Material Safety Data Sheet
According to regulation (EC) No. 1907/2006 (REACH)

64000  Borax

Identification of the Substance/Mixture and of the Company/Undertaking

Product Name: Borax
Article No.: 64000

Relevant identified Uses of the Substance or Mixture and Uses advised against

Identified uses: No information available.
Uses advised against: We have no information on any restrictions for this product.

Details of the Supplier of the Safety Data Sheet (Producer/Importer)

Company: Kremer Pigmente GmbH & Co. KG
Address: Hauptstr. 41-47, 88317 Aichstetten, Germany
Tel./Fax.: Tel +49 7565 914480, Fax +49 7565 1606
Internet: www.kremer-pigmente.de
EMail: info@kremer-pigmente.de
Importer: --

Emergency No.

Emergency No.: +49 7565 914480 (Mon-Fri 8:00 - 17:00)

Hazards Identification

Classification of the Substance or Mixture

Classification according to EC Regulation 1272/2008
Eye irritation, category 2
Reproductive toxicity, category 1B
H319 Causes serious eye irritation.
Cat.: 2
H360D May damage the unborn child.
Cat.: 1B
H360f May damage fertility.
Cat.: 1B

Classification according to EC Regulation No. 67/548 or No. 1999/45
Irritating (Xi) R36 Irritating to eyes.
Toxic (T), Repr. Cat. 2 R60 May impair fertility.
R61 May cause harm to the unborn child.

Safety Phrases:

Possible Environmental Effects: See Section 12.

Label Elements

Classification according to EC Regulation 1272/2008
Hazard designation:

GHS07

GHS08-2

Signal word:

Danger

Hazard designation:

H319 Causes serious eye irritation.
H360D May damage the unborn child.
H360f May damage fertility.

Safety designation:

P202 Do not handle until all safety precautions have been read and understood.
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses and continue rinsing.
P308+P313 If exposed or concerned: Get medical advice/attention.
P501 Dispose of contents/container according to regional, national and international regulations.

Hazardous components for labelling:

Disodium tetraborate decahydrate

3. Composition/Information on Ingredients

3.1. Substance

This product is a substance: see details under 3.2.

3.2. Mixture

Chemical Characterization:

Hazardous Ingredients:

Disodium tetraborate decahydrate (T, Xi; Repr.Cat.2, R36-60-61; Repr.1B, H360Df-H319) 100 %

CAS-Nr: 1303-96-4
EINECS-Nr: 215-540-4
EC-Nr: 005-011-01-1

Additional information:

This product contains a substance which is on the candidate list according to Article 59 of the REACH Regulation 1907/2006 (1, 10) in a concentration >= 0.1 % (w/w).

4. First Aid Measures

4.1. Description of the First Aid Measures

General information:

Remove contaminated clothes immediately.
After inhalation: Supply fresh air. Consult physician if symptoms persist.

After skin contact: Remove contaminated clothing immediately. Wash off immediately with plenty of water and soap.

After eye contact: Rinse open eyes with plenty of water for at least 5 minutes. Seek medical attention if irritation persists.

After ingestion: Rinse mouth thoroughly with plenty of water and drink plenty of water. Consult a physician. Never give anything by mouth to an unconscious person. Induce vomiting as long as affected person is conscious.

4.2. Most important Symptoms and Effects, both Acute and Delayed

Symptoms: No further information available.

Effects: No further information available.

4.3. Indication of any Immediate Medical Attention and special Treatment needed

Treatment: Treat symptomatically.

5. Fire-Fighting Measures

5.1. Extinguishing Media

Suitable extinguishing media: Product itself does not burn. Use extinguishing media for surrounding fire.

Unsuitable extinguishing media: None known.

5.2. Special Hazards arising from the Substance or Mixture

Special hazards: In case of fire: formation of toxic pyrolysis products. Product can decompose in case of fire: formation of toxic fumes.

5.3. Advice for Firefighters

Protective equipment: Wear self-contained respiratory protective device. Wear suitable protective clothing.

Further information: Collect contaminated extinguishing water and debris separately; avoid contamination of sewage system. Contaminated extinguishing water and debris should be disposed of according to local regulations.

6. Accidental Release Measures
6. 1. Personal Precautions, Protective Equipment and Emergency Procedures

Personal precautions:
Wear protective clothing.
Avoid formation of dust.
Avoid contact with skin and eyes. Do not ingest or inhale.

6. 2. Environmental Precautions

Environmental precautions:
Prevent contamination of soils, drains and surface water.
Contact local authorities if product pollutes soil or vegetation.

6. 3. Methods and Material for Containment and Cleaning Up

Methods and material:
Take up mechanically and collect in suitable containers for disposal.

6. 4. Reference to other Sections

Protective clothing, see Section 8.
See Section 13 for information on disposal.

7. Handling and Storage

7. 1. Precautions for Safe Handling

Instructions on safe handling:
Wear adequate protective clothing (see para. 8).
Provide adequate ventilation.
Avoid contact with eyes and skin.
Do not swallow or inhale.
A nearby eyewash facility should be available for emergencies.

Hygienic measures:
Keep away from foodstuffs and drinks. Do not eat, drink or smoke during work. Wash hands before breaks and at the end of work. Take off contaminated clothing immediately. Store working clothes separately.

7. 2. Conditions for Safe Storage, including any Incompatibilities

Storage conditions:
Store dry and in the original tightly sealed containers.
Do not store together with food stuff and animal feed.
Store locked up.

Requirements for storage areas and containers:
Storage: In the original container.

Information on fire and explosion protection:
Product is not combustible.
Do not store together with reducing agents.
Follow the usual measures for preventive fire protection.

Storage class (VCI):
6.1 D: Non combustible, acute toxic cat. 3 / toxic products
Further Information:

Store in a dry place.

7.3. Specific End Use(s)

Further information:

No information available.

8. Exposure Controls/Personal Protection

8.1. Parameters to be Controlled

Parameters to be controlled (DE):

Disodium tetraborate decahydrate, CAS 1303-96-4; AGW: 0.5 mg/m³ (2)

Y: No teratogenic risk when the exposure limit values (ELV) and biological limit values (BLV) are adhered to.

Parameters to be controlled:

Derived No-Effect Level (DNEL):

Disodium tetraborate decahydrate, CAS 1303-96-4:

22.3 mg/m³ (worker/consumer, inhalation, long-term/short-term exposition - Local)

12.76 mg/m³ (worker, inhalation, long-term exposition - systemic)

6.50 mg/m³ (consumer, inhalation, long-term exposition - systemic)

303.5 mg/kg kg/d (consumer, skin contact, long-term exposition - systemic)

1.51 mg/kg kg/d (consumer, swallowing, long-term/short-term exposition - systemic)

599.6 mg/kg kg/d (worker, skin contact, long-term exposition - systemic)

Predicted No-Effect Concentration (PNEC):

Disodium tetraborate:

Fresh water: 1.35 mg/l

Sea water: 1.35 mg/l

Fresh water sediment: 1.8 mg/kg

Seawater sediment: 1.8 mg/kg

Sewage treatment system (STP): 1.75 mg/l

Soil: 5.4 mg/kg

Sporadic release: 9.1 mg/l

Additional Information:

8.2. Exposure Controls

Technical protective measures:

Provide adequate ventilation.

Personal Protection

General protective measures:

Avoid contact with eyes and skin.

Do not inhale vapor/dust.
According to regulation (EC) No. 1907/2006 (REACH)

64000  Borax

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Keep away from foodstuffs and drinks. Do not eat, drink or smoke during work. Wash hands before breaks and at the end of work.

Respiratory protection:
Respirator mask required if ventilation is insufficient. Wear filter respirator in case of short-term or low exposure, and wear a self-contained breathing apparatus in case of long-term or higher exposure.
Recommended: Particle filter P2/P3 (EN 141)

Hand protection:
Protective gloves (EN 374)

Protective glove material:
Butyl rubber (480 min; 0.5 mm).
Polyvinyl chloride (> 480 min, > 0.5 mm)
Fluoro carbon rubber - FKM (480 min; > 0.4 mm).
Nitrile rubber (480 min, 0.35 mm)
Chloroprene rubber (> 480 min, > 0.5 mm).
Natural rubber (480 min, 0.5 mm)

Eye protection:
Safety glasses (EN 166)

Body protection:
Protective clothing.

Environmental precautions:
Prevent contamination of open water ways and sewage system.
Avoid contamination of ground water.

9. Physical and Chemical Properties
9.1. Information on Basic Physical and Chemical Properties

Form: powder
Color: white
Odor: odorless

Odor threshold: No information available.

pH-Value: ca. 9.2 (1 %, 20°C)
Melting temperature: ca. 741°C
Boiling temperature: 1575°C
Flash point: not applicable

Evaporation rate: No information available.

Flammability (solid, gas): not flammable
Upper explosion limit: not determined
Material Safety Data Sheet
According to regulation (EC) No. 1907/2006 (REACH)

64000  Borax

Lower explosion limit:  not determined
Vapor pressure:  not determined
Vapor density:  No information available.
Density:  1.71 g/cm³ (20°C)
Solubility in water:  ca. 47 g/l (20°C)
Coefficient of variation (n-Octanol/Water):  no information available
Auto-ignition temperature:  No information available.
Decomposition temperature:  No information available.
Viscosity, dynamic:  not applicable
Explosive properties:  Product does not present an explosion hazard.
Oxidizing properties:  No information available.

Bulk density:  810 kg/m³

9.2. Further Information
Solubility in solvents:
Viscosity, kinematic
Burning class:
Solvent content:
Solid content:
Particle size:
Other information:

Molecular weight: 381.37 g/mol

10. Stability and Reactivity
10.1. Reactivity
Stable if used according to specifications.

10.2. Chemical Stability
No decomposition if used according to specifications.

10.3. Possibility of Hazardous Reactions
Explosion risk.
Reactions with metals: development of hydrogen.
10.4. Conditions to Avoid

Conditions to avoid:

Avoid heat.
Loss of water when heated.

Thermal decomposition:

No data available.

10.5. Incompatible Materials

Keep away from strong oxidizing agents, strong reducing agents, alkali metals, acids, metallic salts.

10.6. Hazardous Decomposition Products

No information available.

10.7. Further Information

11. Toxicological Information

11.1. Information on Toxicological Effects

Acute Toxicity

LD50, oral: 6000 mg/kg (rat)
LD50, dermal: > 2000 mg/kg (rabbit)
LC50, inhalation: > 2.0 mg/l (4h, rat; OECD 403)

Primary effects

Irritant effect on skin: Non irritating (rabbit)
Irritant effect on eyes: Strong irritant effect (rabbit; OECD 405).

Inhalation: No information available.

Ingestion: No information available

Sensitization: No sensitizing effects known (guinea pig; OECD 406).

Mutagenicity:

Boric acid:
In vitro genetic-toxicity: negative (OECD 476, mouse lymphona cells)
Not mutagenic: Bacterial Reverse Mutation Test (Ames-Test, OECD 471, S. typhimurium)
In vitro Mammalian Chromosomal Aberration Test (OECD 473, ovaries of the chin. hamster (CHO)): negative
In vivo genetic-toxicity: Chromosomal Aberration Test (mouse m/f; OECD 474): negative

Reproductive toxicity:
May damage fertility. May damage the unborn child.
Boric acid: NOEL: > 5000 ppm (mouse, male and female, oral, 103 weeks; OECD 451)

Teratogenicity:
No information available.

Specific target organ toxicity (STOT):
Single exposure: no information available.
Repeated exposure: no information available.

Additional toxicological information:
Aspiration hazard: not applicable

12. Ecological Information
12.1. Aquatic Toxicity

Fish toxicity:
Boric acid: LC50: 456 mg/l (96h, Pimepales promelas)
Sodium tetraborate: LC50: 88 mg/l (24d, Oncorhynhus mykiss)
Sodium tetraborate: LC50: 54 mg/l (32d, Oncorhynhus mykiss)
Sodium tetraborate: LC50: 65 mg/l (7d, Cassius auratus)
Sodium tetraborate: LC50: 71 mg/l (3d, Cassius auratus)

Daphnia toxicity:
Boric acid: LC50: 760 mg/l (48h, Daphnia magna)

Bacteria toxicity:
No data available.

Algae toxicity:
Boric acid: EC50: 229 mg/l (72h, Pseudokirchneriella subcapitata)

12.2. Persistence and Degradability
Method is not applicable for inorganic substances.
Degradation by hydrolysis.

12.3. Bioaccumulation

Natural component in the enviroment. Low bioaccumulation.

12.4. Mobility
Product is mobile in aqueous environment.

12.5. Results of PBT- und vPvP Assessment
Inorganic substance: does not comply with the criteria for the classification as PBT or vPvB.

12.6. Other Adverse Effects

Water hazard class:
Do not let product contaminate ground water, waterways or sewage system.

Behaviour in sewage systems:

Further ecological effects:

AOX Value:
13. Disposal Considerations

13. 1. Waste Treatment Methods

**Product:**

Must be treated as toxic waste according to local laws and regulations.

Do not let product enter water systems.

**European Waste Code (EWC):**

Uncleaned packaging:

Packaging may be disposed of in the same manner as the product.

**Waste Code No.:**

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14. Transport Information

14. 1. UN Number

ADR, IMDG, IATA

14. 2. UN Proper Shipping Name

ADR/RID:

No hazardous goods according to ADR (land transportation).

IMDG/IATA:

14. 3. Transport Hazard Classes

ADR Class:

not applicable

Hazard no.:

Classification code:

Tunnel no.:

IMDG Class (sea):

Hazard no.:

EmS No.:

IATA Class:

Hazard no.:

14. 4. Packaging Group

ADR/RID:

not applicable

IMDG:

IATA:

14. 5. Environmental Hazards

None

14. 6. Special Precautions for User

not applicable
14. 7.  Transportation in Bulk according to Annex II of MARPOL 73/78 and IBC-Code

IMDG: not applicable

14. 8.  Further Information

15.  Regulatory Information

15. 1.  Safety, Health and Environmental Regulations/Legislation specific for the Substance or Mixture

Water hazard class:

1, slightly hazardous for water

Local regulations on chemical accidents:

Does not underlie the Accident Ordinance.

Employment restrictions:

The employment restrictions for young workers in accordance with the Youth Employment Protection Law (94/33/EC) are to be observed.

The employment restrictions for expectant and nursing mothers in accordance with the Maternity Protection Guideline (94/85/EEC) are to be observed.

Restriction and prohibition of application:

Not permitted for privat consumers.

Restricted to professional users!

Attention - Avoid exposure. Obtain special instructions before use.

EC. REACH, Section XVII, Restrictions on the Manufacture, Placing on the Market and Use of Certain Dangerous Substances, Preparations and Articles, Registered no. 30

EU. REACH, Section XVII, App. 6, Reg. No. 30: 215-540-4; Reproduction Toxicity, Category 1B

15. 2.  Chemical Safety Assessment

A Chemical Safety Assessment has been carried out for this product.

15. 3.  Further Information

EC. REACH, Annex XIV, Candidate List of Substances of very High Concern (SVHC): Reproduction toxicity; Decision Number: ED/30/2010

EC. Directive 98/8/EC, Annex 1, Active Substances in Biocide Products. Special rules may apply; see legal texts. Minimum purity: 990 g/kg. Wood preservative.

EC. Directive 98/8/EC, Annex 1, Active Substances in Biocide Products. Expiry date: 31 Aug 2021


EC. Regulation No. 1451/2007 (Biocide), Annex I, Substances identified as existing (OJ (L325). Registered under EC Number 215-540-4

Seveso III Directive: not applicable under Directive 2012/18/EC.

Listed in:

TSCA (US), AICS (AUS), DSL/INV (CA), ENCS/ISHL (JP) (1)-69, KECI (KR) KE-03483, PICCS (PH), IECSC (CN), NZIoC (NZ) (HSR002914)
16. Other Information

This product should be stored, handled and used in accordance with good hygiene practices and in conformity with any legal regulations. This information contained herein is based on the present state of knowledge and is intended to describe our product from the point of view of safety requirements. It should be therefore not be construed as guaranteeing specific properties.