



ETİ MINE WORKS
GENERAL MANAGEMENT

ETİ MINE WORKS GENERAL MANAGEMENT
TECHNOLOGY & DEVELOPMENT
DEPARTMENT

ETIBOR-48 (BORAX PENTAHYDRATE) HEALTH AND SAFETY DATA SHEET

Prepared by

**Erhan TEKTAŞ
Timuçin Tolga AYDIN
Selahattin CÜCE**

Date of Issue : March 2007
Revision No : 2
Date of Revision : July 2007

**ETİ MINE WORKS GENERAL MANAGEMENT
TECHNOLOGY DEVELOPMENT DEPARTMENT
(06377) Güvercinlik / ANKARA, TÜRKİYE
TEL : ++90 312 397 2570
FAX : ++90 312 397 1655**

July 2007
(Safety Data Sheet in compliance with REACH Title IV / Annex II and ISO 11014)



1. Identification of the Substance / Preparation and the Company / Undertaking

1.1. Identification of the substance or preparation

Etibor-48 (Borax Pentahydrate)

Registration number:

To be exempted from registration under REACH Regulation according to Article 2 § (7). Etibor-48 (disodium tetraborate pentahydrate) is to be exempted from Registration and Evaluation with respect to paragraph 6 of Annex V of REACH Regulation provided that borax anhydrous (disodium tetraborate anhydrous) is registered using this exemption (CAS No: 12179-04-3).

Trade names : Etibor-48 (Borax Pentahydrate)

Chemical name/synonyms :

Sodium tetraborate pentahydrate, disodium tetraborate pentahydrate, borax 5 mol

1.2. Use of the substance / preparation

The product is used in industrial manufacturing, in particular in:

- Ceramics
- Detergent
- Borosilicate glass
- Insulation fibreglass

1.3. Company/undertaking identification

Manufacturer:

Name : ETI MINE WORKS GENERAL MANAGEMENT

Address : Sıhhiye, Cihan Sok. No:2, 06430, Ankara, Türkiye.

Phone No: 00 90 312 294 23 42

Fax No : 00 90 312 232 59 10

1.4. Emergency phone number : 00 90 312 294 23 45 (Available office hours)
: 00 90 312 232 59 10 (Available office hours)

2. Hazards Identification

Emergency overview

Borax pentahydrate is a white odourless, powdered substance that is not flammable, combustible, or explosive, and has low acute oral and dermal toxicity.

Potential health effects

Inhalation is the most significant route of exposure in occupational and other settings. Dermal exposure is not usually a concern because borax pentahydrate is poorly absorbed through intact skin.



Inhalation

Occasional mild irritation effects to nose and throat may occur from inhalation of borax pentahydrate dusts at levels greater than 10 mg/m³.

Eye contact

Borax pentahydrate is a mild eye irritant.

Skin contact

Borax pentahydrate does not cause irritation to intact skin.

Ingestion

Products containing borax pentahydrate are not intended for ingestion. Borax pentahydrate has low acute toxicity. Small amounts (e.g. a teaspoonful) swallowed accidentally are not likely to cause effects; swallowing amounts larger than that may cause gastrointestinal symptoms.

Reproductive/Developmental

Animal ingestion studies in several species, at high doses, indicate that borates cause reproductive and developmental effects. A human study of occupational exposure to borate dust showed no adverse effect on reproduction.

Potential ecological effects

Large amounts of borax pentahydrate can be harmful to plants and other species. Therefore releases to the environment should be minimised.

Signs and symptoms of exposure

Symptoms of accidental over-exposure to borax pentahydrate have been associated with ingestion or absorption through large areas of damaged skin. These may include nausea, vomiting, and diarrhoea, with delayed effects of skin redness and peeling (see section 11).

3. Composition / Information on Ingredients

3.1. Chemical composition:

Chemical Nature of the Substance / Preparation

The product contains greater than 99.9 percent (%) borax pentahydrate Na₂B₄O₇·5H₂O

Components

CAS- N°	EINECS	Name	EC Classification
12179-04-3	215-540-4	Borax pentahydrate	no classification

For other "Chemical inventory listing", please refer to section 15.

4. First aid measures

Skin contact

No treatment necessary because non-irritating.

Eye contact

Use eye wash fountain or fresh water to cleanse eye. If irritation persists for more than 30 minutes, seek medical attention.



Inhalation

If symptoms such as nose or throat irritation are observed, remove to fresh air.

Ingestion

If large amounts are swallowed (i.e. more than one teaspoon), give two glasses of water or milk to drink and seek medical attention.

Note to physicians

Observation only is required for adult ingestion of less than 7 grams of borax pentahydrate. For ingestion in excess of 7 grams, maintain adequate kidney function and force fluids. Gastric lavage is recommended for symptomatic patients only. Haemodialysis should be reserved for massive acute ingestion or patients with renal failure. Boron analyses of urine or blood are only useful for documenting exposure and should not be used to evaluate severity of poisoning or to guide treatment⁽¹⁾ (see section 11).

5. Fire-fighting measures

General hazard

None, because borax pentahydrate is not flammable, combustible or explosive. The product is itself a flame retardant.

Extinguishing media

Any fire extinguishing media may be used on nearby fires.

6. Accidental release measures

Personal precautions

Avoid dust formation. In case of exposure to high level of airborne dust, wear a personal respirator in compliance with national legislation.

Environmental precautions

Borax pentahydrate is a water-soluble white powder that may, at high concentrations cause damage to trees or vegetation by root absorption (see section 12).

Methods for cleaning up (Land spill)

Vacuum, shovel or sweep up borax pentahydrate and place in containers for disposal in accordance with applicable local regulations. Avoid contamination of water bodies during clean up and disposal. No personal protective equipment is needed to clean up land spills.

Spillage into water

Where possible, remove any intact containers from the water. Advise local water authority that none of the affected water should be used for irrigation or for the abstraction of potable water until natural dilution returns the boron value to its normal environmental background level (see sections 12, 13 and 15).

7. Handling and Storage

7.1. Safe Handling Advice

To maintain package integrity and to minimise caking of the product, bags should be handled on a first-in first-out basis. Good housekeeping procedures should be followed to minimise dust generation and accumulation. Your supplier can advise you on safe handling, please contact the supplier.

7.2. Storage

No special handling precautions are required, but dry, indoor storage is recommended. No specific requirements. Provide appropriate ventilation and store bags such as to prevent any accidental damage.



7.3. Specific Use(s)

The product should be kept away from strong reducing agents.

8. Exposure controls / Personal protection

8.1. Exposure limit values

Respect regulatory provisions for dust (total and respirable).

- *Occupational exposure limits : Borax pentahydrate is regulated by OSHA, Cal OSHA and ACGI.*

ACGIH/TLV	5 mg/m ³
Cal OSHA/PEL	5 mg/m ³
OSHA/PEL (total dust)	10 mg/m ³

8.2. Exposure controls

8.2.1. OCCUPATIONAL EXPOSURE CONTROLS

Use local exhaust ventilation to keep airborne concentrations of borax pentahydrate dust below permissible exposure levels.

- *Respiratory protection*
Where airborne concentrations are expected to exceed exposure limits, respirators should be used.
- *Eyes and hands protection*
Goggles and gloves are not required for normal industrial exposures, but may be warranted if environment is excessively dusty.

8.2.2. ENVIRONMENTAL EXPOSURE CONTROLS

No special requirement.

9. Physical and chemical properties

9.1. General information

Physical state	crystalline solid
Colour	white
Odour	odourless
Molecular weight	291.35
Specific gravity	1.81

9.2. Important health, safety and environmental information

Melting temperature	200°C (heated in closed space)
Boiling point	1575 °C
Flash point	Non flammable
Explosion hazard	Non explosive
Solubility in water	3.7% @ 20°C; 51.2% @ 100°C
Vapour pressure	Negligible @ 20°C
pH @ 20°C	9.3 (3 % solution)

