SAFETY DATA SHEET

According to 29 CFR 1910.1200

MAGNESIUM OXIDE

Date of issue: September 01, 2023 **Revision date:** - **Version:** 1

SECTION 1.- IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

1.1 Product identifier

Product form Solid

Substance name Magnesium oxide

CAS No. 1309-48-4

Formula MgO

Synonyms Magnesia, calcined magnesite.

1.2 Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture According to the Product Technical Data Sheet:

1.3 Details of the supplier of the safety data sheet

Química Pima, S.A. de C.V.
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Hermosillo, Sonora, México. C.P. 83297 Tel. 011 (662) 251-0010 / (662) 251-0316
ventas@qpima.com
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1.4 Emergency telephone number

Emergency number CHEMTREC (24HR Emergency Telephone), call: 1-800-424-9300

SECTION 2.- HAZARD IDENTIFICATION

2.1 GHS-US classification

This substance does not meet the criteria for classification.

2.2 Label elements

GHS-US labelling

Hazard pictograms (GHS-US) Not applicable

Signal Word (GHS-US): Not applicable

Hazard statement (GHS-US): Not applicable

Precautionary statements (GHS-US): Not applicable

2.3 Other hazards No data available

2.4 Unknown acute toxicity (GHS-US) No data available

SECCIÓN 3.- COMPOSITION / INFORMATION OF INGREDIENTS

3.1 Substance

Name	*Product identifier*	*%*
Magnesium oxide	(CAS No.) 1309-48-4	> 97.5

3.2 Mixture

Not applicable

SECCIÓN 4.- FIRST AID MEASURE

4.1 Description of first aid measure

First-aid measures general Check vital signs. Unconscious: keep airways clear and provide breathing assistance. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform CPR. Conscious

victim with breathing difficulty: semi-upright position. Victim in shock: lying on back with legs slightly elevated. Vomiting: prevent choking or aspiration. Avoid cooling by covering the victim (without heating). Continue monitoring the victim. Provide psychological support. Keep the victim calm, and avoid physical strain. Depending on the victim's condition: seek medical attention/hospital. Never give anything by mouth to an unconscious person. If feeling unwell, seek medical attention (if possible, show the label).

First-aid measures after eye contact Wash immediately with water for an extended period (at least 15 minutes), keeping eyelids open. Seek medical attention immediately.

First-aid measures after skin contact Remove contaminated clothing and immediately wash the entire exposed skin area with plenty of water. If discomfort occurs or in case of doubt, consult a physician.

First-aid measures after inhalation If inhaled, move to fresh air and keep in a comfortable position for breathing. Administer oxygen or perform artificial respiration if necessary. If discomfort occurs or in case of doubt, consult a physician.

First-aid measures after ingestion Never give anything by mouth to an unconscious person. Rinse mouth with water. Drink plenty of water. Call a doctor if the person feels unwell.

4.2 Most important

Symptoms/injuries after inhalation Irritation.

Symptoms/injuries after skin contact Irritation.

Symptoms/injuries after eye contact Irritation.

Symptoms/injuries after ingestión Irritation.

Chronic symptoms No data available.

4.3 Indications of any immediate medical attention and special treatment needed

No data available

SECCIÓN 5.- FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media Use the extinguishing agent according to the type of surrounding fire. To extinguish the fire, use water spray, dry chemical, carbon dioxide, or chemical foam. Do not leave water in containers.

Unsuitable extinguishing media No data available

5.2 Special hazard arising from the substance or mixture

Fire hazard Non-combustible. May produce toxic carbon monoxide fumes in case of fire.

Explosion hazard See section 10.

Reactivity Magnesium oxide reacts violently or ignites with interhalogens such as chlorine trifluoride (ClF3) or bromine pentafluoride (BrF5), and in an incandescent manner with phosphorus pentachloride (PCl5).

5.3 Advice for firefighters

Precautionary measures fire Non-combustible.

Firefighting instructions Act according to the surrounding fire. Evacuate or isolate the area. Restrict access to unnecessary personnel without proper protection. Position oneself upwind. Use personal protective equipment. Remove containers from the fire, if possible, without risk. Keep containers cool by applying water from a safe distance.

Protection during firefighting Firefighters should wear full protective clothing including self-contained breathing apparatus.

SECCIÓN 6.- ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment, and emergency procedures

6.1.1 For non-emergency personnel

Protective equipment	See section 8.
Emergency procedures	Wash contaminated clothing. In case of hazardous reactions: stay upwind. In case of reactivity risk: consider evacuation. Do not attempt to act or respond to an emergency without appropriate protective equipment.
Measures in case of dust release	Prevent dust cloud formation. Dust cloud production: dust suit. In case of dust production: stay upwind. Close doors and windows of facilities.

6.1.2 For emergency responders

Use appropriate protective equipment (see section 8) to prevent any possible contamination of the skin, eyes, and clothing. Avoid contact with skin, eyes, and clothing.

6.2 Environmental precautions

Keep the product away from drains and surface or groundwater. Contain and dispose of contaminated wash water.

6.3 Methods and material for containment and cleaning up

Method for containment	Contain and collect any contaminated material, avoiding the generation of dust. Prevent runoff into sewers, waterways, or disposal in areas where surface or groundwater may be affected.
Method for cleaning up	Contaminated material should be placed in a container for disposal following local regulations (refer to section 13).

6.4 Reference to other sections

For further information refer to section 8: Exposure-controls/personal protection

SECTION 7.- HANDLING AND STORAGE

7.1 Precautions for safe handling

Precautions for safe handling	Avoid contact with skin and eyes. Prevent the formation of dust. Provide adequate ventilation in areas where vapors, aerosols, fumes, or dust may form. Keep away from ignition sources. No smoking. Keep away from heat and ignition sources. Take normal preventive fire protection measures. Avoid the accumulation of electrostatic charges.
Hygiene measures	Handle according to safety regulations for chemical products. Wearing closed work clothing is an additional requirement in the personal protective equipment instructions. While in use, eating, drinking, or smoking is prohibited. Wash hands and/or face before breaks and at the end of work. Gloves should be regularly checked and inspected before use. Replace if necessary (e.g., if small holes are present). Remove contaminated clothing immediately. Wash contaminated clothing before reuse. Store work clothing separately.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions	Store only in the original container in a cool, well-ventilated area, away from incompatible materials. Keep the container tightly closed when not in use. Recommended storage temperature: 15 – 25°C.
Incompatible products	See section 10.
Heat-ignition	No data available.
Storage area	Store only in the original container in a cool, well-ventilated area, away from incompatible materials. Recommended storage temperature: 15 – 25°C.
Special rules on packaging	Keep the container tightly closed when not in use. Store in a tightly sealed, dry, clean, and properly labeled container. Comply with applicable regulatory requirements.

Packaging materials No data available

7.3 Specific end use(s)

No additional information is available

SECTION 8.- EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Name	*ACGIH TLV*	*OSHA PEL*	*NIOSH IDLH*
Magnesium oxide 1309-48-4	10 mg/m^3	No data available	No data available

8.2 Exposure controls

Appropriate engineering controls Eye wash stations and safety showers should be available nearby during use/handling. Provide exhaust ventilation or other engineering controls to keep vapor or dust concentrations (total/respirable) below the applicable occupational exposure limits indicated above. It is recommended that all dust control equipment such as local ventilation and material handling systems involved in handling this product contain explosion relief vents or an explosion suppression system or an oxygen-deficient atmosphere. Ensure that dust handling systems (such as exhaust ducts, dust collectors, containers, and processing equipment) are designed to prevent dust from escaping into the work area (i.e., no equipment leaks).

Personal protective equipment Protective goggles with side shields, gloves, body protection, apron, protective boots, protective suit, head protection, and particle filter.

Material for protective clothing Nitrile rubber (NBR).

Hand protection Use appropriate gloves. Suitable gloves are chemically resistant gloves tested for this purpose. For special uses, it is recommended to verify with the supplier of the protective gloves regarding their resistance to the above-mentioned chemicals. Material type: NBR (Nitrile rubber). Material thickness: >0.11 mm. Permeation: level 6 (> 480 minutes).

Eye protection Use protective goggles with side shields.

Skin and body protection Select body protection depending on the activity and potential exposure, e.g., aprons, protective boots, chemical-resistant protective suits, and head protection (helmet).

Respiratory protection Particle filter: P1 (filters at least 80% of atmospheric particles, color code: white). Respiratory protection is necessary for Dust formation.

Environmental exposure controls Avoid release to the environment.

SECTION 9.- PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical state Solid

Appearance Powder

Odor Odorless

Color White

Molecular mass 40.3 g/mol

Odor threshold No data available

pH No data available

pH solution No data available

Relative evaporation rate (butyl acetate = 1) No data available

Melting/Freezing point 2800 ºC

Boiling point	3600 ºC
Flash point	No data available
Self-ignition temperature	No data available
Decomposition temperature	No data available
Flammability (solid, gas)	No data available
Vapor pressure	No data available
Relative vapor density at 20 ºC	No data available
Relative density	3.58 (20 ºC)
Bulk density	100 kg/m^3
Solubility	Insoluble in water
Log Pow	No data available
Log Kow	No data available
Viscosity, kinematic	No data available
Viscosity, dynamic	No data available
Explosive properties	No data available
Oxidizing properties	No data available
Explosive limits	No data available

9.2 Other information

No additional information is available

SECTION 10.- STABILITY AND REACTIVITY

10.1 Reactivity	This material is not reactive under normal environmental conditions.
10.2 Chemical stability	Stable under normal use and storage conditions. It is hygroscopic and absorbs CO2 and water from the air.
10.3 Possibility of hazardous reactions	Strong reactions with acids
10.4 Conditions to avoid	Air, moisture, and incompatibles.
10.5 Incompatible materials	Acids, interhalogens, phosphorus pentachloride, and chlorine trifluoride.
10.6 Hazardous decomposition products	Toxic gases may be generated by thermal decomposition or combustion.

SECTION 11.- TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Likely routes of exposure	Skin and eye contact, inhalation, and ingestion.
Acute toxicity	May cause gastrointestinal irritation with nausea, vomiting, and diarrhea. May cause central nervous system depression. Magnesium oxide is absorbed slowly. Ingestion may cause rapid bowel evacuation.
Skin corrosión/irritation	May cause irritation.
Serious eye damage/irritation	May cause irritation.
Respiratory or skin sensitization	Nuisance dust. May irritate the nasal passages and respiratory tract. Inhalation may cause flu-like discomfort. Within 24-48 hours, this discomfort is characterized by chills, fever, muscle pain, dryness in the mouth and throat, and headache.
Germ cell mutagenicity	Not classified.
Carcinogenicity	Not classified.

Reproductive toxicity	Not classified.
Specific target toxicity (single exposure)	No data available
Specific target toxicity (repeat exposure)	No data available
Aspiration hazard	No data available

Name	LD_{50} oral	LD_{50} dermal	LC_{50} inhalation
Magnesium oxide	No data available	No data available	No data available

SECTION 12.- ECOLOGICAL INFORMATION

12.1 Toxicity

Ecology – General	Classification concerning the environment: not applicable.
Ecology – Air	Not classified as dangerous for the ozone layer.
Ecology – Water	Not classified as hazardous to the aquatic environment.

12.2 Persistence and degradability

No data available

12.3 Bioacumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Other adverse effects

Other information Slightly hazardous to water.

SECCIÓN 13.- INFORMACIÓN RELATIVA A LA ELIMINACIÓN DE LOS PRODUCTOS

13.1 Waste treatment methods

Waste treatment methods	Dispose of the product and its container as hazardous waste. Dispose of content/container following local, regional, national, or international regulations. Do not dispose of waste down the drain. Avoid release to the environment. Obtain specific instructions from the safety data sheet.
Waste disposal recommendations	It is hazardous waste; only approved containers may be used.

SECTION 14.- TRANSPORT INFORMATION

14.1 UN Number	Unregulated
14.2 UN proper shipping name	Unregulated
14.3 Class of hazards in transportation	Unregulated
14.4 Packaging group	Unregulated

14.3 Additional information

Other information	No additional information is available.
Overland transport	No additional information is available.
Transport by sea	No additional information is available.
Air transport	No additional information is available.

SECTION 15.- REGULATORY INFORMATION

International inventories

TSCA All components are listed or exempt.

TSCA – Toxic Substances Control Act Inventory Section 8(b).

DSL/NDSL - Domestic Substance List/Non-Domestic Substance List.

US Federal Regulations: Not listed in the Toxic Substances Control Act Inventory

SARA 311/312 Categories.

Acute Health Hazard	No	Chronic Health Hazard	No	Fire Hazard	No
Sudden Hazardous Pressure Release	No	Reactive Hazard	No		

Clean Water Act. No data available

CERCLA. No data available

National Regulations. Norma Oficial Mexicana NOM-002-SCT/2011, Listado de las substancias y materiales peligrosos más usualmente transportados.

SECTION 16.- OTHER INFORMATION

NFPA	NFPA health Hazard	1	NFPA fire Hazard	0	NFPA instability Hazard	0	NFPA Special hazard	-
HMIS III	Health	1	Flammability	0	Physical	0	Personal protection	E

Safety goggles, gloves, apron, and dust respirator.

E

Made for: Química Pima, S.A. de C.V. Del Cobre No. 20 Parque Industrial. Hermosillo, Sonora, México. 83297.

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IMPORTANT NOTE: Information in this SDS is from available published sources and is believed to be accurate, but is not exhaustive and will be used only as a guide, which is based on current knowledge of the chemical substance or mixture and applied to the appropriate product for safety precautions. No warranty, express or implied, is made and Pima Chemicals & Fertilizers, LLC and Quimica Pima, S.A. de C.V. assumes no liability resulting from the use of this SDS. The user must determine the suitability of this information for his application.

End of Safety Data Sheet