



# EDTA (Ethylenediaminetetracetic acid)

## Safety Data Sheet

Version 1.1

Revision date 11/15/2011

### SECTION 1. Product and company identification

Chemical type	: Substance
Substance name	: EDTA (Ethylenediaminetetracetic acid)
CAS No.	: 6381-92-6
Product code	: RC-047
Formula	: C <sub>10</sub> H <sub>14</sub> N <sub>2</sub> Na <sub>2</sub> O <sub>8</sub> .2H <sub>2</sub> O
Synonyms	: (ethylenedinitrilo)tetraacetic acid disodium salt, dihydrate / acetic acid(ethylenedinitrilo)tetra-, disodium salt, dihydrate / CHELEST F-NA / disodium edetate, dihydrate / disodium EDTA, dihydrate / disodium(ethylenedinitrilo)tetraacetic acid, dihydrate / disodiummethylenediamine tetraacetic acid, dihydrate / EDTA disodium salt, dihydrate / EDTA disodium salt, dihydrate, crystal / EDTA disodium, dihydrate / EDTA Na <sub>2</sub> , dihydrate / ethylenediamine tetraacetic acid disodium salt, dihydrate / glycine, N,N'-1,2-ethanediybis(N-(carboxymethyl)-,disodium salt, dihydrate / IDRANOL III / N,N'-1,2-ethanediy-bis(N(carboxymethyl)glycine)disodium salt, dihydrate / SEQUESTRENE Na <sub>2</sub> , dihydrate / TITRIPLEX III, dihydrate
Company identification	: G-Biosciences/ Geno Technology, Inc. 9800 Page Avenue St. Louis, MO 63132-1429, USA Tel.1-800-628-7730 <a href="http://www.GBiosciences.com">http://www.GBiosciences.com</a>
Emergency number	: Chemtrec <b>1-800-424-9300</b> (USA/Canada), <b>+1-703-527-3887</b> (Intl)

### SECTION: 2. Hazards identification

#### 2.1. Emergency Overview

Physical state	: Solid
Appearance	: Crystalline solid. Crystalline powder
Colour	: White
Odour	: Odourless

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#### 2.2. OSHA Regulatory Status

No additional information available

#### 2.3. Potential health effects

Symptoms/injuries after inhalation	: AFTER INHALATION OF DUST: Dry/sore throat. Coughing.
Symptoms/injuries after ingestion	: AFTER ABSORPTION OF HIGH QUANTITIES: Gastrointestinal complaints. Change in the haemogramme/blood composition.

#### 2.4. Potential environmental effects

No additional information available

### SECTION: 3. Composition/information on ingredients

Name	CAS No.	%
EDTA (Ethylenediaminetetracetic acid)	6381-92-6	100

#### 4.1. First aid procedures

First-aid measures general	: Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with laboured breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital.
First-aid measures after inhalation	: Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.
First-aid measures after skin contact	: Rinse with water. Soap may be used. Take victim to a doctor if irritation persists.
First-aid measures after eye contact	: Rinse with water. Do not apply neutralizing agents. Take victim to an ophthalmologist if irritation persists.
First-aid measures after ingestion	: Rinse mouth with water. Immediately after ingestion: give lots of water to drink. Call Poison Information Centre ( <a href="http://www.big.be/antigif.htm">www.big.be/antigif.htm</a> ). Consult a doctor/medical service if you feel unwell. Ingestion of large quantities: immediately to hospital.

#### 4.2. Note to physicians

No additional information available

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### SECTION: 5. Firefighting measures

#### 5.1. Flammable properties

Fire hazard	: DIRECT FIRE HAZARD. Most organic solids may burn if strongly heated. INDIRECT FIRE HAZARD. Reactions involving a fire hazard: see "Reactivity Hazard".
Explosion hazard	: DIRECT EXPLOSION HAZARD. Most organic solids are liable to dust explosion hazard. INDIRECT EXPLOSION HAZARD. Dust cloud can be ignited by a spark. Reactions with explosion hazards: see "Reactivity Hazard".
Reactivity	: Reacts on exposure to water (moisture) with (some) metals: release of highly flammable gases/vapours (hydrogen). On burning: release of toxic and corrosive gases/vapours (nitrous vapours, carbon monoxide - carbon dioxide).

#### 5.1. Extinguishing media

Suitable extinguishing media	: Water. Water spray. Polyvalent foam. ABC powder. Carbon dioxide.
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#### 5.3. Protection for firefighters

Firefighting instructions	: Dilute toxic gases with water spray. Take account of environmentally hazardous firefighting water. Use water moderately and if possible collect or contain it.
Protection during firefighting	: Heat/fire exposure: compressed air/oxygen apparatus.

### SECTION: 6. Accidental release measures

#### 6.1. Personal precautions

##### 6.1.1. For non-emergency personnel

Protective equipment	: Gloves. Protective clothing. Dust cloud production: compressed air/oxygen apparatus.
Emergency procedures	: Mark the danger area. Prevent dust cloud formation, e.g. by wetting. No naked flames. Wash contaminated clothes. In case of hazardous reactions: keep upwind. In case of reactivity hazard: consider evacuation.

##### 6.1.2. For emergency responders

No additional information available

#### 6.2. Environmental precautions

Prevent soil and water pollution. Prevent spreading in sewers.

#### 6.3. Methods for containment

For containment	: Contain released substance, pump into suitable containers. Consult "Material-handling" to select material of containers. Plug the leak, cut off the supply. Dam up the solid spill. Knock down/dilute dust cloud with water spray. Hazardous reaction: measure explosive gas-air mixture. Reaction: dilute combustible gas/vapour with water curtain.
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#### 6.4. Methods for clean up

Methods for cleaning up	: Stop dust cloud by covering with sand/earth. Scoop solid spill into closing containers. See "Material-handling" for suitable container materials. Carefully collect the spill/leftovers. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling.
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#### 6.5. Other information

No additional information available

#### 6.6. Spill or leak statements by type of chemical

No additional information available

### SECTION: 7. Handling and storage

#### 7.1. Handling

Precautions for safe handling	: Comply with the legal requirements. Clean contaminated clothing. Thoroughly clean/dry the installation before use. Do not discharge the waste into the drain. Powdered form: no compressed air for pumping over. Avoid raising dust. Keep away from naked flames/heat. Finely divided: spark- and explosionproof appliances. Finely divided: keep away from ignition sources/sparks. Observe normal hygiene standards. Keep container tightly closed. Carry operations in the open/under local exhaust/ventilation or with respiratory protection.
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#### 7.2. Storage

Storage temperature	: 15 - 25 °C
Heat-ignition	: KEEP SUBSTANCE AWAY FROM: heat sources. ignition sources.
Prohibitions on mixed storage	: KEEP SUBSTANCE AWAY FROM: metals. water/moisture.
Storage area	: Store in a dry area. Provide the tank with earthing. Meet the legal requirements.
Special rules on packaging	: SPECIAL REQUIREMENTS: closing. watertight. dry. clean. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.
Packaging materials	: SUITABLE MATERIAL: synthetic material. glass. MATERIAL TO AVOID: metal.

### SECTION: 8. Exposure controls/personal protection

#### 8.1. Exposure guidelines

No additional information available

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### 8.2. Engineering controls

No additional information available

### 8.3. Personal protective equipment (PPE)

Materials for protective clothing : GIVE GOOD RESISTANCE: rubber. neoprene.  
Hand protection : Gloves.  
Eye protection : Safety glasses. In case of dust production: protective goggles.  
Skin and body protection : Protective clothing.  
Respiratory protection : Dust production: dust mask with filter type P1.

## SECTION: 9. Physical and chemical properties

Physical state : Solid  
Appearance : Crystalline solid. Crystalline powder.  
Molecular mass : 372.24 g/mol  
Colour : White.  
Odour : Odourless.  
Odour threshold : No data available  
pH : 4 - 5 (5 %)  
pH solution : 5 %  
Melting point : No data available  
Solidification point : No data available  
Boiling point : No data available  
Flash point : No data available  
Relative evaporation rate (butylacetate=1) : No data available  
Flammability (solid, gas) : No data available  
Explosive limits : No data available  
Vapour pressure : No data available  
Relative vapour density at 20 °C : No data available  
Relative density : No data available  
Solubility : Soluble in water.  
Water: > 10 g/100ml  
Log Pow : No data available  
Self ignition temperature : No data available  
Decomposition temperature : > 246 °C  
Viscosity : No data available  
Explosive properties : No data available  
Oxidising properties : No data available  
VOC content : 0 %  
Other properties : Hygroscopic. Substance has acid reaction.

## SECTION: 10. Stability and reactivity

### 10.1. Chemical stability

Reacts on exposure to water (moisture) with (some) metals: release of highly flammable gases/vapours (hydrogen). On burning: release of toxic and corrosive gases/vapours (nitrous vapours, carbon monoxide - carbon dioxide).

Hygroscopic.

### 10.2. Conditions to avoid

No additional information available

### 10.3. Incompatible materials

No additional information available

### 10.4. Hazardous decomposition products

No additional information available

### 10.5. Possibility of hazardous reactions

No additional information available

## SECTION: 11. Toxicological information

### Information on toxicological effects

Acute toxicity : Not classified

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LD50 oral rat	> 2000 mg/kg (Rat)
LD50 dermal rabbit	> 5000 mg/kg (Rabbit)
Skin corrosion/irritation	: Not classified pH: 4 - 5 (5 %)
Serious eye damage/irritation	: Not classified pH: 4 - 5 (5 %)
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: Not classified

## SECTION: 12. Ecological information

### 12.1 Ecotoxicity

Ecology - air : Not dangerous for the ozone layer (Council Regulation (EC) no 1005/2009).

EDTA (Ethylenediaminetetracetic acid)(6381-92-6)	
LC50 fishes 1	320 mg/l (96 Hours; Poecilia reticulata; ANHYDROUS FORM)
EC50 Daphnia 1	> 100 mg/l (24 Hours; Daphnia magna)
EC50 other aquatic organisms 1	403 mg/l (3 Hours; Activated sludge; ANHYDROUS FORM)
LC50 fishes 2	1827 mg/l (96 Hours; Lepomis macrochirus; ANHYDROUS FORM)

### 12.2. 12.2. Persistence and degradability

EDTA (Ethylenediaminetetracetic acid)(6381-92-6)	
Persistence and degradability	Not readily biodegradable in water.
Biochemical oxygen demand (BOD)	0.01 g O <sub>2</sub> /g substance

### 12.3. Bioaccumulation/Accumulation

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Bioaccumulative potential	No bioaccumulation data available.

### 12.4. Mobility in environmental media

No additional information available

### 12.6. Other adverse effects

No additional information available

## SECTION: 13. Disposal considerations

### 13.1. Waste treatment methods

Waste disposal recommendations : Dissolve or mix with a combustible solvent. Remove to an authorized incinerator equipped with an afterburner and a flue gas scrubber. Obtain the consent of pollution control authorities before discharging to wastewater treatment plants.

## SECTION: 14. Transport information

### 14.1. Basic shipping description

No additional information available

### 14.2 Additional information

Other information : No supplementary information available.

State during transport (ADR-RID) : Rail and road transport: not subject to ADR-RID.

### Overland transport

No additional information available

### Transport by sea

No additional information available

### Air transport

No additional information available

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### SECTION: 15. Regulatory information

#### 15.1. US Federal regulations

No additional information available

#### 15.2. International regulations

##### CANADA

No additional information available

##### EU-Regulations

No additional information available

##### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

##### Classification according to Directive 67/548/EEC or 1999/45/EC

Not classified

#### 15.2.2. National regulations

No additional information available

#### 15.3. US State regulations

No additional information available

### SECTION: 16. Other information

#### HMIS III Rating

No additional information available

SDS US (ANSI) GBiosciences