



SAFETY DATA SHEET

BORIC ACID

DOCUMENT JC-SDS-BA-001
SOURCE REVISION 2021-10-10 / Version 07.1

GHS AT A GLANCE



IRRITANT / HARMFUL / HEALTH HAZARD

**JACKSON**
CHEMICALS

TECHNICAL CLARITY.
BUILT FOR SAFE HANDLING.

01

IDENTIFICATION



DISTRIBUTED BY JACKSON CHEMICALS
3900 Francis Street, Jackson, Michigan 49203
734-385-7394 / support@jacksonchemicals.com
jacksonchemicals.com

24-HOUR EMERGENCY

800-424-9300

CHEMTREC - United States



SOURCE TECHNICAL RECORD

Technical classifications and regulatory data are retained from the supplied source SDS. Source organization: Eti Maden / Etimine USA.



ADDITIONAL DETAILS - CONTINUED

No additional information available 1.3. Recommended use of the chemical and restrictions on use Recommended use : Ceramic, Detergent, Borosilicate glass, Fiberglass 1.4. Supplier's details Supplier Importer ETI MADEN İŞLETMELERİ GENEL MÜDÜRLÜĞÜ ETİMİNE USA, INC. Kızılirmak Mahallesi 1443. Cadde No:5 411 Hackensack Ave Suite 902 . . Hackensack, NJ 07601 USA Cukurambar-Cankaya Zipcode: 06530 Tel: +1 (201) 462-1200; Fax: +1 (201) 462-1500 Ankara - TÜRKİYE etimineusa@etimineusa.com www.etimineusa.com Tel: +90 312 294 20 00 - Fax: +90 312 230 71 84 info@etimaden.gov.tr www.etimaden.gov.tr 1.5. Emergency phone number



ADDITIONAL DETAILS - CONTINUED

CHEMTREC 1-800-262-8200/ (703) 741-5500

02

HAZARD(S) IDENTIFICATION





HAZARD PICTOGRAMS



IRRITANT / HARMFUL



HEALTH HAZARD

ADDITIONAL DETAILS - CONTINUED

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 H361d Full text of H statements : see section 16 Adverse physicochemical, human health and : Suspected of damaging the unborn child, Harmful if swallowed. environmental effects 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/....
P301+P312 - IF SWALLOWED: Call a POISON CENTER/doctor' ... if you feel unwell.
P308+P313 - IF exposed or concerned: Get medical advice/attention.
P405 - Store locked up. Other hazards not contributing to the : Dispose of contents/container to hazardous or special waste collection point, in accordance 11/08/2021 EN (English) 178 classification with local, regional, national and/or international regulation.

03

COMPOSITION / INFORMATION ON INGREDIENTS

ADDITIONAL DETAILS - CONTINUED

3.1. Substances Substance type : Mono-constituent IUPAC name : boric acid Chemical name : Boric acid, orthoboric acid, boracic acid Substance identification codes: See section 1.1 Name Product identifier % Classification according to the United Nations GHS Boric Acid (CAS-No.) 10043-35-3 > 99.9 Acute Tox. 5 (Oral), H303 {Main constituent} Repr. 2, H361 Full text of H-statements: see section 16 3.2. Mixtures Not applicable

04

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.



05

FIRE-FIGHTING MEASURES

 ADDITIONAL DETAILS - CONTINUED

5.1. Suitable extinguishing media Suitable extinguishing media : Water spray. Dry powder. Foam. Hazardous decomposition products in case of fire : Toxic fumes may be released. Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

06

ACCIDENTAL RELEASE MEASURES

 ADDITIONAL DETAILS - CONTINUED

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.

07

HANDLING AND STORAGE

 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. 7.2. Conditions for safe storage, including any incompatibilities Storage conditions : Store locked up. Store in a well-ventilated place. Keep cool. 11/08/2021 EN (English) 218

08

EXPOSURE CONTROLS / PERSONAL PROTECTION

 ADDITIONAL DETAILS - CONTINUED

8.1. Control parameters ETIBORIK ASIT (Boric acid) (10043-35-3) DNEL/DMEL (Workers) Long-term - systemic effects, dermal 392 mg/kg bodyweight/day Long-term - systemic effects, inhalation 8.3 mg/m³ DNEL/DMEL (General population) Acute - systemic effects, oral 0.98 mg/kg bodyweight/day Long-term - systemic effects, oral 0.98 mg/kg bodyweight/day Long-term - systemic effects, inhalation 4.15 mg/m³ Long-term - systemic effects, dermal 196 mg/kg bodyweight/day PNEC (Water) PNEC aqua (freshwater) 2.9 mg/l PNEC aqua (marine water) 2.9 mg/l

 ADDITIONAL DETAILS - CONTINUED

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.

 ADDITIONAL DETAILS - CONTINUED

Personal protective equipment symbol(s) No additional information available



09

PHYSICAL AND CHEMICAL PROPERTIES

 PHYSICAL STATE

Solid Molecular mass : 61.83 g/mol Colour : white. Odour : odourless. Odour threshold > Not available Melting point : 450°C Freezing point : 450 °C Not applicable Boiling point : 1860 Flammability (solid, gas) : Not applicable Explosive limits : Not applicable Lower explosive limit (LEL) : Not applicable 11/08/2021 EN (English) 3/8 Upper explosive limit (UEL) : Not applicable

 FLASH POINT

Non flammable Auto-ignition temperature : Not applicable Decomposition temperature : 300 °C 169 to HBO2-1 14 H2O pH : 5.13 1.0 % solution PH solution : Not available 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 : 1489 kg/m³ Type: 'density' Temp.: 23 °C Relative density : 1.49 Type: 'relative density' Temp.: 23 °C Relative vapour density at 20 °C : Not applicable Solubility : Water: 4.94 - 37.9 (1.0 % solution) @ 20 C - (1.0 % solution) @ 100 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 No additional information available

10

STABILITY AND REACTIVITY

 ADDITIONAL DETAILS - CONTINUED

10.1. Reactivity The product is non-reactive under normal conditions of use, storage and transport. Stable under normal conditions. 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 Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11

TOXICOLOGICAL INFORMATION

 ACUTE TOXICITY (ORAL)

May be harmful if swallowed. Acute toxicity (dermal) : Not classified Acute toxicity (inhalation) : Not classified ETIBORIK ASIT (Boric acid) (10043-35-3) LD50 oral rat > 2600 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 401 (Acute Oral Toxicity), Guideline: EU Method B.1 (Acute Toxicity (Oral)) LD50 dermal rabbit > 2000 mg/kg bodyweight Animal: rabbit, Guideline: other:FIFRA (40 CFR 163) LC50 inhalation rat (mg/l) > 2.12 mg/l air Animal: rat, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity), Guideline: other: USEPA FIFRA 40 CFR Part 160 Skin corrosion/irritation : Not classified pH: 5.13 1.0 % solution Serious eye damage/irritation : Not classified pH: 5.13 1.0 % solution

 RESPIRATORY OR SKIN SENSITISATION

Not classified Germ cell mutagenicity : Not classified 11/08/2021 EN (English) 418 Carcinogenicity : Not classified Reproductive toxicity : Suspected of damaging fertility or the unborn child. STOT-single exposure : Not classified STOT-repeated exposure : Not classified Aspiration hazard : Not classified ETIBORIK ASIT (Boric acid) (10043-35-3) Viscosity, kinematic | Not applicable



12

ECOLOGICAL INFORMATION

 ADDITIONAL DETAILS - CONTINUED

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 : Not classified (acute) Hazardous to the aquatic environment, long-term : Not classified (chronic) ETIBORIK ASIT (Boric acid) (10043-35-3) LC50 - Fish [1] 79.7 mg/l Test organisms (species): Pimephales promelas LC50 - Fish [2] 74 mg/l Test organisms (species): Limanda limanda 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 a4 mg/l Test organisms (species): Danio rerio (previous name: Brachydanio rerio) Duration: '34

 ADDITIONAL DETAILS - CONTINUED

12.2. Persistence and degradability ETIBORIK ASIT (Boric acid) (10043-35-3) Persistence and degradability Boron is naturally occurring and ubiquitous in the environment. Boric acid decomposes in the environment to natural borate. 12.3. Bioaccumulative potential ETIBORIK ASIT (Boric acid) (10043-35-3) Bioaccumulative potential Not bioaccumulative. 12.4. Mobility in soil ETIBORIK ASIT (Boric acid) (10043-35-3) Mobility in soil The product is soluble in water and is leachable through normal soil. 12.5. Other adverse effects Ozone : Not classified Other adverse effects : No additional information available

13

DISPOSAL CONSIDERATIONS

 WASTE TREATMENT METHODS

Dispose of contents/container in accordance with licensed collector's sorting instructions.

14

TRANSPORT INFORMATION

 ADDITIONAL DETAILS - CONTINUED

In accordance with IMDG / IATA/ UN RTDG UN RTDG IMDG IATA 14.1. UN number Not regulated for transport 11/08/2021 EN (English) 5/8 14.2. UN Proper Shipping Name Not applicable Not applicable Not applicable Not applicable Not applicable Not applicable Not applicable Not applicable Not applicable 14.4. Packing group Not applicable Not applicable Not applicable Not applicable Dangerous for the environment : No Dangerous for the environment : No Dangerous for the environment : No Marine pollutant : No

 ADDITIONAL DETAILS - CONTINUED

No supplementary information available 14.6. Special precautions for user - UN RTDG No data available -IMDG No data available -IATA No data available Nol applicable

15

REGULATORY INFORMATION





ADDITIONAL DETAILS - CONTINUED

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 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 United States TSCA (Toxic Substances Control Act) inventory Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China).

16

OTHER INFORMATION

ISSUE DATE

03/01/2007 Revision date : 03/04/2021 Indication of changes: Added. 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) Modified This SDS was updated in accordance with the IMO resolution MSC.393(95).(January, 2017)

ISSUE DATE - CONTINUED

Added This SDS was updated in line with "Standardization and Simplification of Bag Printings" (January, 2018) Added This SDS was updated to include K-REACH Registration number.(February, 2019) 11/08/2021 EN (English) 6/8 Abbreviations and acronyms : CAS-No. - Chemical Abstract Service number ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways ATE - Acute Toxicity Estimate ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road BCF - Bioconcentration factor

ISSUE DATE - CONTINUED

BLV - Biological limit value BOD - Biochemical oxygen demand (BOD) CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008 COD - Chemical oxygen demand (COD) DMEL - Derived Minimal Effect level DNEL - Derived-No Effect Level EC50 - Median effective concentration EC-No. - European Community number ED - Endocrine disrupting properties EN - European Standard IARC - International Agency for Research on Cancer IATA - International Air Transport Association IMDG - International Maritime Dangerous Goods

ISSUE DATE - CONTINUED

IOELY - Indicative Occupational Exposure Limit Value LC50 - Median lethal concentration LD50 - Median lethal dose LOAEL - Lowest Observed Adverse Effect Level N.O.S. - Not Otherwise Specified NOAEC - No-Observed Adverse Effect Concentration NOAEL - No-Observed Adverse Effect Level NOEC - No-Observed Effect Concentration OECD - Organisation for Economic Co-operation and Development OEL - Occupational Exposure Limit PBT - Persistent Bioaccumulative Toxic PNEC - Predicted No-Effect Concentration REACH - Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation

ISSUE DATE - CONTINUED

(EC) No 1907/2006 RID - Regulations concerning the International Carriage of Dangerous Goods by Rail SDS - Safety Data Sheet STP - Sewage treatment plant ThOD - Theoretical oxygen demand (ThOD) TLM - Median Tolerance Limit TRGS - Technical Rules for Hazardous Substances VOC - Volatile Organic Compounds vPVB - Very Persistent and Very Bioaccumulative WGK - Water Hazard Class Training advice : Normal use of this product shall imply use in accordance with the instructions on the packaging. Other information : DISCLAIMER OF LIABILITY The information in this SDS was obtained from sources which



ISSUE DATE - CONTINUED

we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This SDS was prepared and is to be used only for this product. If the product is used as a component in another product, this SDS information may not be applicable. 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.

P202 Do not handle until all safety precautions have been read and understood.

ISSUE DATE - CONTINUED

P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/....

P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor'... if you feel unwell.

P308+P313 IF exposed or concerned: Get medical advice/attention. 11/08/2021 EN (English) 718

P405 Store locked up. 11/08/2021 EN (English) 8/8

