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\*\*\*\* MATERIAL SAFETY DATA SHEET \*\*\*\*

Ethylenediamine Tetraacetic acid, Disodium salt, Dihydrate  
08308

\*\*\*\* SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION \*\*\*\*

MSDS Name: Ethylenediamine Tetraacetic acid, Disodium salt, Dihydrate  
Catalog Numbers:  
BP120 1, BP120 500, BP120-1, BP120-500, BP1201, BP120500, CRNS3113,  
O2793 500, O2793-500, O2793500, S311 10, S311 100, S311 3, S311 500,  
S311-10, S311-100, S311-3, S311-500, S31110, S311100, S3113, S311500

Synonyms:  
Disodium EDTA dihydrate, EDTA disodium dihydrate, Glycine  
N,N'-1,2-ethanediybis(n-(carboxymethyl)-disodium salt dihydrate  
Company Identification: Fisher Scientific  
1 Reagent Lane  
Fairlawn, NJ 07410  
For information, call: 201-796-7100  
Emergency Number: 201-796-7100  
For CHEMTREC assistance, call: 800-424-9300

\*\*\*\* SECTION 2 - COMPOSITION, INFORMATION ON INGREDIENTS \*\*\*\*

| CAS#      | Chemical Name   | %     | EINECS#  |
|-----------|---|-------|----------|
| 6381-92-6 | Disodium dihydrogen ethylenediaminetetraacetate dihydrate | 100.0 | unlisted |

Hazard Symbols: XI  
Risk Phrases: 36/37

\*\*\*\* SECTION 3 - HAZARDS IDENTIFICATION \*\*\*\*

EMERGENCY OVERVIEW

Appearance: White crystalline solid.  
Caution! May cause irritation.  
Target Organs: None.

Potential Health Effects

Eye: May cause eye irritation.  
Skin: May cause skin irritation.  
Ingestion: May cause irritation of the digestive tract.  
Inhalation: May cause respiratory tract irritation.  
Chronic: Not available.

\*\*\*\* SECTION 4 - FIRST AID MEASURES \*\*\*\*

Eyes: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower lids. Get medical aid.  
Skin: Flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists.  
Ingestion: If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid.  
Inhalation: Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid if cough or other symptoms appear.  
Notes to Physician: Treat symptomatically and supportively. None reported.

\*\*\*\* 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.  
Extinguishing Media: In case of fire, use water, dry chemical, chemical foam, or alcohol-resistant foam.  
Autoignition Temperature: Not applicable.  
Flash Point: Not applicable.  
NFPA Rating: Not published.  
Explosion Limits, Lower: Not available.  
Upper: Not available.

\*\*\*\* SECTION 6 - ACCIDENTAL RELEASE MEASURES \*\*\*\*

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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. Avoid generating dusty conditions.

\*\*\*\* SECTION 7 - HANDLING and STORAGE \*\*\*\*

Handling: Wash hands before eating. Use with adequate ventilation. Avoid contact with skin and eyes. Avoid ingestion and inhalation.  
Storage: Store in a cool, dry, well-ventilated area away from incompatible substances.

\*\*\*\* SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION \*\*\*\*

Engineering Controls: Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

| Exposure Limits   |             |             |                   |
|---|-------------|-------------|-------------------|
| Chemical Name   | ACGIH       | NIOSH       | OSHA - Final PELs |
| Disodium dihydrogen ethylenediaminetetraacetate dihydrate | none listed | none listed | none listed       |

OSHA Vacated PELs:  
Disodium dihydrogen ethylenediaminetetraacetate dihydrate:  
No OSHA Vacated PELs are listed for this chemical.

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.  
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 29CFR 1010.134. Always use a NIOSH-approved respirator when necessary.

\*\*\*\* SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES \*\*\*\*

Physical State: Solid  
Appearance: White crystalline solid.  
Odor: Not available.  
pH: 5.3 @ aqueous sol.  
Vapor Pressure: Not applicable.  
Vapor Density: Not available.  
Evaporation Rate: Not applicable.  
Viscosity: Not applicable.  
Boiling Point: Not available.  
Freezing/Melting Point: 486F decomposes.  
Decomposition Temperature: 252 C  
Solubility: Soluble in water.  
Specific Gravity/Density: Not available.  
Molecular Formula: C10H14N2Na2O8 2H2O  
Molecular Weight: 372.14

\*\*\*\* SECTION 10 - STABILITY AND REACTIVITY \*\*\*\*

Chemical Stability: Stable under normal temperatures and pressures.  
Conditions to Avoid: Strong oxidants.  
Incompatibilities with Other Materials: None reported.  
Hazardous Decomposition Products: Nitrogen oxides, carbon monoxide, carbon dioxide.  
Hazardous Polymerization: Has not been reported.

\*\*\*\* SECTION 11 - TOXICOLOGICAL INFORMATION \*\*\*\*

RTECS#:  
CAS# 6381-92-6: AH4410000  
LD50/LC50:  
Not available.  
Carcinogenicity:

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Disodium dihydrogen ethylenediaminetetraacetate dihydrate -  
 Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.  
 Epidemiology:  
 No data available.  
 Teratogenicity:  
 No data available.  
 Reproductive Effects:  
 No data available.  
 Neurotoxicity:  
 No data available.  
 Mutagenicity:  
 No data available.  
 Other Studies:  
 No data available.

\*\*\*\* SECTION 12 - ECOLOGICAL INFORMATION \*\*\*\*

Ecotoxicity:  
 Not available.  
 Environmental Fate:  
 Not available.  
 Physical/Chemical:  
 Not available.  
 Other:  
 Not available.

\*\*\*\* SECTION 13 - DISPOSAL CONSIDERATIONS \*\*\*\*

Dispose of in a manner consistent with federal, state, and local regulations.  
 RCRA D-Series Maximum Concentration of Contaminants: Not listed.  
 RCRA D-Series Chronic Toxicity Reference Levels: Not listed.  
 RCRA F-Series: Not listed.  
 RCRA P-Series: Not listed.  
 RCRA U-Series: Not listed.  
 Not listed as a material banned from land disposal according to RCRA.

\*\*\*\* SECTION 14 - TRANSPORT INFORMATION \*\*\*\*

US DOT  
 No information available.  
 IMO  
 No information available.  
 IATA  
 No information available.  
 RID/ADR  
 No information available.  
 Canadian TDG  
 No information available.

\*\*\*\* SECTION 15 - REGULATORY INFORMATION \*\*\*\*

A. Federal

TSCA  
 CAS# 6381-92-6 is not listed on the TSCA inventory.  
 It is for research and development use only.  
 Health & Safety Reporting List  
 None of the chemicals are on the Health & Safety Reporting List.  
 Chemical Test Rules  
 None of the chemicals in this product are under a Chemical Test Rule.  
 Section 12b  
 None of the chemicals are listed under TSCA Section 12b.  
 TSCA Significant New Use Rule  
 None of the chemicals in this material have a SNUR under TSCA.  
 SARA  
 Section 302 (RQ)  
 None of the chemicals in this material have an RQ.  
 Section 302 (TPQ)  
 None of the chemicals in this product have a TPQ.  
 SARA Codes  
 CAS # 6381-92-6: acute.  
 Section 313  
 No chemicals are reportable under Section 313.  
 Clean Air Act:  
 This material does not contain any hazardous air pollutants.  
 This material does not contain any Class 1 Ozone depleters.  
 This material does not contain any Class 2 Ozone depleters.  
 Clean Water Act:  
 None of the chemicals in this product are listed as Hazardous  
 Substances under the CWA.  
 None of the chemicals in this product are listed as Priority  
 Pollutants under the CWA.  
 None of the chemicals in this product are listed as Toxic Pollutants  
 under the CWA.  
 OSHA:  
 None of the chemicals in this product are considered highly hazardous  
 by OSHA.

B. State

Not present on state lists from CA, PA, MN, MA, FL, or NJ.  
 California No Significant Risk Level:

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None of the chemicals in this product are listed.  
 C. International  
 Canada

None of the chemicals in this product are listed on the DSL/NDSL list.  
 CAS# 6381-92-6 is not listed on Canada's Ingredient Disclosure List.  
 European Labeling in Accordance with EC Directives  
 Hazard Symbols: Xi  
 Risk Phrases:  
 R 36/37 Irritating to eyes and respiratory system.  
 Safety Phrases:  
 S 24/25 Avoid contact with skin and eyes.  
 Exposure Limits:  
 OEL-AUSTRALIA:TWA 10 ppm (25 mg/m3). OEL-BELGIUM:TWA 10 ppm (25 mg/m3)  
 OEL-DENMARK:TWA 10 ppm (25 mg/m3). OEL-FINLAND:TWA 10 ppm (25 mg/m3)  
 STEL 20 ppm (50 mg/m3). OEL-FRANCE:TWA 10 ppm (25 mg/m3). STEL 15 ppm  
 (35 mg/m3). OEL-GERMANY:TWA 10 ppm (25 mg/m3). OEL-JAPAN:TWA 10 ppm (2  
 5 mg/m3). OEL-THE NETHERLANDS:TWA 2 mg/m3. OEL-THE PHILIPPIN  
 ES:TWA 10 ppm (25 mg/m3). OEL-POLAND:TWA 2 mg/m3. OEL-RUSSIA:TWA 10 pp  
 m STEL 2 mg/m3. OEL-SWEDEN:TWA 10 ppm (25 mg/m3). STEL 15 ppm (35 mg/m3)  
 OEL-SWITZERLAND:TWA 10 ppm (25 mg/m3). STEL 20 ppm (50 mg/m3). OEL-T  
 URKEY:TWA 10 ppm (25 mg/m3). OEL-UNITED KINGDOM:TWA 10 ppm (25 mg/m3)  
 OEL IN BULGARIA, COLOMBIA, JORDAN, KOREA check ACGIH TLV. OEL IN NEW  
 ZEALAND, SINGAPORE, VIETNAM check ACGI TLV

\*\*\*\* SECTION 16 - ADDITIONAL INFORMATION \*\*\*\*

Additional Information:

Added NFPA codes to Section 5. Added SARA classifications to Section  
 15.  
 Section 3, Emer Overview, added "CAUTION!..."  
 Section 3, Emer Overview, added "MAY CAUSE IRRITATION..."  
 Section 3, Eye Effects, added "May cause eye irritation..."  
 Section 3, Skin Effects, added "May cause skin irritation..."  
 Section 3, Inhalation Effects, added "May cause respiratory tract  
 irritat..."  
 Section 3, Ingestion Effects, added "May cause irritation of the  
 digesti..."  
 Section 4, Eye First Aid, added "Flush eyes with plenty of water  
 for..."  
 Section 4, Eye First Aid, added "Get medical aid..."  
 Section 4, Skin First Aid, added "Flush skin with plenty of soap  
 and..."  
 Section 4, Skin First Aid, added "Get medical aid if irritation  
 devel..."  
 Section 4, Inhalation First Aid, added "Remove from exposure to  
 fresh air..."  
 Section 4, Inhalation First Aid, added "If not breathing, give  
 artificial r..."  
 Section 4, Inhalation First Aid, added "If breathing is difficult,  
 give oxy..."  
 Section 4, Inhalation First Aid, added "Get medical aid if cough or  
 other s..."  
 Section 4, Ingestion First Aid, added "If victim is conscious and  
 alert, g..."  
 Section 4, Ingestion First Aid, added "Never give anything by mouth  
 to an..."  
 Section 4, Ingestion First Aid, added "Get medical aid..."  
 Section 5, Extinguishing Media, added "In case of fire, use water,  
 dry che..."  
 Section 5, General Firefighting, added "As in any fire, wear a  
 self-contain..."  
 Section 6, Spills/Leaks, added "Vacuum or sweep up material and  
 pla..."  
 Section 6, Spills/Leaks, added "Avoid generating dusty  
 conditions..."  
 Section 7, Handling, added "Wash hands before eating..."  
 Section 7, Handling, added "Use with adequate ventilation..."  
 Section 7, Handling, added "Avoid contact with skin and eyes..."  
 Section 7, Handling, added "Avoid ingestion and inhalation..."  
 Section 7, Storage, added "Store in a cool, dry, well-ventilat..."  
 Section 8, Engin. Controls, added "Use adequate general or local  
 exhau..."  
 Section 8, Eye Protection, added "Wear appropriate protective  
 eyeglas..."  
 Section 8, Skin Protection, added "Wear appropriate protective  
 gloves..."  
 Section 8, Clothing, added "Wear appropriate protective clothin..."  
 Section 8, Respirators, added "Follow the OSHA respirator regulati..."  
 Section 9, Physical Properties has changed.  
 Section 10, Stability, added "Stable under normal temperatures an..."  
 Section 10, Condit. to Avoid, added "strong oxidants..."  
 Section 10, Decomposition Prod., added "nitrogen oxides..."  
 Section 10, Decomposition Prod., added "carbon monoxide..."  
 Section 10, Decomposition Prod., added "carbon dioxide..."  
 Section 10, Incompatibilities has changed.  
 Section 11, Epidemiology has changed.  
 Section 11, Neurotoxicity has changed.

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Section 11, Teratogenicity has changed.  
Section 11, Mutagenicity has changed.  
Section 11, Reproductive has changed.  
Section 11, Other Info has changed.  
Section 12, Ecology Info has changed.  
Section 12, Environ. Info has changed.  
Section 12, Physical Info has changed.  
Section 12, Other Info has changed.

MSDS Creation Date: 9/12/1995 Revision Date: 3/04/1996

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