

**MAGNESIUM SILICATE, hydrous**

Safety Data Sheet SIM6471.0

Issue date: 01/09/2015

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Version: 1.1

SECTION 1: Identification**1.1. Identification**

Product name : MAGNESIUM SILICATE, hydrous
 Product code : SIM6471.0
 Product form : Substance
 Physical state : Solid
 Formula : $\text{Mg}_3\text{O}_{10}(\text{OH})_2\text{Si}_4$
 Synonyms : TALC
 Chemical family : INORGANIC SILICATE

1.2. Recommended use and restrictions on use

Recommended use : Chemical intermediate

1.3. Supplier**GELEST, INC.**

11 East Steel Road
 Morrisville, PA 19067

USA

T 215-547-1015 - F 215-547-2484 - (M-F): 8:00 AM - 5:30 PM EST

info@gelest.com - www.gelest.com

1.4. Emergency telephone number

Emergency number : CHEMTREC: 1-800-424-9300 (USA); +1 703-527-3887 (International)

SECTION 2: Hazard(s) identification**2.1. Classification of the substance or mixture****GHS US classification**

Carcinogenicity Category 1A H350 May cause cancer
 Specific target organ toxicity (repeated exposure) Category 1 H372 Causes damage to organs through prolonged or repeated exposure
 Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements**GHS US labeling**

Hazard pictograms (GHS US) :



Signal word (GHS US) : Danger
 Hazard statements (GHS US) : H350 - May cause cancer
 H372 - Causes damage to organs through prolonged or repeated exposure
 Precautionary statements (GHS US) : P201 - Obtain special instructions before use.
 P202 - Do not handle until all safety precautions have been read and understood.
 P260 - Do not breathe dust.
 P264 - Wash hands thoroughly after handling.
 P270 - Do not eat, drink or smoke when using this product.
 P280 - Wear protective gloves/protective clothing/eye protection/face protection.
 P308+P313 - If exposed or concerned: Get medical advice/attention.

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P314 - Get medical advice/attention if you feel unwell.
P405 - Store locked up.
P501 - Dispose of contents/container to licensed waste disposal facility..

2.3. Hazards not otherwise classified (HNOC)

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Substance type : Multi-constituent
Name : MAGNESIUM SILICATE, hydrous
CAS-No. : 13376-74-4/14807-96-6

Name	Product identifier	%	GHS US classification
Talc ($\text{Mg}_3\text{H}_2(\text{SiO}_3)_4$)	CAS-No.: 14807-96-6	97 – 100	STOT RE 2, H373
Quartz	CAS-No.: 14808-60-7	0 – 1	Carc. 1A, H350 STOT RE 1, H372

Full text of hazard classes and H-statements : see section 16

3.2. Mixtures

Not applicable

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general : Remove contaminated clothing and shoes. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). If possible show this sheet; if not available show packaging or label.

First-aid measures after inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If you feel unwell, seek medical advice.

First-aid measures after skin contact : Wash with plenty of soap and water. Get medical advice/attention.

First-aid measures after eye contact : Immediately flush eyes thoroughly with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention.

First-aid measures after ingestion : Never give anything by mouth to an unconscious person. Get medical advice/attention.

4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects : Causes damage to organs through prolonged or repeated exposure.

Symptoms/effects after inhalation : May cause irritation to the respiratory tract.

Symptoms/effects after skin contact : May cause skin irritation.

Symptoms/effects after eye contact : May cause eye irritation.

Symptoms/effects after ingestion : No information available.

Chronic symptoms : Long-term excessive exposure may cause talcosis, a pulmonary fibrosis, which in turn may lead to severe and permanent damage to lungs. This product contains small amounts of crystalline silica which causes silicosis. IARC found sufficient evidence in humans of carcinogenicity of inhaled crystalline silica in the form of quartz or cristobalite.

4.3. Immediate medical attention and special treatment, if necessary

No additional information available

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SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media	: Not combustible.
Unsuitable extinguishing media	: None known.

5.2. Specific hazards arising from the chemical

Fire hazard	: None known.
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5.3. Special protective equipment and precautions for fire-fighters

Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection. Avoid contact with skin and eyes. Do not breathe dust.
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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment	: Wear protective equipment as described in Section 8.
Emergency procedures	: Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment	: Do not attempt to take action without suitable protective equipment. Equip cleanup crew with proper protection. For further information refer to section 8: "Exposure controls/personal protection".
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6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment	: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.
Methods for cleaning up	: Sweep or shovel spills into appropriate container for disposal.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid contact with skin and eyes. Avoid dust formation. Do not breathe dust. Provide local exhaust or general room ventilation to minimize exposure to dust.
Hygiene measures	: Wash contaminated clothing before reuse. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions	: Keep container tightly closed. Store locked up.
Incompatible materials	: None known.
Storage area	: Store in a well-ventilated place. Store away from heat.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

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Talc (Mg₃H₂(SiO₃)₄) (14807-96-6)

USA - ACGIH - Occupational Exposure Limits

Local name	Talc
ACGIH OEL TWA	2 mg/m ³ (Containing no asbestos fibers. E - The value is for particulate matter containing no asbestos and < 1 % crystalline silica, R - Respirable particulate matter) 2 mg/m ³ (Containing asbestos fibers. R - Respirable particulate matter) 0.1 fibers/cm ³ (Containing asbestos fibers. F - Respirable fibers)
Remark (ACGIH)	Containing no asbestos fibers = TLV® Basis: Pulm fibrosis; pulm func. Notations: A4 Containing asbestos fibers = TLV® Basis: Pneumoconiosis; lung cancer; mesothelioma. Notations: A1 (Confirmed Human Carcinogen)
ACGIH chemical category	Not Classifiable as a Human Carcinogen containing no asbestos fibers
Regulatory reference	ACGIH 2024

USA - OSHA - Occupational Exposure Limits

Local name	Talc (not containing asbestos) (Silicates (less than 1% crystalline silica))
OSHA PEL TWA	2 mg/m ³ (Table Z-3 Mineral Dust, published by OSHA) 20 mppcf
Remark (OSHA)	Table Z-3. CAS No. source: eCFR Table Z-1.
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-3 Mineral Dusts

USA - IDLH - Occupational Exposure Limits

IDLH	1000 mg/m ³ (containing no asbestos and <1% quartz)
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USA - NIOSH - Occupational Exposure Limits

NIOSH REL (TWA)	2 mg/m ³ (containing no Asbestos and <1% Quartz-respirable dust)
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Quartz (14808-60-7)

USA - ACGIH - Occupational Exposure Limits

Local name	Silica crystalline - quartz
ACGIH OEL TWA	0.1 mg/m ³ respirable dust
Remark (ACGIH)	TLV® Basis: Pulm fibrosis; lung cancer. Notations: A2 (Suspected Human Carcinogen)
Regulatory reference	ACGIH 2024

USA - OSHA - Occupational Exposure Limits

OSHA PEL TWA	15 mg/m ³ nuisance dust
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8.2. Appropriate engineering controls

Appropriate engineering controls : Provide local exhaust or general room ventilation.

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Avoid all unnecessary exposure. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

Hand protection:

Neoprene or nitrile rubber gloves

Eye protection:

Safety glasses. Contact lenses should not be worn

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Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. NIOSH-certified dust and mist (orange cartridge) respirator.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Powder.
Molecular mass	: 379.28 g/mol
Color	: White.
Odor	: No data available
Odor threshold	: No data available
pH	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Melting point	: 1557 °C dec
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Not combustible.
Sublimation point	: Median Particle Size: 3-6 microns
Vapor pressure	: < 0.01 mm Hg @ 20°C
Relative vapor density at 20°C	: No data available
Relative density	: 2.75
Solubility	: Insoluble in water.
Partition coefficient n-octanol/water (Log Pow)	: No data available
Partition coefficient n-octanol/water (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
Explosion limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Stable.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

None known.

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10.5. Incompatible materials

None known.

10.6. Hazardous decomposition products

None known.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

Talc (Mg₃H₂(SiO₃)₄) (14807-96-6)

LD50 oral rat	> 5000 mg/kg Source: ECHA
LD50 dermal rat	> 2000 mg/kg Source: ECHA
LC50 Inhalation - Rat	> 2.1 mg/l air Animal: rat, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity), Guideline: EU Method B.2 (Acute Toxicity (Inhalation)), Guideline: EPA OPPTS 870.1300 (Acute inhalation toxicity)

Skin corrosion/irritation : Not classified
Serious eye damage/irritation : Not classified
Respiratory or skin sensitization : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : May cause cancer.
IARC found sufficient evidence in humans of carcinogenicity of inhaled crystalline silica in the form of quartz or cristobalite.
This product contains a component that has been reported to be carcinogenic based on its IARC, ACGIH, NTP, or EPA classification.

Talc (Mg₃H₂(SiO₃)₄) (14807-96-6)

IARC group	3 - Not classifiable
National Toxicology Program (NTP) Status	1 - Evidence of Carcinogenicity, 5 - Twelfth Report - Items under consideration

Quartz (14808-60-7)

IARC group	1 - Carcinogenic to humans
National Toxicology Program (NTP) Status	2 - Known Human Carcinogens

Reproductive toxicity : Not classified
STOT-single exposure : Not classified
STOT-repeated exposure : Causes damage to organs through prolonged or repeated exposure.

Talc (Mg₃H₂(SiO₃)₄) (14807-96-6)

NOAEL (oral,rat,90 days)	100 mg/kg body weight Animal: rat, Guideline: OECD Guideline 452 (Chronic Toxicity Studies)
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Aspiration hazard : Not classified
Symptoms/effects after inhalation : May cause irritation to the respiratory tract.
Symptoms/effects after skin contact : May cause skin irritation.
Symptoms/effects after eye contact : May cause eye irritation.
Symptoms/effects after ingestion : No information available.
Chronic symptoms : Long-term excessive exposure may cause talcosis, a pulmonary fibrosis, which in turn may lead to severe and permanent damage to lungs. This product contains small amounts of crystalline silica which causes silicosis. IARC found sufficient evidence in humans of carcinogenicity of inhaled crystalline silica in the form of quartz or cristobalite.

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SECTION 12: Ecological information

12.1. Toxicity

Talc (Mg₃H₂(SiO₃)₄) (14807-96-6)

LC50 - Fish [1]	> 100 g/l (Exposure time: 96 h - Species: Brachydanio rerio [semi-static])
LC50 - Fish [2]	110000 mg/l Test organisms (species): other:
EC50 96h - Algae [1]	7202.7 mg/l Source: ECHA
NOEC (chronic)	1459798 mg/l Test organisms (species): other: Duration: '30 d'

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

Talc (Mg₃H₂(SiO₃)₄) (14807-96-6)

BCF - Fish [1]	(no known bioaccumulation)
Partition coefficient n-octanol/water (Log Pow)	-9.4 Source: ECHA

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Effect on the ozone layer : No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

Sewage disposal recommendations	: Do not dispose of waste into sewer.
Product/Packaging disposal recommendations	: This product is a naturally occurring mineral. Unless contaminated in service, this product is neutral to the environment. Landfill. Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to licensed waste disposal facility..
Ecological waste information	: Avoid release to the environment.

SECTION 14: Transport information

In accordance with DOT / TDG / IMDG / IATA

DOT	TDG	IMDG	IATA
14.1. UN number			
Not regulated for transport			
Not applicable	Not applicable	Not applicable	Not applicable
14.2. Proper Shipping Name			
Not applicable	Not applicable	Not applicable	Not applicable
Transport document description			
Not applicable	Not applicable	Not applicable	Not applicable
14.3. Transport hazard class(es)			
Not applicable	Not applicable	Not applicable	Not applicable

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DOT	TDG	IMDG	IATA
14.4. Packing group			
Not applicable	Not applicable	Not applicable	Not applicable
14.5. Environmental hazards			
Not applicable	Not applicable	Not applicable	Not applicable
No supplementary information available			

14.6. Special precautions for user

DOT
No data available

TDG
No data available

IMDG
No data available

IATA
No data available

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

Commercial status of components according to the United States Environmental Protection Agency's Toxic Substances Control Act (TSCA):

Name	CAS-No.	Listing	Commercial status	Flags
Talc (Mg3H2(SiO3)4)	14807-96-6	Present	Active	
Quartz	14808-60-7	Present	Active	

15.2. International regulations

CANADA

Talc (Mg3H2(SiO3)4) (14807-96-6)
Listed on the Canadian DSL (Domestic Substances List)

Quartz (14808-60-7)
Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

Talc (Mg3H2(SiO3)4) (14807-96-6)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

Quartz (14808-60-7)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

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National regulations

Talc ($\text{Mg}_3\text{H}_2(\text{SiO}_3)_4$) (14807-96-6)

Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the Japanese ENCS (Existing New Chemical Substances) inventory
Listed on KECL/KECI (Korean Existing Chemicals Inventory)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on INSQ (Mexican National Inventory of Chemical Substances)
Listed on CICR (Turkish Inventory and Control of Chemicals)
Listed on the TCSI (Taiwan Chemical Substance Inventory)
Listed on Thailand Existing Chemicals Inventory (DIW)
Listed on the NCI (Vietnam - National Chemical Inventory)
Listed on IARC (International Agency for Research on Cancer)

Quartz (14808-60-7)

Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on IARC (International Agency for Research on Cancer)
Listed as carcinogen on NTP (National Toxicology Program)
Listed on INSQ (Mexican National Inventory of Chemical Substances)

15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

Talc ($\text{Mg}_3\text{H}_2(\text{SiO}_3)_4$) (14807-96-6)

U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

Quartz (14808-60-7)

U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: Other information

Full text of H-phrases::

H350	May cause cancer
H372	Causes damage to organs through prolonged or repeated exposure
H373	May cause damage to organs through prolonged or repeated exposure

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Abbreviations and acronyms

: Abbreviations: ND: Not Determined, No Data; NA: Not Applicable; LD: Lethal Dose; LC: Lethal Concentration; ATE: Acute Toxicity Estimates; H: hour; °: °C unless otherwise stated; mm: millimeters Hg, torr; PEL: permissible exposure level; TWA: time weighted average; TLV: threshold limit value; TG: Test Guideline; NIOSH: National Institute for Occupational Safety and Health; IARC: International Agency for Research on Cancer; NTP: National Toxicology Program; HMIS: Hazardous Material Information System; CAS No.: Chemical Abstract Service Registration Number; EC No.: European Commission Registration Number; EC Index No.: European Commission Index Number; OECD: The Organisation for Economic Co-operation and Development; GHS: The Globally Harmonized System of Classification and Labelling; APF: Assigned Protection Factor.

Hazard Rating

Health

: 1 Slight Hazard - Irritation or minor reversible injury possible

Flammability

: 0 Minimal Hazard - Materials that will not burn

Physical

: 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

Prepared by safety and environmental affairs.

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Version: 1.1

SDS US (GHS HazCom 2012) - Custom

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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