Tradeasia International PTE LTD
133 Cecil Street # 12-03 Keck Seng Tower, Singapore 069535
Tel: +65-6227 6365 Fax: +65-6225 6286
www.chemtradeasia.com

Material Safety Data Sheet
Di-magnesium Phosphate Trihydrate

Section 1 - Product Identification

Synonyms : Magnesium Phosphate Dibasic Trihydrate
Magnesium Hydrogen Phosphate Trihydrate
Molecular Weight : 174.329 g/mol
Chemical Formula : MgHPO4.3H2O
Company Identification : Tradeasia International Pte. Limited
Address : 133 Cecil Street # 12-03 Keck Seng Tower, Singapore
Tel: +65-6227 6365
Fax: +65-6225 6286
Email: contact@chemtradeasia.com
Recommended use of the chemical and restrictions on use
The product is used in industrial manufacturing, in particular in :

- Ceramics
- Detergent
- Borosilicate glass
- Insulation fiberglass

Section 2 – Composition/Information on Ingredients

The product contains greater than 96 percent (%) di-magnesium phosphate trihydrate MgHPO4.3H2O

Chemical Name	EC No/CAS No	Purity, %
Magnesium hydrogen phosphate trihydrate	231-823-5 7782-75-4	min. 96

Section 3 – Hazards Identification

3.1 Classification of the substance according to GHS
Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008. This substance is not classified as dangerous according to Directive 67/548/EEC.

3.2 Other hazards
none

Section 4 – First-Aid Measures

4.1. Description of first aid mesaures
Skin contact
Rinse skin with water/shower. In all cases of doubt, or when symptoms persist, seek medical advice.
Eye contact
Rinse cautiously with water for several minutes. In all cases of doubt, or when symptoms persist, seek medical advice.
Ingestion
Rinse mouth. Call a doctor if you feel unwell.
Note to physicians
Take off contaminated clothing.
4.2. Most important symptoms and effects, both acute and delayed

Irritant effects, Gastrointestinal complaints, Diarrhoea

4.3. Indication of any immediate medical attention and special treatment needed

none

Section 5 – Fire Fighting Measures

5.1. Suitable Extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings water spray, foam, dry extinguishing powder, carbon dioxide (CO2)

5.2. Specific hazards arising from the chemical

Non-combustible.

5.3. Special protective actions for fire-fighters

Fight fire with normal precautions from a reasonable distance. Wear self-contained breathing apparatus.

Section 6 – Accidental Release Measures

6.1. Personal precautions, protective equipment and emergency procedures

Do not breathe dust.

6.2. Environmental precautions

Keep away from drains, surface and ground water.

6.3. Methods and material for containment and cleaning up

Land spill)

Covering of drains.

Spillage into water

Place in appropriate containers for disposal.

Section 7 – Handling and Storage

7.1. Precautions for safe Handling

Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation.

7.2. Conditions for safe storage, including any incompatibilities

Keep container closed when not in use. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

Section 8 – Exposure Controls/Personal Protection

8.1. Control parameters

National Limit Values

Occupational Exposure Limit Values

8.2. Appropriate engineering controls

Maintain air concentrations below occupational exposure standards.

Use local exhaust ventilation to keep airborne concentrations of borax pentahydrate dust below permissible exposure levels. Wash hands before breaks and at the end of the workday. Remove and wash soiled clothing.

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

Respiratory protection

Respiratory protection necessary at: Dust formation. Particulate filter device (EN 143). P1 (filters at least 80 % of airborne particles, colour code: White).

Eyes and hands protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374.

Section 9 – Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Physical State: Crystalline powder

Color: white

Odor: None reported.
pH: Not available.
Vapor Pressure: Not available.
Viscosity: Not available.
Boiling Point: Not available.
Freezing/Melting Point: Not available.
Autoignition Temperature: Not applicable.
Flash Point: 550 deg C (1,022.00 deg F)
Explosion Limits, lower: Not available.
Explosion Limits, upper: Not available.
Decomposition Temperature: 550 deg C
Solubility in water: Slightly soluble.
Specific Gravity/Density: 2.1300g/cm3
Molecular Formula: HMgO4P.3H2O
Molecular Weight: 174.34

Section 10 – Stability and Reactivity

10.1. Reactivity
This material is not reactive under normal ambient conditions.
10.2. Chemical stability
The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.
10.3. Possibility of hazardous reactions
No known hazardous reactions
10.4. Conditions to avoid:
Keep away from heat. Decompostion takes place from temperatures above: >500 °C.
10.5. Incompatible materials
There is no additional information.
10.6. Hazardous decomposition products
Hazardous combustion products: see section 5.

Section 11 – Toxicological Information

11.1. Information on toxicological effect
11.1.1. Substances
Acute toxicity(2)
Shall not be classified as acutely toxic.
Skin corrosion / irritation
Shall not be classified as corrosive/irritant to skin.
Serious eye damage/ irritation
Shall not be classified as seriously damaging to the eye or eye irritant.
Respiratory or skin sensitization
Shall not be classified as a respiratory or skin sensitiser.
Germcell mutagenicity
NA
Carcinogenicity
Magnesium hydrogen phosphate trihydrate, C.P. - Not listed by ACGIH, IARC, or NTP.
Reproductive toxicity
No information available.
STOT-single exposure

Shall not be classified as a specific target organ toxicant (single exposure).
STOT-repeated exposure
Shall not be classified as a specific target organ toxicant (repeated exposure).
Aspiration Hazard
Shall not be classified as presenting an aspiration hazard.

Section 12 – Ecological Information

12.1.Toxicity
acc. to 1272/2008/EC: Shall not be classified as hazardous to the aquatic environment.
12.2. Persistence and degradability
The methods for determining the biological degradability are not applicable to inorganic substances.
12.3. Bioaccumulative potential
Data are not available.
12.4. Mobility in soil
Data are not available.
12.5. Other adverse effects
Data are not available.

Section 13 – Disposal Considerations

13.1. Disposal methods
Consult the appropriate local waste disposal expert about waste disposal.

Section 14 – Transport Information

Not regulated under IATA, IMDG, RID/ADR.
14.1. UN number : N.A.
14.2. UN proper shipping name : N.A
14.3. Transport of hazard classes : N.A
14.4. Packing group : N.A
14.5. Environmental hazards : N.A.
14.6. Special precautions for user : N.A
14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: N.A.

Section 15 – Regulatory Information

15.1. Safety, health and environmental regulations
European/International Regulations
European Labeling in Accordance with EC Directives
Hazard Symbols: Not available.
Risk Phrases:
Safety Phrases:
S 24/25 Avoid contact with skin and eyes.
S 28A After contact with skin, wash immediately with plenty of water.
S 37 Wear suitable gloves.
S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
WGK (Water Danger/Protection)
CAS# 7782-75-4: No information available.
Canada
None of the chemicals in this product are listed on the DSL/NDSL list.
CAS# 7782-75-4 is not listed on Canada's Ingredient Disclosure List.
US FEDERAL

TSCA
CAS# 7782-75-4 is not listed on the TSCA inventory.
It is for research and development use only.

Section 16 : Additional Information

16.1. Mainly changes made to the previous version of this Material Safety Data Sheet (MSDS):
• This MSDS complies with ISO 11014; the requirements of UN-GHS

Revision No	Revision content
05	• This SDS is updated in accordance with the GHS (Rev.6) (2015)-Guidance on the Compilation of Safety data Sheets.

16.2. List of abbreviation and acronyms used in this MSDS
SDS : Safety Data Sheets
Index N° : atomic number of the element most characteristic of the properties of the substance
CAS No : Chemical Abstracts Service number
EC No : EINECS Number : European Inventory of Existing Commercial Substances
Repr. Cat. 2 : Substance presumed human reproductive toxicant
Acute Oral Cat. 5 : Substance which is of relatively low acute oral toxicity.
GHS : Globally Harmonised System of Classification and Labelling
LD_{50} : Median Lethal Dose
LC_{50} : Lethal Concentration, 50%
N.A. : Not Applicable
OSHA : Occupational Safety & Health Administration
Cal OSHA : The State of California Division of Occupational Safety and Health (DOSH)
PEL : Permissible Exposure Limits
ACGIH : American Conference of Governmental Industrial Hygienists
TLV : Threshold Limit Value
Japanese MITI : Japanese Ministry of International Trade and Industry
EC_{50} : Half maximal effective concentration
UN : United Nations
U.S. EPA TSCA Inventory: Inventory of the chemical substances manufactured or processed in the United States according to Toxic Substances Control Act compiled and published under the autority of the Environmental Protection Agency
Canadian DSL: Canadian Domestic Substances List

16.3. List of relevant hazard statements and precautionary statements used in this MSDS
Hazard Statement
H361 d: Suspected of damaging the unborn child
H319: Causes serious eye irritation
H303: May be harmful if swallowed
Precautionary Statements
Prevention
P201: Obtain special instructions before use.
P202: Do not handle until all safety precautions have been read and understood.
P281: Use personal protective equipment as required.
P264: Wash eyes thoroughly after handling.
P280: Wear protective gloves/ protective clothing/ eye protection/ face protection.
Response
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, if present and easy to do. Continue rinsing.
P337+P313: If eye irritation persists: Get medical advice/attention.

Storage

P405: Store locked up.

Disposal

P501: Dispose of contents/container to in accordance with local regulations.

16.4. References

1. Litovitz T L, Norman S A, Veltri J C, Annual Report of the American Association of Poison Control Centers Data Collection System. Am. J. Emerg. Med. (1986), 4, 427-458
2. Denton SM (1996). Acute oral toxicity study in the rat: anhydrous boric acid. Final report. Report no.: 1341/7-1032.
3. National Toxicology Program (NTP) – Technical Report Series No. TR324, NIH Publication No. 88 2580 (1987), PB88 213475/XAB
4. Fail et al., Fund. Appl. Toxicol. (1991) 17, 225-239
5. Heindel et al., Fund. Appl. Toxicol. (1992) 18, 266-277
6. Birge W J, Black J A, EPA-560/-76-008 (April 1977) PB 267 085
7. Scialli AR, Bonde JP, Brüske-Hohlfeld I, Culver D, Li Y, Sullivan FM; ELSEVIER 2009
8. Robbins WA, Xun L, Jia J, Kennedy N, Elashoff DA, Ping L. ;ELSEVIER 2009;(Reproductive Toxicology)
9. Hansveit and Oldersma, 2000; TNO Nutrition and Food Research Institute. Report No. V99.157.
10. Gersich, FM (1984a). Environ.Toxicol.Chem., 3 #1, 89-94 (1984)
11. Soucek et al., 2010. Illinois Natural History Survey, University of Illinois.

For general information on the toxicology of borates see ECETOC Technical Report No. 63 (1995); Patty's Industrial Hygiene and Toxicology, 4th Edition Vol. II, (1994) Chap. 42, 'Boron'.

16.5. Disclaimer of Liability

The information in this MSDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its accuracy, reliability or completeness. 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. It is the user's responsibility to satisfy himself as to the suitableness and completeness of such information for his own particular use.

This MSDS was prepared and is to be used only for this product. If the product is used as a component in another product, this MSDS information may not be applicable.