

## **MATERIAL SAFETY DATA SHEET (MSDS)**

**Product Name:** Magnesium Oxide Nanoparticles

**Product Series:** MgO-NANO

### **1. Identification of the substance and of the company**

#### **1.1 Product identifiers**

**Product Name :** - Magnesium oxide (MgO)

**Brand** - Techinstro

**CAS-No.:** 1309-48-4

#### **1.2 Relevant identified uses of the substance along with the uses advised against**

**Identified uses:** Laboratory chemicals, Research, and development

#### **1.3 Details of the supplier:**

Company: M/s. Techinstro

Plot No. - 463, Yadav Nagar

Nagpur, Maharashtra, India

Pin Code- 440026

Emergency Contact: +91(0) 8007799090

Emergency Contact Email: [info@techinstro.com](mailto:info@techinstro.com)

### **2. Hazards Identification**

#### **2.1 Classification of the substance**

Not at all a hazardous substance as per Regulation (EC) No. 1272/2008.

#### **2.2 Label Elements**

Not a hazardous substance or mixture as per the Regulation (EC) No. 1272/2008.

#### **2.3 Other hazards**

The substance/mixture does not contain any components classified as persistent, bioaccumulative, toxic (PBT), or very persistent. Bioaccumulative (vPvB) at 0.1% or higher levels.

### 3. Composition /Information On Ingredients

#### 3.1 Substances

Formula : MgO

Molecular weight: 40,30 g/mol

CAS-No. 1309-48-4

EC-No. : 215-171-9

There are no components that need to be disclosed under the relevant regulations.

### 4. First Aid Measures

#### 4.1 Description of first aid measures

##### If inhaled

If breathed in, move the person into the fresh air. If not breathing, then give artificial respiration.

##### In case of skin contact

Wash off with soap along with plenty of water.

##### In the case of eye contact

Flush the eyes with water as a precaution.

##### If swallowed

If a person is unconscious, do not give them anything to eat or drink by mouth. Instead, rinse their mouth with water.

#### 4.2 Most important symptoms, effects, both acute as well as delayed

The most crucial 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 or any special treatment is needed

No data available

### 5. Firefighting Measures

#### 5.1 Extinguishing media

##### Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemicals, or CO<sub>2</sub>.

#### 5.2 Special hazards arising from the substance, mixture of Magnesium oxide

#### 5.3 Advice for Firefighters

In firefighting, it is advisable to use a self-contained breathing apparatus.

#### **5.4 Further information**

No data available

### **6. Accidental Release Measures/Preventions**

#### **6.1 Personal Precautions/Preventions, Protective Equipment, and Emergency Procedures**

Avoid the following - dust formation, breathing vapors, mist, or gas.

For personal protection, see section 8.

#### **6.2 Environmental precautions**

No special environmental precautions are required.

#### **6.3 Methods and materials for containment as well as cleaning up**

Sweep up and shovel. Also, keep them in suitable and closed containers for disposal.

#### **6.4 Reference to other sections**

For disposal, kindly see section 13.

### **7. Handling and Storage**

#### **7.1 Precautions for safe handling**

Provide proper exhaust ventilation where dust is formed; for precautions, one can see SECTION 2.2.

#### **7.2 Conditions for safe storage, including any inconsistencies**

You need to keep the container tightly closed in a dry and well-ventilated place. Store in a cool place.

Air and moisture sensitive. Handle and store under inert gas.

#### **7.3 Specific end use(s)**

Apart from the uses which are mentioned in section 1.2, no other specific uses are set out.

### **8. Exposure controls/personal protection**

#### **8.1 Control parameters**

Components with workplace control parameters

#### **8.2 Exposure controls**

##### **Appropriate engineering controls**

General industrial hygiene practice.

##### **Personal protective equipment**

### **Eye/face protection**

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

### **Skin Protection**

Handle the product with gloves. Inspect gloves before use. Properly remove gloves to avoid contact with the product. Dispose of contaminated gloves properly. Wash and dry hands thoroughly.

### **Body Protection**

Choose body protection with its type, the concentration and amount of dangerous substances, and the specific workplace. The type of protective equipment which will be used must be selected according to the concentration as well as the amount of the hazardous substance in the workplace.

### **Respiratory protection**

Respiratory protection is not required. Where protection from nuisance levels of dust is desired, one needs to use type N95 (US) or type P1 (EN 143) dust masks. One should use respirators and components which are tested as well as approved under/by appropriate/suitable government standards such as NIOSH (US) or CEN (EU).

### **Control of environmental exposure**

No special environmental precautions are required.

## **9. Properties: - Chemical and Physical**

### **9.1 Details on basic physical and chemical properties**

- a. (Looks Like) Appearance From powder, Color - White
- b. Odour - No data available
- c. Odour Threshold - No data available
- d. pH - No data available
- e. Melting point/freezing point - Melting point/range: 2.852 °C
- f. Initial boiling point and boiling range - 3.600 °C at 1013 hPa
- g. Flash point - Not applicable
- h. Evaporation rate - No data available
- i. Flammability (solid, No data available gas) – No data available
- j. Upper/lower flammability or explosive limits - No data available
- k. Vapour pressure - No data available
- l. Vapour density - No data available
- m. Relative density - 3,580 g/cm<sup>3</sup>
- n. Water solubility - insoluble
- o. Partition coefficient on n-octanol/water - No data available
- p. Auto-ignition temperature - No data available
- q. Decomposition temperature - No data available
- r. Viscosity - No data available

- s. Explosive properties - No data available
- t. Oxidizing properties - No data available

## **9.2 Other safety information**

No data available

## **10. Stability and Reactivity**

### **10.1 Reactivity**

No data available

### **10.2 Chemical stability**

Stable under recommended storage conditions.

### **10.3 Possibility of hazardous reactions**

No data available

### **10.4 Conditions to avoid**

Air sensitive

### **10.5 Incompatible materials**

Strong oxidizing agents, May react violently with phosphorous pentachloride, Strong Acids

### **10.6 Hazardous decomposition products**

Hazardous decomposition products formed under fire conditions. - Magnesium oxide  
Other decomposition products - No data available  
At the occurrence of fire: see section 5

## **11. Toxicological Information**

### **11.1 Information on toxicological effects**

#### **Acute Toxicity**

No data available

#### **Skin corrosion/irritation**

No data available

#### **Severe eye damage/eye irritation**

No data available

#### **Respiratory or skin sensitization**

No data available

**Germ cell mutagenicity**

No data available

**Carcinogenicity**

**IARC:** No component of the mentioned product present at levels which are greater than or equal to 0.1% is identified as a possible, probable, or confirmed human carcinogen by **IARC**.

**Reproductive Toxicity** No data available

**Specific Target Organ Toxicity - Single Exposure**

No data available

**Specific Target organ toxicity - Repeated Exposure**

No data available

**Aspiration hazard**

No data available

**Additional Information** RTECS: OM3850000

Ingestion or inhalation of a large quantity may cause a feverish reaction and leukocytosis., Diarrhoea, to our knowledge, the chemical, physical, and toxicological properties have not been investigated thoroughly.

**12. Ecological information**

**12.1 Toxicity**

No data available

**12.2 Persistence and degradability** No data available

**12.3 Bioaccumulative potential** No data available

**12.4 Mobility in soil** No data available

**12.5 Results of PBT and vPvB Assessment**

This substance/mixture contains no components considered either persistent, bioaccumulative, or toxic (PBT) or very persistent & very bioaccumulative(vPvB) at the levels of 0.1% or higher.

**12.6 Other adverse/unfavorable effects**

No data is available

### 13. Disposal Considerations

#### 13.1 Waste treatment methods

##### Product

Offer surplus, non-recyclable solutions to a licensed disposal company.

Contaminated packaging

Dispose of it as an unused product.

### 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

IMDG Marine

ADR/RID: no pollutant: no

IATA: -

#### 14.6 Special precautions for user

No data available

### 15. Regulatory Information

#### 15.1 Health, Safety, and environmental regulations/legislation specific to the substance or mixture

This safety datasheet complies with Regulation (EC) No. 1907/2006 requirements.

#### 15.2 Chemical safety assessment

No chemical safety assessment was conducted for this product.

## 16. Other information

The information presented here is believed to be accurate as of the above date and is provided in good faith. However, no warranty, whether express or implied, is given. The client's responsible for ensuring its activities comply with the relevant laws.