

Material Safety Data Sheets

1. IDENTIFICATION

Product Name	Ethylenediaminetetraacetic acid disodium salt dihydrate
Other Names	EDTA disodium salt; EDTA DISODIUM SALT DIHYDRATE; Edta disodium
Uses	No Data Available
Chemical Family	No Data Available
Chemical Formula	$C_{10}H_{14}N_2O_8Na_2 \cdot 2H_2O$
Chemical Name	No Data Available
Product Description	No Data Available
Company	Arman sina.co
Contact Information	info@armansina.com www.armansina.com

2. HAZARD IDENTIFICATION

Hazard Categories	Acute Toxicity (Inhalation) Serious Eye Damage/Irritation Specific Target Organ Toxicity (Repeated Exposure)
Risk Phrases	Causes serious eye irritation. Harmful if inhaled. May cause damage to organs through prolonged or repeated exposure.
Safety Phrases	Use only outdoors or in a well-ventilated area. Do not breathe dusts or mists. Wear eye protection/face protection. Wash hands and face thoroughly after handling. IF INHALED: Remove victim to fresh air and keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a POISON CENTER or doctor if you feel unwell. If eye irritation persists: Get medical advice. Dispose of contents/container in accordance with local / regional / national / international regulations.

Symbol



3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

Chemical Entity	Formula	CAS Number	Proportion
Ethylenediaminetetraacetic acid disodium salt dihydrate	$C_{10}H_{14}N_2O_8Na_2 \cdot 2H_2O$	6381-92-6	>=99 %

4. FIRST AID MEASURES

Description of necessary measures according to routes of exposure

Swallowed	IF SWALLOWED: Rinse mouth, then drink plenty of water. Do not induce vomiting. Call a Poison Centre or doctor/physician for advice. Never give anything by mouth to an unconscious person.
Eye	IF IN EYES: Immediately flush eyes with running water for several minutes, holding eyelids open and occasionally lifting the upper and lower lids. Remove contact lenses if present and easy to do. Continue rinsing for at least 15 minutes. If eye irritation persists, get medical advice/attention.
Skin	IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash before reuse. If skin irritation occurs, get medical advice/attention. Wash contaminated clothing and shoes before reuse.
Inhaled	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a Poison Centre or doctor/physician for advice. Apply resuscitation if victim is not breathing - Administer oxygen if breathing is difficult.
Advice to Doctor	In all cases of doubt, or when symptoms persist, seek medical attention. Treat symptomatically. Ensure that attending medical personnel are aware of the identity and nature of the product(s) involved, and take precautions to protect themselves.

Medical Conditions Aggravated by No information available.
Exposure

5. FIRE FIGHTING MEASURES

General Measures	If safe to do so, move undamaged containers from fire area. Cool containers with water spray until well after fire is out.
Flammability Conditions	May burn but does not ignite readily.
Extinguishing Media	Use dry chemical, Carbon dioxide (CO ₂), foam or water spray for extinction.
Fire and Explosion Hazard	Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.
Hazardous Products of Combustion	Fire may produce irritating, toxic and/or corrosive fumes, including Carbon oxides, Nitrogen oxides.
Special Fire Fighting Instructions	Contain runoff from fire control or dilution water - Runoff may pollute waterways.
Personal Protective Equipment	Wear self-contained breathing apparatus (SCBA) and chemical splash suit. SCBA and structural firefighter's uniform may provide limited protection.
Flash Point	No Data Available
Lower Explosion Limit	No Data Available
Upper Explosion Limit	No Data Available
Auto Ignition Temperature	No Data Available
Hazchem Code	No Data Available

6. ACCIDENTAL RELEASE MEASURES

General Response Procedure	Ensure adequate ventilation. ELIMINATE all ignition sources. Do not touch or walk through spilled material. Avoid generating dust. Do not breathe dust and avoid contact with eyes, skin and clothing.
Clean Up Procedures	Mechanically recover spilled product (sweep or shovel) into appropriate container for disposal (see SECTION 13).
Containment	Stop leak if safe to do so – Prevent entry into waterways, drains or confined areas. Prevent dust cloud.
Decontamination	No information available.
Environmental Precautionary Measures	Prevent entry into drains and watercourses. Local authorities should be advised if significant spillages cannot be contained.
Evacuation Criteria	Spill or leak area should be isolated immediately. Keep unauthorised personnel away.
Personal Precautionary Measures Use personal protective equipment as required (see SECTION 8).	

7. HANDLING AND STORAGE

Handling	Safety showers and eyewash facilities should be provided within the immediate work area for emergency use. Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Minimise dust generation and accumulation. Do not breathe dust/mist and avoid contact with eyes, skin and clothing. Do not ingest. Use personal protective equipment as required (see SECTION 8). Dry powders can build static electricity charges when subjected to the friction of transfer and mixing operations. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres.
Storage	Store in a cool, dry and well-ventilated place, out of direct sunlight. Keep container tightly closed. Keep away from heat and sources of ignition - No smoking. Keep away from food/feedstuffs and incompatible materials (see SECTION 10).
Container	Keep in the original container.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General	No specific exposure standards are available for this product. For dusts from solid substances without specific occupational exposure standards: <ul style="list-style-type: none">- Safe Work Australia Exposure Standard (Nuisance dusts): 8 hr TWA = 10 mg/m³ (measured as inhalable dust).- New Zealand WES (Particulates not otherwise classified): TWA = 10 mg/m³; TWA = 3 mg/m³ (respirable dust).
----------------	---

Exposure Limits

Biological Limits

Material	Type	Limit Info
Ethylenediaminetetraacetic acid		

Engineering Measures	A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area.
Personal Protection Equipment	<ul style="list-style-type: none">- Respiratory protection: In case of inadequate ventilation, wear respiratory protection. Recommended: Dust mask/particulate filter respirator (refer to AS/NZS 1715 & 1716).- Eye/face protection: Wear appropriate eye protection to avoid eye contact. Recommended: Safety glasses with side shields (or goggles).- Hand protection: Handle with gloves. Recommended: Protective gloves.- Skin/body protection: Wear appropriate personal protective clothing to avoid skin contact. Recommended: Suitable protective clothing.
Special Hazards Precautions	No information available.
Work Hygienic Practices	Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Take off contaminated clothing and wash before reuse. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Solid
Appearance	Powder
Odour	Odourless
Colour	White
pH	4.0-5.5(5%, water)
Vapour Pressure	No Data Available
Relative Vapour Density	No Data Available
Boiling Point	No Data Available
Melting Point	255°C
Freezing Point	No Data Available
Solubility	Slightly soluble in water 100 g/l (20°C)
Specific Gravity	No Data Available
Flash Point	No Data Available
Auto Ignition Temp	No Data Available
Evaporation Rate	No Data Available
Bulk Density	No Data Available
Corrosion Rate	No Data Available
Decomposition Temperature	No Data Available
Density	No Data Available
Specific Heat	No Data Available
Molecular Weight	No Data Available
Net Propellant Weight	No Data Available
Octanol Water Coefficient	No Data Available
Particle Size	No Data Available
Partition Coefficient	No Data Available
Saturated Vapour Concentration	No Data Available
Vapour Temperature	No Data Available
Viscosity	No Data Available
Volatile Percent	No Data Available
VOC Volume	No Data Available
Additional Characteristics	No information available.
Potential for Dust Explosion	Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.
Fast or Intensely Burning Characteristics	No information available.
Flame Propagation or Burning Rate of Solid Materials	No information available.
Non-Flammables That Could Contribute Unusual Hazards to a Fire	No information available.
Properties That May Initiate or Contribute to Fire Intensity	May burn but does not ignite readily.
Reactions That Release Gases or Vapours	Fire/decomposition may produce irritating, toxic and/or corrosive fumes, including Carbon oxides, Nitrogen oxides.
Release of Invisible Flammable Vapours and Gases	No information available.

10. STABILITY AND REACTIVITY

General Information	The product is non-reactive under normal conditions of use, storage and transport.
Chemical Stability	Stable under recommended storage and handling conditions.
Conditions to Avoid	Avoid generating dust. Keep away from heat and sources of ignition. Take precautionary measures against static discharge.
Materials to Avoid	Incompatible/reactive with Copper, Copper alloys, Nickel.
Hazardous Decomposition Products	Under normal conditions of storage and use, hazardous decomposition products should not be produced. Fire/decomposition may produce irritating, toxic and/or corrosive fumes, including Carbon oxides, Nitrogen oxides.
Hazardous Polymerisation	No dangerous reactions known under normal conditions of use.

11. TOXICOLOGICAL INFORMATION

General Information	<ul style="list-style-type: none">- Acute toxicity: Harmful if inhaled.- Skin corrosion/irritation: Not classified. Non-irritating to the skin.- Eye damage/irritation: Causes serious eye irritation (pH 2.8 - 3).- Respiratory/skin sensitisation: Not classified. No sensitisation responses were observed.- Germ cell mutagenicity: Not classified.- Carcinogenicity: Not classified.- Reproductive toxicity: Not classified.- STOT (single exposure): Not classified.- STOT (repeated exposure): May cause damage to organs through prolonged or repeated exposure.- Aspiration toxicity: Not classified.
Acute	
Ingestion	Acute toxicity (Oral): <ul style="list-style-type: none">- LD50, Rat: 4,500 mg/kg bw. [EDTA acid].
Inhalation	Acute toxicity (Inhalation): <ul style="list-style-type: none">- LC50, Rat: 30 mg/m3 air [EDTA acid].
Carcinogen Category	None

12. ECOLOGICAL INFORMATION

Ecotoxicity	Aquatic toxicity: <ul style="list-style-type: none">- LC50, Fish (Danio rerio): ≥ 25.7 mg/L [EDTA acid].- EC50, Crustacea (Daphnia magna): 140 mg/l (48 h) [EDTA acid].- EC50, Algae/aquatic plants (Pseudokirchnerella subcapitata): >100 mg/L (72 h) [EDTA acid].
Persistence/Degradability	Readily biodegradable.
Mobility	No information available.
Environmental Fate	The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.
Bioaccumulation Potential	Log Kow: -3.86 (25° C) [EDTA acid].
Environmental Impact	No Data Available

13. DISPOSAL CONSIDERATIONS

General Information	Dispose of contents/container in accordance with local/regional/national regulations.
Special Precautions for Land Fill	No information available.

14. TRANSPORT INFORMATION

Land Transport (Australia)

ADG Code

Proper Shipping Name	Ethylenediaminetetraacetic acid disodium salt dihydrate
Class	No Data Available
Subsidiary Risk(s)	No Data Available
	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available
Comments	NON-DANGEROUS GOODS: Not regulated for LAND transport.

Sea Transport

IMDG Code

Proper Shipping Name	Ethylenediaminetetraacetic acid disodium salt dihydrate
Class	No Data Available
Subsidiary Risk(s)	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available
EMS	No Data Available
Marine Pollutant	No
Comments	NON-DANGEROUS GOODS: Not regulated for SEA transport.

Air Transport

IATA DGR

Proper Shipping Name	Ethylenediaminetetraacetic acid disodium salt dihydrate
Class	No Data Available
Subsidiary Risk(s)	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available
Comments	NON-DANGEROUS GOODS: Not regulated for AIR transport.

15. OTHER INFORMATION

Revision

2

Key/Legend

< Less Than
 > Greater Than
 AICS Australian Inventory of Chemical Substances
 atm Atmosphere
 CAS Chemical Abstracts Service (Registry Number)
 cm² Square Centimetres
 CO₂ Carbon Dioxide
 COD Chemical Oxygen Demand
 deg C (° C) Degrees Celcius
 EPA (New Zealand) Environmental Protection Authority of New Zealand
 deg F (° F) Degrees Farenheit
 g Grams
 g/cm³ Grams per Cubic Centimetre
 g/l Grams per Litre
 HSNO Hazardous Substance and New Organism
 IDLH Immediately Dangerous to Life and Health
 immiscible Liquids are insoluable in each other.
 inHg Inch of Mercury
 inH₂O Inch of Water
 K Kelvin
 kg Kilogram
 kg/m³ Kilograms per Cubic Metre
 lb Pound
 LC₅₀ LC stands for lethal concentration. LC₅₀ is the concentration of a material in air which causes the death of 50% (one half) of a group of test animals. The material is inhaled over a set period of time, usually 1 or 4 hours.
 LD₅₀ LD stands for Lethal Dose. LD₅₀ is the amount of a material, given all at once, which causes the death of 50% (one half) of a group of test animals.
 ltr or L Litre
 m³ Cubic Metre
 mbar Millibar
 mg Milligram
 mg/24H Milligrams per 24 Hours
 mg/kg Milligrams per Kilogram
 mg/m³ Milligrams per Cubic Metre
 Misc or Miscible Liquids form one homogeneous liquid phase regardless of the amount of either component present.
 mm Millimetre
 mmH₂O Millimetres of Water
 mPa.s Millipascals per Second
 N/A Not Applicable
 NIOSH National Institute for Occupational Safety and Health
 NOHSC National Occupational Heath and Safety Commission
 OECD Organisation for Economic Co-operation and Development
 Oz Ounce
 PEL Permissible Exposure Limit
 Pa Pascal
 ppb Parts per Billion
 ppm Parts per Million
 ppm/2h Parts per Million per 2 Hours
 ppm/6h Parts per Million per 6 Hours
 psi Pounds per Square Inch
 R Rankine
 RCP Reciprocal Calculation Procedure
 STEL Short Term Exposure Limit
 TLV Threshold Limit Value
 tne Tonne
 TWA Time Weighted Average
 ug/24H Micrograms per 24 Hours
 UN United Nations
 wt Weight