

SECTION 1: Identification**1.1. GHS Product identifier**

Product form	: Substance
Trade name	: ETİDOT-67 (Disodium octaborate tetrahydrate)
Chemical name	: disodium octaborate tetrahydrate
IUPAC name	: disodium tetraborate, anhydrous
Substance type	: Mono-constituent
EC-No.	: 215-540-4
EC Index-No.	: 005-020-00-3
CAS-No.	: 12280-03-4
Formula	: Na ₂ B ₈ O ₁₃ .4H ₂ O
Product group	: Trade product

1.2. Other means of identification

No additional information available

1.3. Recommended use of the chemical and restrictions on use

Recommended uses and restrictions	: Not restricted
Recommended use	: Agriculture (Fertilizer, Formulation of fertilizer) Wood articles Flame-retardant agent

1.4. Supplier's details**Supplier**

ETİ MADEN İŞLETMELERİ GENEL MÜDÜRLÜĞÜ

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1.5. Emergency phone number

+90 312 294 20 00

SECTION 2: Hazard identification**2.1. Classification of the substance or mixture****Classification according to the United Nations GHS**

Acute toxicity (oral), Category 5 H303

Reproductive toxicity, Category 2 H361 d

Full text of H statements : see section 16

Adverse physicochemical, human health and environmental effects : Suspected of damaging the unborn child,Harmful if swallowed.

2.2. GHS Label elements, including precautionary statements**Labelling according to the United Nations GHS**

Hazard pictograms (GHS UN) :



Signal word (GHS UN)	: Warning
Hazard statements (GHS UN)	: H303 - May be harmful if swallowed H361d - Suspected of damaging the unborn child
Precautionary statements (GHS UN)	: P201 - Obtain special instructions before use. P202 - Do not handle until all safety precautions have been read and understood. P280 - Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/... P312 - Call a POISON CENTER/doctor/... if you feel unwell. P308+P313 - IF exposed or concerned: Get medical advice/attention. P405 - Store locked up.

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2.3. Other hazards which do not result in classification

Other hazards not contributing to the classification : Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

SECTION 3: Composition/information on ingredients

3.1. Substances

Substance type : Mono-constituent
IUPAC name : disodium tetraborate, anhydrous
Chemical name : disodium octaborate tetrahydrate
Substance identification codes: See section 1.1

Name	Product identifier	%	Classification according to the United Nations GHS
Disodium octaborate tetrahydrate (Main constituent)	(CAS-No.) 12280-03-4	≥ 99.25	Acute Tox. 5 (Oral), H303 Repr. 2, H361

Full text of H-statements: see section 16

3.2. Mixtures

Not applicable

SECTION 4: First-aid measures

4.1. Description of necessary first-aid measures

First-aid measures general : IF exposed or concerned: Get medical advice/attention. Call a poison center or a doctor if you feel unwell.
First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact : Wash skin with plenty of water.
First-aid measures after eye contact : Rinse eyes with water as a precaution.
First-aid measures after ingestion : Rinse mouth. Call a poison center or a doctor if you feel unwell.

4.2. Most important symptoms/effects, acute and delayed

No additional information available

4.3. Indication of immediate medical attention and special treatment needed, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam.

5.2. Specific hazards arising from the chemical

Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Special protective actions for fire-fighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and materials for containment and cleaning up

Methods for cleaning up : Mechanically recover the product. Notify authorities if product enters sewers or public waters.
Other information : Dispose of materials or solid residues at an authorized site.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear personal protective equipment.

Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

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7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store locked up. Store in a well-ventilated place. Keep cool.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

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DNEL/DMEL (Workers)

Long-term - systemic effects, dermal : 316.4 mg/kg bodyweight/day

Long-term - systemic effects, inhalation : 6.7 mg/m³

DNEL/DMEL (General population)

Acute - systemic effects, oral : 0.79 mg/kg bodyweight/day

Long-term - systemic effects, oral : 0.79 mg/kg bodyweight/day

Long-term - systemic effects, inhalation : 3.4 mg/m³

Long-term - systemic effects, dermal : 159.5 mg/kg bodyweight/day

PNEC (Water)

PNEC aqua (freshwater) : 2.9 mg/l

PNEC aqua (marine water) : 2.9 mg/l

PNEC aqua (intermittent, freshwater) : 13.7 mg/l

PNEC (Soil)

PNEC soil : 5.7 mg/kg dwt

PNEC (STP)

PNEC sewage treatment plant : 10 mg/l

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.

Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures, such as personal protective equipment (PPE)

Hand protection : Protective gloves

Eye protection : Safety glasses

Skin and body protection : Wear suitable protective clothing

Respiratory protection : [In case of inadequate ventilation] wear respiratory protection.

Personal protective equipment symbol(s)



8.4. Exposure limit values for the other components

No additional information available

SECTION 9: Physical and chemical properties

9.1. Basic physical and chemical properties

Physical state : Solid

Molecular mass : 412.5 g/mol

Colour : white.

Odour : odourless.

Odour threshold : Not available

Melting point : 815 °C

Freezing point : Not available

Boiling point : Not available

Flammability (solid, gas) : Non flammable.

Explosive limits : Not applicable

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Lower explosive limit (LEL)	: Not applicable
Upper explosive limit (UEL)	: Not applicable
Flash point	: Not applicable
Auto-ignition temperature	: Not applicable
Decomposition temperature	: No data available
pH	: 8.53 @ 25 C
pH solution	: 1 %
Viscosity, kinematic (calculated value) (40 °C)	: Not applicable
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Negligible @ 20 C
Vapour pressure at 50 °C	: Not available
Density	: Not available
Relative density	: Not available
Relative vapour density at 20 °C	: Not applicable
Solubility	: Water: 21.43 – 37.14 21.43 (1.0 % solution) @ 20 C; 37.14 (1.0 % solution) @ 40 C
Particle size	: Not available
Particle size distribution	: Not available
Particle shape	: Not available
Particle aspect ratio	: Not available
Particle specific surface area	: Not available

9.2. Data relevant with regard to physical hazard classes (supplemental)

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: May be harmful if swallowed.
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

ETIDOT-67 (Disodium octaborate tetrahydrate) (12280-03-4)

LD50 dermal rabbit	> 2000 mg/kg bodyweight Animal: rabbit, Guideline: other:FIFRA (40 CFR 163)
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Skin corrosion/irritation	: Not classified pH: 8.53 @ 25 C
Serious eye damage/irritation	: Not classified pH: 8.53 @ 25 C
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Suspected of damaging fertility or the unborn child.

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STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified

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Viscosity, kinematic	Not applicable
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SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.
Hazardous to the aquatic environment, short-term (acute)	: Not classified
Hazardous to the aquatic environment, long-term (chronic)	: Not classified

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LC50 - Fish [1]	74 mg/l Test organisms (species): Limanda limanda
LC50 - Fish [2]	79.7 mg/l Test organisms (species): Pimephales promelas
EC50 72h - Algae [1]	66 mg/l Test organisms (species): Phaeodactylum tricornutum
EC50 72h - Algae [2]	54 mg/l Test organisms (species): Phaeodactylum tricornutum
NOEC chronic fish	6.4 mg/l Test organisms (species): Danio rerio (previous name: Brachydanio rerio) Duration: '34 d'

12.2. Persistence and degradability

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Persistence and degradability	Boron is naturally occurring and ubiquitous in the environment. Disodium octaborate tetrahydrate decomposes in the environment to natural borate.
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12.3. Bioaccumulative potential

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Bioaccumulative potential	Not bioaccumulative.
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12.4. Mobility in soil

ETIDOT-67 (Disodium octaborate tetrahydrate) (12280-03-4)

Mobility in soil	This product is soluble in water and is leachable through normal soil.
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12.5. Other adverse effects

Ozone	: Not classified
Other adverse effects	: No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
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SECTION 14: Transport information

In accordance with IMDG / IATA / UN RTDG

UN RTDG	IMDG	IATA
14.1. UN number		
Not regulated for transport		

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14.2. UN Proper Shipping Name		
Not applicable	Not applicable	Not applicable
14.3. Transport hazard class(es)		
Not applicable	Not applicable	Not applicable
Not applicable	Not applicable	Not applicable
14.4. Packing group		
Not applicable	Not applicable	Not applicable
14.5. Environmental hazards		
Dangerous for the environment : No	Dangerous for the environment : No Marine pollutant : No	Dangerous for the environment : No
No supplementary information available		

14.6. Special precautions for user

- UN RTDG

No data available

- IMDG

No data available

- IATA

No data available

14.7. Transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations specific for the product in question

Regulatory reference : Listed on ELINCS (European List of Notified Chemical Substances)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on KECL/KECI (Korean Existing Chemicals Inventory)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on the Canadian DSL (Domestic Substances List)
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 United States TSCA (Toxic Substances Control Act) inventory.

SECTION 16: Other information

Issue date : 03/01/2007

Revision date : 03/01/2021

Section	Changed item	Change	Comments
		Added	This SDS was updated in accordance with the GHS (Rev.6) (2015)-Guidance on the Compilation of Safety data Sheets. This SDS was updated in line with "Eti Maden Corporate Identity". (January,2016/ Rev. No: 05)
		Added	This SDS was updated in line with "Standardization and Simplification of Bag Printings".(January, 2018/ Rev. No: 06)

Full text of H-statements & Precautionary statements (GHS UN):

H303	May be harmful if swallowed
H361	Suspected of damaging fertility or the unborn child
P201	Obtain special instructions before use.

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P202	Do not handle until all safety precautions have been read and understood.
P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/....
P312	Call a POISON CENTER/doctor/... if you feel unwell.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P405	Store locked up.

SDS UN - ETİ Maden

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.