



WEST BENGAL CHEMICAL INDUSTRIES LIMITED

145/1, Jessore Road, Lake Town,

Kolkata – 700 089, India.

Phone: +9133 4025 1700 Fax: +9133 2574 7410

Email: wbcil@wbcil.com Website: www.wbcil.com

Section 1 - Chemical Product and Company Identification

1.1 MSDS Name: Magnesium Gluconate Anhydrous

1.2 Product Code: MGAUS98

1.3 Relevant identified uses of the substance or mixture and uses advised against:

Laboratory chemicals, Industrial & for professional use only.

1.4 Company Identification:

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Section 2 - Hazards Identification

2.1 Classification of the Substance or Mixture:

This substance is not classified as hazardous according to the Globally Harmonized System (GHS) or EU Regulation (EC) No 1272/2008 (CLP).

2.2 Precautionary Statements:

Prevention:

P264: Wash hands thoroughly after handling.

P280: Wear protective gloves and eye protection if handling large amounts or powdered forms.

P261: Avoid inhaling dust.

Response:

P305 + P351 + P338: If in eyes, rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.

P302 + P352: If on skin, wash with plenty of soap and water.

P301 + P330 + P312: If swallowed and feeling unwell, rinse mouth and call a doctor/physician if necessary.

2.3 Potential Chronic Health Effects:

2.3.1 Carcinogenic effects

Not available.

2.3.2 Mutagenic effects

Not available.

2.3.3 Teratogenic effects

Not available.

2.3.4 Developmental effects

Not available. Repeated or prolonged exposure is not known to aggravate medical condition.

2.4 Other Hazards:



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Section 2 - Hazards Identification

Dust Formation:

Fine dust may cause mechanical irritation to the respiratory tract or eyes.

Environmental Hazards:

No significant environmental impact is expected under normal use.

Section 3 - Composition / Information on Ingredients

3.1 Ingredient Name: Magnesium Gluconate

3.2 Synonym: Magnesium gluconate, D-Gluconic acid, magnesium salt (2:1), Magnesium D-gluconate (1:2)

3.3 CAS Number: 59625-89-7

3.4 EC number: 222-848-2

3.5 % wt: 100%

3.6 Molecular Formula: $C_{12}H_{26}MgO_{16}$

3.7 Molecular Wt.: 450.63 g/mol

Section 4 - First Aid Measures

4.1 Description of first aid measures:

4.1.1 Eye Contact:

Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation occurs.

4.1.2 Skin Contact:

Wash with soap and water. Cover the irritated skin with an emollient. Get medical attention if irritation develops.

4.1.3 Ingestion:

Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

4.1.4 Inhalation:

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

4.2 Most important symptoms and effects, both acute and delayed:

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

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

No data available

Section 5 - Fire-Fighting Measures

5.1 Flammability of the Product:

May be combustible at high temperature.



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Section 5 - Fire-Fighting Measures

5.2 Extinguishing media:

Suitable extinguishing media - Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide

5.3 Auto-Ignition Temperature:

Not available.

5.4 Flash Points:

Closed cup: Higher than 93.3°C (200°F).

5.5 Flammable Limits:

These products are carbon oxides (CO, CO₂), nitrogen oxides (NO, NO₂...). Some metallic oxides.

5.6 Products of Combustion:

Slightly flammable to flammable in presence of heat. Non-flammable in presence of shocks.

5.7 Products of Decomposition:

Acetone and calcium carbonate

5.8 Fire Hazards:

Slightly explosive in presence of open flames and sparks. Non-explosive in presence of shocks.

5.9 Fire Fighting Media and Instructions:

5.9.1 Small fire

Use DRY chemical powder.

5.9.2 Large fire

Use water spray, fog or foam. Do not use water jet.

5.10 Special hazards arising from the substance or mixture:

Fire can cause thick, black smoke. As a result of thermal decomposition, dangerous products can form: carbon monoxide, carbon dioxide. Exposure to combustion or decomposition products can be harmful to your health.

5.11 Special Remarks on fire Hazards:

As with most organic solids, fire is possible at elevated temperatures

5.12 Special Remarks on explosion Hazards:

Fine dust dispersed in air in sufficient concentrations, and in the presences of an ignition source is a potential dust explosion hazard.

5.13 Advice for firefighters:

Use protection for the breathing apparatus. Safety helmet and full protective suit. The spray water can be used to protect the people involved in the extinction. You may also use selfrespirator, especially when working in confined and poorly ventilated area and if you use halogenated extinguishers (Halon 1211 fluobrene, Solkan 123, NAF, etc...). Keep containers cool with water spray.

Section 6 - Accidental Release Measures



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Section 6 - Accidental Release Measures

6.1 Personal Protection:

Wear a self-contained breathing apparatus, rubber boots and gloves, and disposable coveralls. Dispose of coveralls after use. Keep unprotected persons away.

6.2 Environmental Protection:

Keep spills out of sewers and bodies of water. Dike and contain the spill with inert material. Absorb on sand, vermiculite or diatomite. Transfer material to a container for disposal or recovery. Ventilate area and wash spill site after material pickup is complete.

6.3 Methods and material for containment and cleaning up:

The contaminated area should be immediately cleaned with an appropriate de-contaminator. Pour the decontaminator on the remains in an opened container and let it act various days until no further reaction is produced.

6.3.1 For containment:

Follow established procedures.

6.3.2 For cleaning up:

Follow established procedures.

Small Spill:

Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose according to local and regional authority requirements. Large Spill: Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.

6.4 Reference to other sections:

For exposure control and individual protection measures, see section 8. For later elimination of waste, follow the recommendations under section 13.

Section 7 - Handling and Storage

7.1 Precautions for safe handling: Avoid breathing dust, vapor, mist or gas. Avoid contact with skin and eyes. Avoid prolonged or repeated exposure. Use only in a chemical fume hood. Open and handle container with care. Keep ignition sources away.

7.2 Conditions for safe storage, including any incompatibilities: Store in a tightly closed container in a dry, well-ventilated place.

Storage class (TRGS 510): 13: Non-Combustible Solids

Section 8 - Exposure Controls / Personal Protection

8.1 Engineering Controls:



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Section 8 - Exposure Controls / Personal Protection

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

8.2 Appropriate engineering controls:

General industrial hygiene practice.

8.3 Personal protective equipment:

8.3.1 Eye/face protection:

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

8.3.2 Skin protection:

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

8.3.3 Body Protection:

Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

8.3.4 Respiratory protection:

Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

8.4 Personal Protection in Case of a Large Spill:

Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self-contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist before handling this product. Exposure Limits: Not available.

8.5 Exposure Limits:

This material is a particulate matter and adequate inhalation/respiratory protection should be used to minimize exposure. No occupational exposure limits have been established. The exposure limits for Particulates Not Otherwise Regulated are applicable.

OSHA (PEL): 15 mg/m³

(TWA, total dust)

5 mg/m³

(TWA, respirable fraction)

NIOSH (REL): 15 mg/m³

(TWA, total dust)

5 mg/m³

(TWA, respirable fraction)



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Section 9 - Physical and Chemical Properties

Appearance Form	: Crystalline or granular powder
Color	: White or almost white
Odour	: Characteristic
Odour Threshold	: No data available
pH of 5 % w/v aqueous solution	: 6.0 – 7.8
Melting point/freezing point	: 169.7 - 171.9°C / 337.5 - 341.4°F
Initial boiling point and boiling range	: 673°C
Flash point	: 100,00°C - closed cup
Evaporation rate	: No data available
Flammability (solid, gas)	: No data available
Upper/lower flammability or explosive limits	: No data available
Sublimation Temperature	: No data available
Relative density	: 1.5
Vapour pressure	: No data available
Solubility	: 9.6 g/L water (20°C)
Vapour density	: No data available
Partition coefficient	: n- octanol/water
Auto-ignition temperature	: >1200°C (2192°F)
Decomposition temperature	: 171°C/339.8°F
Viscosity	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available

Section 10 - Stability and Reactivity

10.1 Reactivity:

No data available

10.2 Stability:

Stable under normal temperatures and pressures.

10.3 Incompatibility:

Strong oxidizing agents, Strong reducing agents.

10.4 Conditions to Avoid:

Heat, Flame, Sparks, other ignition sources

10.5 Incompatible materials:

Strong oxidizing agents

10.6 Hazardous decomposition products:

Hazardous decomposition products formed under fire conditions. - Carbon oxides, Magnesium oxide

10.7 Corrosivity:

Non-corrosive in presence of glass.



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Section 10 - Stability and Reactivity

10.8 Special Remarks on Reactivity:

Very hygroscopic.

10.9 Special Remarks on Corrosivity:

Not available.

10.10 Polymerization:

Will not occur.

Section 11 - Toxicological Information

11.1 RTECS Reference:

Not Available

11.2 Routes of Entry:

Inhalation. Ingestion

11.3 Toxicity Data:

LD50 Intravenous - Mouse - 321 mg/kg

11.4 Carcinogenicity:

Not Available

11.5 Germ cell mutagenicity:

No data available

11.6 Carcinogenicity:

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

11.7 Reproductive toxicity:

No data available

11.8 Specific target organ toxicity - single exposure:

No data available

11.9 Specific target organ toxicity - repeated exposure:

No data available

11.10 Aspiration hazard:

No data available

11.11 Special Remarks on other Toxic Effects on Humans:

11.11.1 Skin:

May cause skin irritation.

11.11.2 Eyes:

Dust may cause eye irritation.

11.11.3 Inhalation:

Dust may cause respiratory tract irritation.

11.11.4 Ingestion:



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Section 11 - Toxicological Information

May cause gastrointestinal (digestive) tract irritation. May affect brain.

Section 12 - Ecological Information

12.1 Toxicity:

Not Available

12.2 BOD5 and COD:

Not available.

12.3 Persistence and degradability:

Not Available

12.4 Bio-accumulative potential:

Not Available

12.5 Mobility in soil:

Not Available

12.6 PBT and vPvB assessment:

Not Available

12.7 Other adverse effects:

Not Available

Section 13 - Disposal Considerations

Contact a licensed professional waste disposal service. Dispose in a manner consistent with federal, state and local environmental regulations.

Section 14 - Transport Information

14.1 UN number:

ADR/RID: - IMDG: - IATA

14.2 UN proper shipping name:

ADR/RID: Not dangerous goods

IMDG: Not dangerous goods

IATA: Not dangerous goods

14.3 Transport hazard class(es):

ADR/RID: - IMDG: - IATA

14.4 Packaging group:

ADR/RID: - IMDG: - IATA

14.5 Environmental hazards:





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ADR/RID: no IMDG Marine pollutant: no IATA: no

14.6 D O T Classification:

Not a DOT controlled material

14.7 Air transport Goods:

Nonhazardous/non-dangerous as per IATA DGR.

14.8 Special Provision for Transport:

Not applicable

14.9 IATA Specification:

Non-dangerous, non-hazardous

AS PER IATA REGULATION SAFE FOR CARRAGE, NONHAZARDOUS AND NON-RESTRICTED.

NO SPECIAL LABELLING OR TRANSPORT MEASURE HAVE BEEN IDENTIFIED.

THIS IS NOT REGULATED AS PER IATA REGULATION

Section 15 - Regulatory Information

United States:

Toxic Substance Control Act (TSCA): Not listed

CERCLA Sections 102a/103 (40 CFR 302.4): Not regulated.

DSL/NDSL Complies

EINECS/ELINCS Complies

ENCS This product complies with ENCS:

IECSC This product complies with China:

KECL Complies

PICCS Complies

AICS All the constituents of this material are listed on the Australian Inventory of Chemical Substances (AICS).

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

US Federal Regulations



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Section 15 - Regulatory Information

SARA 313: Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372. SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (Clean Water Act): This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA: This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material. US State Regulations

California Proposition 65: This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations: This product does not contain any substances regulated under applicable state right-to-know regulations U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

European Union:

European Inventory of Existing Chemical Substances (EINECS): Not Available

Hazard Codes: Not Available

Risk Statements: Not Available

Safety Statements: Not Available

Canada:

Canadian Domestic Substances List (DSL): Not listed

Canadian Non-Domestic Substances List (NDSL): Not listed

Section 16 - Other Information

Disclaimer: This material safety data sheet is provided as an information resource only. **WEST BENGAL CHEMICAL INDUSTRIES LIMITED** believes the information contained herein is accurate and compiled from reliable sources. It is the responsibility of the user to verify its validity. The buyer assumes all responsibility of using and handling the product in accordance with federal, state, and local regulations.

Abbreviations and acronyms

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

ASTM: ASTM International, originally known as American Society for Testing and Materials (ASTM)

EINECS: European Inventory of Existing Commercial Chemical Substances

EC50: Effective Concentration 50 (Maximum Effective Concentration for 0% of Individuals)

LC50: Lethal Concentration 50 (Lethal Concentration for 50% of Individuals)



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Section 16 - Other Information

IC50: Inhibitor Concentration 50 (Inhibitory Concentration for 50% of Individuals)

NOEL: No Observed Effect Level (Maximum dose without effect)

DNEL: Derived No Effect Level (Derived no-effect dose)

DMEL: Derived Minimum Effect Level (Derived dose of minimal effect)

CLP: Classification, Labelling and Packaging

CSR: Chemical Safety Report

LD50: Lethal Dose 50 (Lethal Dose for 50% of Individuals)

IATA: International Air Transport Association

ICAO: International Civil Aviation Organization

Codice IMDG: International Maritime Dangerous Goods code

PBT: Persistent, bio-accumulative and toxic

RID: Regulations concerning the international rail transport of Dangerous Goods

STEL: Short term exposure limit

TLV: Threshold limit value

TWA: Time Weighted Average

UE: European Union

vPvB: Very persistent very bio-accumulative

N.D.: Unavailable

N.A.: Not applicable

VwVwS.: Text of Administrative Regulation on the Classification of Substances hazardous to waters into Water Hazard Classes

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