Safety Data Sheet

ETIDOT 67

Di-Sodium Octaborate Tetrahydrate

Section 1 - Chemical Product and Company Identification

1.1 GHS Name: Di-sodium Tetraborate Octahydrate

1.2 Chemical Name: Di-sodium Tetraborate Octahydrate

1.2.1 Synonyms: Sodium Tetraborate Octahydrate; DOT

1.3 Company Identification:

1.3.1 Manufacturer: ETI MADEN MINES AND PRODUCTS, Turkey
Bahçekapı Mah. Fatih Sultan Mehmet Bulvarı No:179
Postcode:06377; Etimesgut / ANKARA, TÜRKİYE
PHONE : + 90 312 397 41 14

1.3.2 Supplied By: Etimine USA, Inc; One Penn Center West; Suite# 400
Pittsburgh, PA 15276; Telephone: (412) 809-8215;
Fax: (412) 809-8217

1.4 Emergency Number: CHEMTREC 1-800-262-8200/ (703) 741-5500

Section 2 – Hazard Identification

2.1 Product Classification: Reproductive Toxicity Category 2
Eye Irritation Category 2A

2.2 GHS Label Elements:

2.1.1 Hazard Pictogram:

2.1.2 Signal Word: Warning

2.1.3 Hazard Statement: H361 Suspected of damaging fertility or unborn child
H319: May cause eye irritation.

2.1.4 Precautionary Statements:

P201 - Obtain instructions before use
P202 - Do not handle until all safety precautions have been read and understood
P280 - Wear protective gloves, eye protection

P308+P313 - If exposed or concerned: Get medical advice/attention
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses safely.
P501 - Dispose of contents/container to comply with local, state and federal regulations.

2.1.5 Other Hazards: None

Section 3 - Product Identification

CAS#	Chemical Name	Percent	EINECS/ELINCS
12280-03-4	Di-sodium Tetraborate Octahydrate	>99.9%	234-541-0

Section 4 - First Aid Measures

4.1 Necessary First Aid Measures:

4.1.1 Protection of First-aiders: No special protective clothing is required

4.2 HAZARDS TO HUMANS AND DOMESTIC ANIMALS

4.2.1 CAUTION: Maybe harmful if swallowed or inhaled. May cause eye irritation. Avoid breathing dust. Wash with soap and water after handling.

4.2.2 STATEMENT OF PRACTICAL TREATMENT:

If swallowed: Call a physician or poison control center. Do not induce vomiting. It is not intended for ingestion. Amounts greater than one teaspoonful, when ingested, may cause gastrointestinal problems.

If Inhaled: Mild irritation to nose and throat may occur when the PEL or TLV are exceeded (see Section 15). Remove victim to fresh air. Get medical attention.

If in Eyes: Flush eyes with plenty of water. Call a physician if irritation persists.

Dermal Contact: Etidot 67 is very mildly alkaline. Can be slightly irritating. Wash with water. Can be readily absorbed through broken or abraded skin.

ROUTES OF EXPOSURE: In the occupational setting, inhalation is the most important route of exposure. Dermal absorption is usually through open damaged skin.

Notes to Physician: Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information: **ETIDOT 67 is not a flammable material. It functions as flame retardant.** However, as in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Runoff from fire control or dilution water may cause pollution.

Extinguishing Media: Use agent most appropriate to extinguish fire. Use water spray, dry chemical, carbon dioxide, or appropriate foam.

Section 6 - Accidental Release Measures

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. Clean up spills immediately, observing precautions in the Protective Equipment section. Avoid generating dusty conditions. Provide ventilation.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Use with adequate ventilation. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Do not breathe dust, vapor, mist, or gas. Avoid ingestion and inhalation.

Storage: Store in a cool, dry, and well-ventilated area away from incompatible substances.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA
Di-Sodium Octaborate Tetrahydrate	5 mg/m3 TWA	5 mg/m3 TWA	10mg/m3 TWA

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 or European Standard EN166.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: A respiratory protection program that meets OSHA's 29 CFR §1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant a respirator's use.

Section 9 - Physical and Chemical Properties

Physical State:	Solid
Appearance:	White Crystalline Powder
Odor:	Odorless
pH:	Very mildly alkaline pH 8.5 (1.0 g/100ml water at 20C)
Vapor Pressure:	Not applicable. Not a volatile substance
Vapor Density:	Not applicable
Evaporation Rate:	Not applicable
Viscosity:	Not applicable
Boiling Point:	Not Applicable
Freezing/Melting Point:	815◦C (heated in a closed space)
Autoignition Temperature:	Not applicable. Not a flammable substance.
Flash Point:	Not applicable
Decomposition Temperature:	Not available.
Lower Explosion Limit (LEL):	Not applicable. Not an explosive substance
Upper Explosion Limit (UEL):	Not applicable
Solubility:	Soluble in Water, Methanol, Ethylene Glycol, Glycerol. Water solubility: 9.7% at 20◦C and 27.4 at 40◦C
Bulk Density:	0.35 – 0.6 g/cm3
Molecular Formula:	Na2B8O13.4H2O
Molecular Weight:	412.5

Section 10 - Stability and Reactivity

Chemical Stability:	Stable under normal storage and handling conditions.
Conditions to Avoid:	Incompatible materials, dust generation, excessive heat.
Incompatible Materials:	Acids, alkaloids, and metallic salts.
Hazardous Decomposition:	Not available
Hazardous Polymerization:	Will not occur.

Section 11 - Toxicological Information

RTECS#:	CAS# 12280-03-4:	VZ2275000
LD50/LC50:	CAS# 12280-03-4:	Oral, mouse: LD50 = 2 gm/kg; Oral, rat: LD50 = 6000 mg/kg Inhalation Rat: LC50 = 2 mg/L Low acute oral and dermal toxicity. Low Acute Inhalation Toxicity
Carcinogenicity:	CAS# 12280-03-4:	Not a carcinogenic or suspected carcinogenic substance. Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.

Inhalation:	High concentration of dust may cause transient irritation to the upper respiratory tract.
SKIN :	Repeated or prolonged contact may cause mild irritation and/or drying (defattening) of skin.
EYES :	May cause transient eye irritation and discomfort

Epidemiology:	No information available
Teratogenicity:	No information available.
Reproductive Effects:	No information available.
Neurotoxicity:	No information available.
Mutagenicity:	No information available.
Other Studies:	See actual entry in RTECS for complete information.

Section 12 - Ecological Information

Eco-toxicological data: LC50 24 hours Daphnia magna 242 mg/l
LC50 21 days fish (embryonic rainbow trout) 88 mg/l

FISH TOXICITY: Boron naturally occurs in seawater at an average concentration of 5 mg B/liter. In laboratory studies the acute toxicity (96-hr LC50) for under-yearling Coho salmon (Onchorhynchus kisutch) in seawater was determined as 40 mg B/L (added as Sodium Metaborate). The Minimum Lethal Dose for minnows exposed to borates or boric acid at 20C for 6 hours is 18,000 to 19,000 mg/l in distilled water, 19,000 to 19,500 in hard water.

Rainbow trout:	24-day LC50 = 150.0 mg/B/L 36-day NOEC-LOEC = 0.75-1 mg/B/L
Goldfish:	7-day NOEC-LOEC = 26.50 mg/B/L 3-day LC50 = 178 mg/B/L

BIRD TOXICITY: Dietary levels of 100 mg/kg resulted in reduced growth of female mallards. As little as 30 mg/kg fed to mallard adults adversely affected the growth rate of offspring.

INVERTEBRATE TOXICITY: Daphnids 48-hour LC50 = 133 mg/B/L
1-day NOEC-LOEC = 6-13 mg/B/L

PHYTOTOXICITY: Although boron is an essential micro-nutrient for healthy growth of plants, it can be harmful to boron-sensitive plants in higher quantities. Plants and trees can easily be exposed by root absorption to toxic levels of boron in the form of water-soluble Borate leached into nearby waters or soil. Care should be taken to minimize the amount of boron released to the environment.

ENVIRONMENTAL FATE DATA:

Persistence / Degradation: Boron is naturally occurring and is commonly found in the environment as natural Borate.
Soil Mobility: The product is soluble in water and is leachable through normal soil.

Ecological Information: Boron is an essential plant micronutrient, however in large quantities can be phytotoxic.

Section 13 - Disposal Considerations

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Disposal of container and unused contents must be carried out in accordance with the federal, state and local requirements.

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P-Series: None listed.
RCRA U-Series: None listed.

Section 14 - Transport Information

Etidot 67 Disodium Octaborate tetrahydrate is not classified as Hazardous substance for transport.

14.1 US DOT: **Unregulated**

14.2 Canada TDG: **WHIMS Class D2A**

14.3 Transport Classification for Road (ADR) / Rail (RID); Inland waterways (ADN); Sea (IMDG); Air (ICAO/IATA):

14.3.1 UN Number: Not Regulated
14.3.2 UN Proper Shipping Name: Not Regulated
14.3.3 Transport hazard class(es): Not Regulated
14.3.4 Packing Group: Not Regulated
14.3.5 Environmental Hazards (e.g. marine pollutant): Not regulated
14.3.6 Transport in bulk according to Annex II of Marpol 73/78 and the IBC code: Not Regulated
14.3.7 Special precautions for user: Not Regulated

Section 15 - Regulatory Information

US Regulations:

TSCA:	CAS# 12179-04-3 is listed on the TSCA inventory.
Health & Safety Reporting List:	Not on the Health & Safety Reporting List.
Chemical Test Rules:	Not under a Chemical Test Rule.
TSCA 12(b)	Chemical Weapons Convention: TSCA 12(b): No
CDTA:	No
SARA 311/312:	Acute: Yes Chronic: Yes Fire: No Pressure: No Reactivity: No (Mixture / Solid)
TSCA Significant New Use Rule:	Not 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 # 12179-04-3: chronic.
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 depletors. This material does not contain any Class 2 Ozone depletors.
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: This product is not considered highly hazardous by OSHA.

STATE: CAS# 12179-04-3 can be found on the following state right to know lists: California, New Jersey, Florida, Pennsylvania, Minnesota, Massachusetts.
California No Significant Risk Level: None of the chemicals in this product are listed.

Canada: CAS# 12179-04-3 is listed on Canada's DSL List.
This product has a WHMIS classification of D2A, D2B.
CAS# 12179-04-3 is listed on Canada's Ingredient Disclosure List.

Exposure Limits
CAS# 1303-96-4:

OEL-AUSTRALIA:TWA 5 mg/m3
OEL-BELGIUM:TWA 5 mg/m3
OEL-DENMARK:TWA 5 mg/m3
OEL-FRANCE:TWA 5 mg/m3
OEL-THE NETHERLANDS:TWA 5 mg/m3
OEL-SWEDEN:TWA 2 mg/m3;STEL 5mg/m3;Skin
OEL-SWITZERLAND:TWA 5 mg/m3
OEL-UNITED KINGDOM:TWA 5 mg/m3
OEL IN BULGARIA, COLOMBIA, KOREA,
NEW ZEALAND, SINGAPORE, VIETNAM check ACGIH TLV

Section 16 - Additional Information

16.1 Date of Revision: June 23, 2015

16.2 National Fire Protection Association (NFPA) Classification:

(*4 = Severe, 3 = Serious, 2 = Moderate, 1 = Slight, 0 = Minimal*)

Health	1
Flammability	0
Reactivity	0

16.3 Hazardous Materials Information Systems (HMIS):

(*4 = Extreme, 3 = High, 2 = Moderate, 1 = Slight, 0 = Insignificant*)

Blue: (Acute Health)	1*	* Chronic Effects (for explanation see Section 11)
Red: (Flammability)	0	
Yellow: (Reactivity)	0	

Label Hazard Warning: WARNING! HARMFUL IF SWALLOWED, INHALED OR ABSORBED THROUGH SKIN. CAUSES IRRITATION TO SKIN, EYES AND RESPIRATORY TRACT.

Label Precautions:
KEEP OUT OF REACH OF CHILDREN.
Do not ingest.
Avoid contact with eyes, skin and clothing.
Avoid breathing dust.
Wash thoroughly after handling.
Not for use in food, drug, or pesticides.
Refer to safety data sheet

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Per the 2012 revision of the OSHA Hazard Communication Standard (HCS), Material Safety Data Sheets (MSDS) have been reformatted and renamed Safety Data Sheets (SDS).