

Safety Data Sheet

RMCC LLC

According to the European Commission Regulations (EU) 2020/878 Annex II



Valid from: 17-08-2021

Revision date: 02-04-2024

Version number: 9

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name: **MagTreat® S-32%, MagTreat® S-53%, MagTreat® S-65%**
Product Form: Water based suspension with 32-65% solids
Synonyms: Brucite, magnesium hydroxide
CAS number: 1317 – 43 – 7
EC number: 215 – 274 – 9
Molecular Weight: 58.3 g/mol
Chemical Formula: $Mg(OH)_2$
Registration number: not applicable (see section 15)

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

Recommended Use: Industrial water treatment. Municipal wastewater treatment. Acid mine drainage. Flue gas desulphurization. Exhaust gas cleaning systems.
Uses advised against: No Information available

1.3. Details of the supplier of the safety data sheet

Company: Russian Mining Chemical Company LLC,
115093, Russia, Moscow, Pom. 1C, Pavlovskaya street 7,
Intracity Territory of Federal City Danilovsky Municipal District.
E-mail address: info@brucite.plus
Website: <https://brucite.plus/en/>

1.4. Emergency telephone number

+7 (495) 789-65-30

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [CLP] - *Not Classified*

2.2. Label elements

Label elements - *Not required*

Precautionary Statement - *Not required*

2.3. Other hazards

Exposure may aggravate those with pre-existing eye, skin, or respiratory conditions.

Results of PBT and vPvB assessment.

According to the results of its assessment, this substance is not a PBT or a vPvB.

This product does not contain any known or suspected endocrine disruptor.

SECTION 3: Composition/information on ingredients

3.1. Substances

Substance Name	CAS No	EC/List No	Content	R-phrases	Product identifier according to 1272/2008/EC	1907/2006/EC (registration REACH)
Brucite (magnesium hydroxide)	1317 - 43 - 7	215-274-9	100 %	none	none	Exempted in annex V

Safety Data Sheet

RMCC LLC

According to the European Commission Regulations (EU) 2020/878 Annex II



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SECTION 4: First aid measures

4.1. Description of first aid measures

General Advice	Seek medical assistance if feeling unwell.
Eye Contact	Rinse out with plenty of water. Do not rub eyes.
Skin Contact	Wash with plenty of water. Wash contaminated clothing.
Ingestion	Rinse out mouth with plenty of water and spit out the fluid. After swallowing large amounts: induce vomiting.
Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing.
Self-Protection of the First Aider	No special precautions required.

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

Eye Contact	Can cause irritation, redness, tearing, burning
Skin Contact	Can cause irritation, drying, chapping
Ingestion	In large quantities causes irritation, nausea and gastrointestinal upset
Inhalation	not applicable

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

Notes to Physician	Treat symptomatically
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SECTION 5: Firefighting measures

5.1. Extinguishing media

No limitations. Coordinate firefighting measures to the fire surroundings

5.2. Special hazards arising from the substance or mixture

The substance is not combustible, not explosive and not flammable.
Magnesium hydroxide has a flame retardant effect.

5.3. Advice for firefighters

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

Use personal protective equipment as required. Ensure adequate ventilation. Avoid generation of skin contact and eye contact. Contaminated surfaces will be extremely slippery.

6.2. Environmental precautions

Try to prevent the material from entering drains or water courses.

6.3. Methods and material for containment and cleaning up

Soak up with inert absorbent material (e.g. sand, silica gel, universal binder, sawdust).
Dispose of in accordance with local regulations.

6.4. Reference to other sections

Not appropriate

Safety Data Sheet

RMCC LLC

According to the European Commission Regulations (EU) 2020/878 Annex II



Valid from: 17-08-2021

Revision date: 02-04-2024

Version number: 9

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Wear personal protective equipment/face protection. Ensure adequate ventilation. Avoid ingestion and inhalation. Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and after work.

7.2. Conditions for safe storage, including any incompatibilities

Advice on protection against fire and explosion:

Normal measures for preventive fire protection. Take precautionary measures against static discharge.

Advice on safe handling:

Wear personal protective equipment. Keep away from heat and sources of ignition.

Conditions for safe storage:

For long-term storage, it is necessary to ensure periodic mixing (once every week). Mix thoroughly before the use. Store above the freezing point and below the +35°C.

Materials to avoid:

Chloride and phosphate water soluble metal salts, strong acids, strong bases, strong oxidizers, halogenated compounds, reactive metal powders.

7.3. Specific end use(s)

Acid neutralization, wastewater treatment, heavy metals precipitation, reduction of COD and phosphates, prevention of odor and corrosion in sewage systems, whey neutralization, flue gas desulphurization in power plants and marine scrubber systems (EGCS).

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits: No data available.

Biological limit values: No data available.

Magnesium hydroxide – Exposure Limits

OSHA (PEL-TWA)	ACGIH (TLV-TWA)	Alberta (TWA)
15 mg/m ³ (Total Dust)	10 mg/m ³ (Total Dust)	10 mg/m ³ (Nuisance Particulate)
5 mg/ m ³ (Respirable Dust)	5 mg/ m ³ (Respirable Dust)	5 mg/ m ³ (Respirable Dust)

Other countries: Please inform at your national authorities.

8.2. Exposure controls

Engineering Measures

Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location. Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimize release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source.

Personal protective equipment:

Eye Protection Goggles complying with an approved standard

Hand Protection Protective gloves complying with an approved standard.

Safety Data Sheet

RMCC LLC

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Version number: 9

	Ensure gloves are suitable for the task: Chemical compatibility, Dexterity, Operational conditions, User susceptibility, e.g. sensitization effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion. Remove gloves with care avoiding skin contamination.
Skin and body protection	Impervious clothing and shoes to prevent repeated or prolonged skin contact
Respiratory protection	Dust mask (minimum filter type P2) complying with an approved standard
Environmental exposure controls: No information available	

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Concentrated, stabilized aqueous suspension
Colour	white
Odour:	odorless
Melting point/freezing point	350°C (662°F) decomposes < 32°F (0°C)
Boiling point or initial boiling point and boiling range	100 °C (212°F) for water component
Flammability	not flammable
Lower and upper explosion limit	not applicable
Flash point	not applicable
Auto-ignition temperature	not applicable
Decomposition temperature	>350°C (662°F)
pH	~ 10.5 (10 % suspension in water)
Kinematic viscosity	not applicable
Solubility:	
- in water (20°C)	- 0.0009 g/100 ml
Partition coefficient:	
- n-octanol/water (log value)	not applicable
Vapour pressure	not applicable
Relative density	1350 kg/m ³ , min
Relative vapour density	not applicable
Evaporation rate	not applicable
Explosive limits	not applicable
Viscosity	400 cps (Brookfield VT, 100 rpm), max
Explosive properties	not explosive
Oxidizing properties	not applicable

9.2. Other information

Molecular Weight	58.3 g/mol
Chemical Formula	Mg(OH) ₂
Evaporation Rate	not applicable

Safety Data Sheet

RMCC LLC

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SECTION 10: Stability and reactivity

10.1. Reactivity

No decomposition if stored and applied as directed.

10.2. Chemical stability

Hygroscopic. Air sensitive. Chemically stable up to the decomposition temperature. Above 350°C decomposition to magnesium oxide and water.

10.3. Possibility of hazardous reactions

Reacts vigorously with strong acids.

10.4. Conditions to avoid

Avoid dust formation. Exposure to air. Exposure to moist air or water

10.5. Incompatible materials

Chloride and phosphate water soluble metal salts, strong acids, strong bases, strong oxidizers, halogenated compounds, reactive metal powders.

10.6. Hazardous decomposition products

Decomposes to magnesium oxide and water.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Product Information No acute toxicity information is available for this product
Oral: Based on available data, the classification criteria are not met

(a) acute toxicity Dermal: No data available
Inhalation: No data available

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Brucite CAS No 1317 - 43 - 7	LD50 = 8500 mg/kg (Rat) LD50 > 5000 mg/kg (Mice)	LD50 > 2500 mg/kg (Rabbit)	LC50 > 2100 mg/kg (Rat)

- (b) skin corrosion/irritation Not absorbed by intact skin. Intimate contact of the skin with magnesium hydroxide can cause temporary irritation, drying and chapping.
- (c) serious eye damage/irritation Can cause temporary eye irritation.
- (d) respiratory or skin sensitisation Short-term inhalation of magnesium hydroxide dust or fume can cause temporary irritation of upper respiratory tract, nose and skin.
- (e) germ cell mutagenicity No data available
- (f) carcinogenicity Substance is not classified as carcinogenic under ACGIH, NIOSH, IARC, NTP or OSHA
- (g) reproductive toxicity No data available
- (h) STOT-single exposure No data available
- (i) STOT-repeated exposure No data available
- (j) aspiration hazard No data available

Safety Data Sheet

RMCC LLC

According to the European Commission Regulations (EU) 2020/878 Annex II



Valid from: 17-08-2021

Revision date: 02-04-2024

Version number: 9

11.2. Information on other hazards

Endocrine Disrupting Properties

Assess endocrine disrupting properties for human health.
This product does not contain any known or suspected endocrine disruptor

SECTION 12: Ecological information

12.1. Toxicity

Component	Freshwater Fish	Water Flea	Freshwater Algae
Brucite (magnesium hydroxide) CAS No 1317 - 43 - 7	LC50 (96h) = 775,8 mg/l, <i>Oncorhynchus mykiss</i> LC50 (96h) = 306,8 mg/l, <i>Pimephales promelas</i>	EC50 (96h) = 170 mg/l, <i>Daphnia magna</i>	EC50 (72h) > 100 mg/l, <i>Pseudokirchnerella subcapitata</i>

12.2. Persistence and degradability

Magnesium hydroxide is nearly insoluble in water. By reaction with acids and neutralization magnesium hydroxide is slowly degraded.

12.3. Bioaccumulative potential

Due to its ionic nature it is not a candidate for bioaccumulation

12.4. Mobility in soil

Spillage unlikely to penetrate soil. It is not likely mobile in the environment due to its low water solubility.

12.5. Results of PBT and vPvB assessment

In accordance with Annex XIII of the REACH Regulation, inorganic substances do not require assessment.

12.6. Endocrine disrupting properties

This product does not contain any known or suspected endocrine disruptors

12.7. Other adverse effects

Persistent Organic Pollutant

This product does not contain any known or suspected substance

Ozone Depletion

This product does not contain any known or suspected substance

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste from Residues/Unused Products

Dispose of in accordance with the European Directives on waste. Dispose of in accordance with local regulations. Do not discharge into drains or the environment. Do not dispose of domestic waste.

Contaminated Packaging

Dispose of this container to waste collection point.

European Waste Catalogue (EWC)

According to the European Waste Catalog, Waste Codes are not product specific, but application specific

Other Information

Waste codes should be assigned by the user based on the application for which the product was used. Do not empty into drains.

Safety Data Sheet

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SECTION 14: Transport information

14.1. UN number or ID number

IMDG/IMO, ADR, IATA – Not regulated

14.2. UN proper shipping name

IMDG/IMO, ADR, IATA – Not regulated

14.3. Transport hazard class(es)

IMDG/IMO, ADR, IATA – Not regulated

14.4. Packing group

IMDG/IMO, ADR, IATA – Not regulated

14.5. Environmental hazards

No hazards identified

14.6. Special precautions for user

No special precautions required

14.7. Maritime transport in bulk according to IMO instruments

Not applicable, packaged goods

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

International Inventories

Europe

Brucite (magnesium hydroxide) CAS No 1317- 43-7; EINECS 215-274-9

Authorisation/Restrictions according to EU REACH (1907/2006) - Annex XIV – Substances Subject to Authorization, Annex XVII – Restrictions on Certain Dangerous Substances, article 59 - Candidate List of Substances of Very High Concern (SVHC)

Not applicable

Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification, Qualifying Quantities for Safety Report Requirements

Not applicable

Regulation (EC) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of dangerous chemicals

Not applicable

Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

Not applicable

Contains component(s) that meet a definition of per & poly fluoroalkyl substance (PFAS)

Not applicable

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**New Zealand (NZIoC), Canada (DSL/NDSL), China (IECSC), Philippines (PICCS), Taiwan (TCSI), Korea (KECL), Japan (ENCS/ ISHL), Australia (AICS).
US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)**

Component	NZIoC	DSL	NDSL	IECSC	PICCS	TCSI	KECL	ENCS	ISHL	AICS	TSCA
Brucite (magnesium hydroxide) CAS No 1317 - 43 - 7	/	/	/	/	/	/	/	x ¹	/	/	/

Legend: X – Listed / - Not Listed

x¹ – Brucite, Japan: ENCS No C022-972-30A

Turkey

Brucite (magnesium hydroxide) CAS No 1317- 43-7; EINECS 215-274-9

The substance is exempted from the obligation to register according to Registration, Evaluation, Authorisation and Restriction of Chemicals (KKDIK) forced on 23.12.2017 by Ministry of Environment and Urban Planning, Turkey as natural magnesium hydroxide is a mineral occurring in nature. See annex V.

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at Work.

15.2. Chemical safety assessment

A Chemical Safety Assessment/Report (CSA/CSR) has not been conducted

SECTION 16: Other information

CAS - Chemical Abstracts Service
EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
IECSC - Chinese Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
WEL - Workplace Exposure Limit
ACGIH - American Conference of Governmental Industrial Hygienists
DNEL - Derived No Effect Level
RPE - Respiratory Protective Equipment
LC50 - Lethal Concentration 50%
NOEC - No Observed Effect Concentration
PBT - Persistent, Bioaccumulative, Toxic
ADR - European Agreement Concerning the International Carriage of Dangerous Goods by Road

Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
ENCS - Japanese Existing and New Chemical Substances
AICS - Australian Inventory of Chemical Substances
NZIoC - New Zealand Inventory of Chemicals
TCSI - Taiwan's chemical substance inventory

TWA - Time Weighted Average
IARC - International Agency for Research on Cancer
PNEC - Predicted No Effect Concentration
LD50 - Lethal Dose 50%
EC50 - Effective Concentration 50%
POW - Partition coefficient Octanol:Water
vPvB - very Persistent, very Bioaccumulative

ICAO/IATA - International Civil Aviation Organization/International Air Transport Association
MARPOL - International Convention for the Prevention of Pollution from Ships
ATE - Acute Toxicity Estimate

Safety Data Sheet

RMCC LLC

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IMO/IMDG - International Maritime
Organization/International Maritime Dangerous
Goods Code

OECD - Organisation for Economic Co-
operation and Development

BCF - Bioconcentration factor

VOC - (Volatile Organic Compound)

Key literature references and sources for data

<https://echa.europa.eu/information-on-chemicals>

<https://www.guidchem.com/msds/>

Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RT

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet