



**Russian Mining
Chemical Company**

Material Safety Data Sheets

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Material Safety Data Sheet

Russian Mining Chemical Company LLC

According to Regulation (EU) 2020/878

Revision date: 17-08-2021

Version number: 3

Valid from: 17-08-2021



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

1.1. Product identifier:

Trade name: MagTreat®-P, MagTreat®-P10R, MagTreat®-G

Product Form: Powder, granules

Synonyms: Brucite, magnesium hydroxide

EINECS No: 215 - 170 - 3

CAS No: 1317 - 43 - 7

Molecular Weight: 58.3

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:

Use:

- Industrial water treatment
- Municipal wastewater treatment
- Acid mine drainage
- Flue gas desulphurization
- Exhaust gas cleaning systems

Uses advised against

(if any, by the supplier): None

1.3. Details of the supplier of the safety data sheet:

Russian Mining Chemical Company LLC,
115093, Russia, Moscow, Pavlovskaya street 7/1

1.4. Emergency telephone number:

+7 (495) 789-65-30

SECTION 2 - Hazards Identification

2.1. Classification of the substance or mixture:

Classification in accordance with Regulation (EU) 1272/2008

Not classified

2.2. Label elements:

Labelling (REGULATION (EC) No 1272/2008)
Precautionary statements
Prevention
P260 Do not breathe dust.

2.3. Other hazards:

Formation of dust is possible.

PBT: not relevant - no registration required.

vPvB: not relevant - no registration required

SECTION 3 - Composition / Information on ingredients

3.1. Substances:

Product does not contain any substances to be mentioned according to criteria of section 3.1 annex II Regulation (EU) 1907/2006

Substance Name	CAS No	EC/List No	% (weight)	REACH registration	Classification according to Regulation (EC) No 1278/2008 (CLP)
Brucite	1317-43-7	215-274-9	100 %	Exempted see regulation 987/2008: annex 5, item 7	Not classified

3.2 Mixtures:

Not applicable

SECTION 4 - First aid measures

4.1. Description of first aid measures:

Seek medical assistance if feeling unwell.

Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

Skin contact: Wash with plenty of water. Wash contaminated clothing.

Eye contact: Rinse out with plenty of water. Do not rub eyes.

Ingestion: Rinse out mouth with plenty of water and spit out the fluid. After swallowing large amounts: induce vomiting.

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

Inhalation: Dust can cause temporary irritation of upper respiratory tract.

Skin contact: Can cause irritation, drying, chapping,

Eye contact: Can cause irritation, redness, tearing, burning.

Ingestion: In large quantities causes irritation, nausea and gastrointestinal upset.

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

not appropriate

SECTION 5 - Firefighting measures

5.1. Extinguishing Media:

Suitable extinguishing media: No limitations. Adjust extinguishing media to the surrounding fire.

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:

Use extinguishing media most appropriate for the surrounding fire.
Firefighters should wear the usual protective clothing and self-contained breathing apparatus.

SECTION 6 - Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures:

Do not inhale dust. Avoid generation of dust, skin contact and eye contact.

6.2. Environmental precautions: Avoid to enter large quantities in sewerage system.

6.3. Methods and material for containment and cleaning up:

Collect spillage with a shovel and put into a closed container. Clean up affected surface with dry method (or flush with water). Avoid generation of dust.

6.4. Reference to other sections: not appropriate

SECTION 7 - Handling and storage

7.1. Precautions for safe handling:

Avoid any operation leading to the formation of excess of dust.
Observe the exposure limit values in accordance with regulation.
Avoid inhaling dust and fumes when in their presence or ingestion of the product.
Wash after handling thoroughly every surface of the body that has come into contact with the product.
Do not eat, drink or smoke when using the product.
Clean working area frequently to avoid buildup of dust.

7.2. Conditions for safe storage, including any incompatibilities:

Dry storage required. Protect from moisture. Keep containers closed.
Storage temperature: no restrictions.
Avoid contact with incompatibles mentioned under item 10.

7.3. Specific end use(s): No information available

SECTION 8 - Exposure controls / Personal protection

8.1. Control parameters:

Germany (Allgemeiner Staubgrenzwert):

10 mg/m³ einatembare Staubfraktion, E-Staub (inhalable dust)
3 mg/ m³ alveolengängige Staubfraktion, A-Staub (respirable dust)

Netherlands (MAC):

10 mg/ m³ inhaleerbaar stof (inhalable dust)
5 mg/ m³ respirabel stof (respirable dust)

USA:

ACGIH (TLV-TWA) 10 mg/ m³ total dust
5 mg/ m³ respirable dust
OSHA (PEL-TWA) 15 mg/ m³ total dust
5 mg/ m³ respirable dust

United Kingdom:

10 mg/ m³ inhalable dust
4 mg/ m³ respirable dust

Finland, Spain, Italy, Zwitzerland:

10 mg/ m³ inhalable dust
3 mg/ m³ respirable dust

Australia, Austria, Sweden, France, Denmark:

10 mg/ m³ inhalable dust
5 mg/ m³ respirable dust

Other countries: Please inform at your national authorities.

8.2. Exposure controls:

Appropriate Engineering Controls: Use process enclosures, local exhaust ventilation or other engineering controls to keep air-borne levels below recommended exposure limits (see section 8.1).

Individual Protection Measures:

Eye / face protection: Use safety glasses with side protection complying with an approved standard

Hand protection: Impervious protective gloves are recommended complying with an approved standard

Skin protection: It is recommended to wear impervious clothing and shoes to prevent repeated or prolonged skin contact.

Respiratory protection: Wear dust mask (minimum filter type P2) complying with an approved standard

Thermal hazards: not identified

Environmental exposure controls: no information available

SECTION 9 - Physical and chemical parameters

9.1. Information on basic physical and chemical properties:

Physical state:	solid, granule, powder or chipped product
Colour:	white
Odour:	odourless
Melting point/freezing point:	not applicable, decomposition at 350°C
Boiling point or initial boiling point and boiling range:	not applicable, decomposition at 350°C
Flammability:	not flammable
Lower and upper explosion limit:	not applicable
Flash point:	not applicable
Auto-ignition temperature:	not applicable
Decomposition temperature:	ca 350°C
pH:	ca. 10 (10 % suspension in water)
Kinematic viscosity:	not applicable (solid)
Solubility:	
in water (20°C):	almost insoluble
in alcohols:	insoluble
Partition coefficient n-octanol/water (log value):	not applicable
Vapour pressure:	not applicable (not volatile)
Relative density:	Bulk (loose) density 350 - 1000 g/l (depending on the grade and grain-size)
Relative vapour density:	not applicable (not volatile)
Evaporation rate:	not applicable
Explosive limits:	not applicable
Viscosity:	not applicable (solid)
Explosive properties:	not explosive
Oxidizing properties:	not applicable

9.2. Other information:

9.2.1 Information with Regard to Physical Hazard Classes: none

9.2.2 Other Safety Characteristics: none

SECTION 10 - Stability and reactivity

10.1. Reactivity: Reacts vigorously with strong acids.

10.2. Chemical Stability:

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

10.3. Possibility of hazardous Reactions: see 10.1.

10.4. Conditions to avoid: No information available

10.5. Incompatible materials: See 10.1.

10.6. Hazardous decomposition products:

No hazardous decomposition products: decomposes to magnesium oxide and water.

SECTION 11 - Toxicological information

General information:

Not classified as dangerous goods under Regulation (EU) 1272/2008.

11.1. Information on toxicological effects:

Acute toxicity:	None
Skin corrosion / irritation:	Not absorbed by intact skin. Intimate contact of the skin with magnesium hydroxide can cause temporary irritation, drying and chapping.
Serious eye damage / irritation:	Can cause temporary eye irritation.
Respiratory or skin sensitisation:	Short-term inhalation of magnesium hydroxide dust or fume can cause temporary irritation of upper respiratory tract, nose and skin.
Germ cell mutagenicity:	No known studies. Not considered to be mutagenic in general.
Carcinogenicity:	Substance is not classified as carcinogenic under ACGIH, NIOSH, IARC, NTP or OSHA.
Reproductive toxicity:	Not available
STOT-single exposure:	Not available
STOT-repeated exposure:	Not available
Aspiration hazard:	Not available

11.2. Information on other hazards

11.2.1 *Endocrine disrupting properties:* no information available

11.2.2 *Other information:* Alkalinity: Being a mild alkali is mainly the cause for irritation of body tissues.

SECTION 12 - Ecological information

12.1. Toxicity:

Hazardous to the aquatic environment, short-term (acute):	Not classified
Hazardous to the aquatic environment, long-term (chronic):	Not classified

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. Bio accumulative potential:

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

12.4. Mobility in soil:

Low because of the structure and physicochemical characteristics.

12.5. Results of PBT assessment:

not relevant
(no registration required)

Results of vPvB assessment:

not relevant
(no registration required)

12.6 Endocrine disrupting properties:

Not applicable

12.7. Other adverse effects:

Not identified

SECTION 13 - Disposal considerations

Chemical residues generally are considered as special waste. Therefore we recommend to contact the authorities in charge or approved waste disposal companies how to dispose of the waste. The disposal has to be done in compliance with national and regional regulations.

13.1 Waste treatment methods:

Disposal must be done according to official regulations. Do not discharge into drains or the environment. Do not dispose of domestic waste.

SECTION 14 - Transport information

14.1. UN number or ID number:	Not applicable
14.2. UN proper shipping name:	Not applicable
14.3. Transport Hazard Class:	Not applicable
14.4. Packing group:	Not applicable
14.5. Environmental hazards:	Not applicable
14.6. Special precautions for user:	Not applicable
14.7. Maritime transport in bulk according to IMO instruments:	Not applicable

SECTION 15 – Regulatory information

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

Europe:

Contains no REACH substances with Annex XVII restrictions.

Contains no substances on the REACH candidate list.

Contains no REACH Annex XIV substances.

Contains no substances subjected to Regulation (EU) No 649/2012 of the European Parliament of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

Contains no substances subjected to Regulation (EU) No 2019/1021 of the European Parliament of the Council of 20 June 2019 on persistent organic pollutants.

The substance is exempted from the obligation to register according to Regulation 1907/2006 (REACH) as natural magnesium hydroxide is a mineral occurring in nature. See Regulation 987/2008: annex 5, item 7.

USA:

US Federal Regulations:

No additional information available

US State Regulations:

No additional information available

15.2. *Chemical safety assessment*

Not applicable

SECTION 16 - Other information

Used abbreviations and acronyms can be looked up at www.wikipedia.org.

The information in this Safety Data Sheet is based on our present knowledge and experience. The Safety Data Sheet characterizes the product with regard to the appropriate safety precautions. The information does not represent a guarantee of the properties of the product.

Party Responsible for the Preparation of This Document

Russian Mining Chemical Company LLC,

115093, Russia, Moscow, Pavlovskaya street 7/1

Emergency telephone number: +7 (495) 789-65-30

Material Safety Data Sheet

Russian Mining Chemical Company LLC

According to Regulation (EU) 2020/878

Revision date: 17-08-2021

Version number: 7

Valid from: 17-08-2021



RMCC

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%, MagTreat®-S 70%, MagTreat®-S 75%
Product Form:	Water based suspension with 32-75% solids
Synonyms:	Brucite, magnesium hydroxide, liquid/suspension
EINECS No:	215 - 170 - 3
CAS No:	1317 - 43 - 7
Molecular Weight:	58.3
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:

Use:

- Industrial water treatment
- Municipal wastewater treatment
- Acid mine drainage
- Flue gas desulphurization
- Exhaust gas cleaning systems

Uses advised against

(if any, by the supplier): None

1.3. Details of the supplier of the safety data sheet:

Russian Mining Chemical Company LLC,
115093, Russia, Moscow, Pavlovskaya street 7/1

1.4. Emergency telephone number:

+7 (495) 789-65-30

SECTION 2 - Hazards Identification

2.1 Classification of the Substance or Mixture:

Classification in accordance with Regulation (EU) 1272/2008

Not classified

2.2 Label Elements:

Classification in accordance with Regulation (EU) 1272/2008

No labeling applicable

2.3 Other Hazards:

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

PBT: not relevant - no registration required.

vPvB: not relevant - no registration required.

SECTION 3 - Composition / Information on ingredients

3.1. Substances:

Not applicable.

3.2 Mixtures:

Naturally occurring substance aqueous dispersion

Mixture does not contain any substances to be mentioned according to criteria of section 3.2 annex II Regulation (EU) 1907/2006

Substance Name	CAS No	EC/List No	% (weight)	REACH registration	Classification according to Regulation (EC) No 1278/2008 (CLP)
Brucite	1317-43-7	215-274-9	50-65	Exempted see regulation 987/2008: annex 5, item 7	Not classified

SECTION 4 - First aid measures

4.1. Description of first aid measures:

Seek medical assistance if feeling unwell.

Inhalation: not applicable.

Skin contact: Wash with plenty of water. Wash contaminated clothing.

Eye contact: Rinse out with plenty of water. Do not rub eyes.

Ingestion: Rinse out mouth with plenty of water and spit out the fluid. After swallowing large amounts: induce vomiting.

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

Inhalation: not applicable.

Skin contact: Can cause irritation, drying, chapping,

Eye contact: Can cause irritation, redness, tearing, burning.

Ingestion: In large quantities causes irritation, nausea and gastrointestinal upset.

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

not appropriate

SECTION 5 - Firefighting measures

5.1. Extinguishing Media:

Suitable extinguishing media: No limitations. Adjust extinguishing media to the surrounding fire.

5.2. Special Hazards arising from the substance or mixture:

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

5.3. Advice for firefighters:

Use extinguishing media most appropriate for the surrounding fire.
Firefighters should wear the usual protective clothing and self-contained breathing apparatus.

SECTION 6 - Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures:

Avoid skin contact and eye contact.

6.2. Environmental precautions:

Avoid to enter large quantities in sewerage system.

6.3. Methods and material for containment and cleaning up:

Collect liquid spillage with adsorbent material and put into a closed container. Clean up affected surface (sweeping, shovelling) and collect the material in appropriate container for disposal.

Dispose in accordance with official regulations.

6.4. Reference to other sections: not appropriate

SECTION 7 - Handling and storage

7.1 Precautions for Safe Handling

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures.
Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and again when leaving work.

7.2 Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Comply with applicable regulations.

Storage Conditions: Store the suspension in the temperature range from +2 to +35°C, and keep away from direct UV light. Keep container closed when not in use.

Incompatible Materials: chloride and phosphate water soluble metal salts, strong acids, strong bases, strong oxidizers, halogenated compounds, reactive metal powders.

7.3 Specific End Use(s)

For use in environmental applications such as industrial process streams, industrial and

municipal wastewater treatment, exhaust gas treatment in scrubbers etc.

SECTION 8 - Exposure controls / Personal protection

8.1. Control parameters:

Germany (Allgemeiner Staubgrenzwert):

10 mg/m³ einatembare Staubfraktion, E-Staub (inhalable dust)
3 mg/ m³ alveolengängige Staubfraktion, A-Staub (respirable dust)

Netherlands (MAC):

10 mg/ m³ inhaleerbaar stof (inhalable dust)
5 mg/ m³ respirabel stof (respirable dust)

USA:

ACGIH (TLV-TWA) 10 mg/ m³ total dust
5 mg/ m³ respirable dust
OSHA (PEL-TWA) 15 mg/ m³ total dust
5 mg/ m³ respirable dust

United Kingdom:

10 mg/ m³ inhalable dust
4 mg/ m³ respirable dust

Finland, Spain, Italy, Zwitserland:

10 mg/ m³ inhalable dust
3 mg/ m³ respirable dust

Australia, Austria, Sweden, France, Denmark:

10 mg/ m³ inhalable dust
5 mg/ m³ respirable dust

Other countries: Please inform at your national authorities.

8.2. Exposure controls:

Appropriate Engineering Controls:

Good general ventilation should be sufficient to control worker exposure to airborne contaminants. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.

Hygiene measures: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Wash contaminated clothing before reusing. A washing facility or water for eye and skin cleaning purposes should be present

Individual Protection Measures:

Eye / face protection: Use safety glasses with side protection complying with an approved standard

Hand protection: Impervious protective gloves are recommended complying with an approved standard

Skin protection: It is recommended to wear impervious clothing and shoes to prevent repeated or prolonged skin contact.

Respiratory protection: no need at normal conditions of use

Thermal hazards: not identified

Environmental exposure controls: no information available

SECTION 9 - Physical and chemical parameters

9.1. Information on basic physical and chemical properties:

Physical state:	Homogenous suspension
Colour:	white
Odour:	odourless
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:	No data available
Flash point:	No data available
Auto-ignition temperature:	No data available
Decomposition temperature:	>350 °C (662°F)
pH:	~ 10.5 (saturated solution)
Viscosity:	50-650 cPs (#3 spindle Brookfield viscometer)
Specific Gravity (suspension)	No data available
Solubility (magnesium hydroxide)	Water: 0.0009 g/100 ml
Partition coefficient n-octanol/water (log value):	No data available
Vapour pressure:	No data available
Relative density:	1100 – 1700 kg/m ³
Relative vapour density at 20 °C:	No data available
Evaporation Rate	No data available
Explosion Data – Sensitivity to Mechanical Impact:	Not expected to present an explosion hazard due to mechanical impact.
Explosion Data – Sensitivity to Static Discharge:	Not expected to present an explosion hazard due to static discharge.

9.2. Other information:

9.2.1 Information with Regard to Physical Hazard Classes: none

9.2.2 Other Safety Characteristics: none

SECTION 10 - Stability and reactivity

10.1 Reactivity:

Hazardous reactions will not occur under normal conditions.

10.2 Chemical Stability:

Stable under recommended handling and storage conditions (see section 7).

10.3 Possibility of Hazardous Reactions:

Hazardous polymerization will not occur.

10.4 Conditions to Avoid:

Temperatures below +2 and above +35, direct UV light.

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:

No hazardous decomposition products: decomposes to magnesium oxide and water.

SECTION 11 - Toxicological information

11.1 Information on Toxicological Effects - Product

Acute toxicity:	None
Skin corrosion / irritation:	Not absorbed by intact skin. Intimate contact of the skin with magnesium hydroxide can cause temporary irritation, drying and chapping.
Serious eye damage / irritation:	Can cause temporary eye irritation.
Respiratory or skin sensitization:	Short-term inhalation of magnesium hydroxide dust or fume can cause temporary irritation of upper respiratory tract, nose and skin.
Germ cell mutagenicity:	No known studies. Not considered to be mutagenic in general.
Carcinogenicity:	Substance is not classified as carcinogenic under ACGIH, NIOSH, IARC, NTP or OSHA.
Reproductive toxicity:	Not available
STOT-single exposure:	Not available
STOT-repeated exposure:	Not available
Aspiration hazard:	Not available

11.2. Information on other hazards

11.2.1 Endocrine disrupting properties: no information available

11.2.2 Other information: Alkalinity: Being a mild alkali is mainly the cause for irritation of body tissues.

SECTION 12 - Ecological information

12.1. Toxicity:

Hazardous to the aquatic environment, short-term (acute):	Not classified
Hazardous to the aquatic environment, long-term (chronic):	Not classified

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. Bio accumulative potential:

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

12.4. Mobility in soil:

Low because of the structure and physicochemical characteristics.

12.5. Results of PBT assessment:

not relevant
(no registration required)

Results of vPvB assessment:

not relevant
(no registration required)

12.6 Endocrine disrupting properties: Not applicable

12.7. Other adverse effects: Not identified

SECTION 13 - Disposal considerations

13.1 Waste treatment methods:

Disposal must be done according to official regulations. Do not discharge into drains or the environment. Do not dispose of domestic waste.

SECTION 14 - Transport information

14.1. UN number or ID number: Not applicable

14.2. UN proper shipping name: Not applicable

14.3. Transport Hazard Class: Not applicable

14.4. Packing group: Not applicable

14.5. Environmental hazards: Not applicable

14.6. Special precautions for user: Not applicable

14.7. Maritime transport in bulk according to IMO instruments: Not applicable

SECTION 15 – Regulatory information

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

Europe:

Contains no REACH substances with Annex XVII restrictions.

Contains no substances on the REACH candidate list.

Contains no REACH Annex XIV substances.

Contains no substances subjected to Regulation (EU) No 649/2012 of the European Parliament of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

Contains no substances subjected to Regulation (EU) No 2019/1021 of the European Parliament of the Council of 20 June 2019 on persistent organic pollutants.

The substance is exempted from the obligation to register according to Regulation 1907/2006 (REACH) as natural magnesium hydroxide is a mineral occurring in nature. See Regulation 987/2008: annex 5, item 7.

USA:

US Federal Regulations:

No additional information available

US State Regulations:

No additional information available

15.2. *Chemical safety assessment*

Not applicable

SECTION 16 - Other information

Used abbreviations and acronyms can be looked up at www.wikipedia.org.

The information in this Safety Data Sheet is based on our present knowledge and experience. The Safety Data Sheet characterizes the product with regard to the appropriate safety precautions. The information does not represent a guarantee of the properties of the product.

Party Responsible for the Preparation of This Document

Russian Mining Chemical Company LLC,
115093, Russia, Moscow, Pavlovskaya street 7/1
Emergency telephone number: +7 (495) 789-65-30