ratio of the equilibrium concentration (C) of a dissolved substance in a two-phase system consisting of two largely immiscible solvents, in this case octanol and water
NOAEL - No-Observed Adverse Effect Level
NOEC - No-Observed Effect Concentration
NTP – National Toxicology Program
OEL - Occupational Exposure Limits
pH – Potential Hydrogen
SADT - Self Accelerating Decomposition Temperature
SDS - Safety Data Sheet
STEL - Short Term Exposure Limit
ThOD – Theoretical Oxygen Demand
TLM - Median Tolerance Limit
TLV - Threshold Limit Value
TPQ - Threshold Planning Quantity
TWA - Time Weighted Average

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LD50 - Median Lethal Dose

LOAEL - Lowest Observed Adverse Effect Level

LOEC - Lowest-Observed-Effect Concentration

Log Koc - Soil Organic Carbon-water Partitioning Coefficient

Log Kow - Octanol/water Partition Coefficient

UN – United Nations

UN RTDG – United Nations Recommendations on the Transport of Dangerous Goods

VOC – Volatile Organic Compounds

WEEL - Workplace Environmental Exposure Levels

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

Australia GHS SDS