

# Safety Data Sheet

RMCC LLC

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



Valid from: 30-07-2021

Revision date: 29-03-2024

Version number: 3

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

### 1.1. Product identifier

Trade name:	<b>AgroMag® AktiMax</b>
Product Form:	Suspension
Synonyms:	Brucite, magnesium hydroxide
CAS number	not applicable
EC number	not applicable
Molecular Weight:	not applicable
Chemical Formula:	not applicable
Registration number	not applicable (see section 15)

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

Recommended Use	Liquid magnesium-nitrogen fertilizer
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	<a href="mailto:info@brucite.plus">info@brucite.plus</a>
Website	<a href="https://brucite.plus/en/">https://brucite.plus/en/</a>

### 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*

### 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.

# Safety Data Sheet

RMCC LLC

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



Valid from: 30-07-2021

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Version number: 3

## 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	50.0 – 65.0 %	none	none	Exempted in annex V
Urea (carbamide)	57 – 13 – 6	200 – 315 - 5	7.0 – 9.0 %	none	none	01-2119463277-33-0011

## 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

## 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.

# Safety Data Sheet

RMCC LLC

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## **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

## **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:**

Keep away from direct UV light. Keep container closed when not in use. For long-term storage, it is necessary to ensure periodic mixing (once every three months). Mix thoroughly before the use. Store above the freezing point.

#### **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)**

Used to normalize plant metabolism, increase yield and improve product quality. It is recommended to apply by spraying the leaves of field, vegetable, fruit and berry crops.

## **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 <sup>3</sup> (Total Dust)	10 mg/m <sup>3</sup> (Total Dust)	10 mg/m <sup>3</sup> (Nuisance Particulate)
5 mg/m <sup>3</sup> (Respirable Dust)	5 mg/m <sup>3</sup> (Respirable Dust)	5 mg/m <sup>3</sup> (Respirable Dust)

#### ***Urea (carbamide) - Exposure Limits***

10 mg/m <sup>3</sup> (Respirable Dust)	-	-
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**Other countries:** Please inform at your national authorities.

# Safety Data Sheet

RMCC LLC

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



Valid from: 30-07-2021

Revision date: 29-03-2024

Version number: 3

## **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. 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	stabilized water based suspension
Colour	white
Odour:	odorless
Melting point/freezing point	≤ 0°C (32°F)
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)
Kinematic viscosity	150-600 cPs
Solubility: - in water (20°C) - <i>magnesium hydroxide</i>	0.0009 g/100 ml
Partition coefficient: - n-octanol/water (log value)	no data available
Vapour pressure	no data available
Relative density	not less 1400 kg/m <sup>3</sup>
Relative vapour density	no data available

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RMCC LLC

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



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<b>Evaporation rate</b>	no data available
<b>Explosive limits</b>	no data available
<b>Viscosity</b>	no data available
<b>Explosive properties</b>	no data available
<b>Oxidizing properties</b>	no data available

## **9.2. Other information**

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

## **SECTION 10: Stability and reactivity**

### **10.1. Reactivity**

No decomposition if stored and applied as directed.

### **10.2. Chemical stability**

Stable under recommended storage conditions.

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

Reacts vigorously with strong acids.

### **10.4. Conditions to avoid**

For long-term storage, it is necessary to ensure periodic mixing (once every three months). Mix thoroughly before the use. Store above the freezing point. Keep away from 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 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
<b>(a) acute toxicity</b>	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)
Urea (carbamide) CAS No 57 - 13 - 6	LD50 = 8471 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.

# Safety Data Sheet

RMCC LLC

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Valid from: 30-07-2021

Revision date: 29-03-2024

Version number: 3

<b>(d) respiratory or skin sensitisation</b>	Short-term inhalation of magnesium hydroxide dust or fume can cause temporary irritation of upper respiratory tract, nose and skin.
<b>(e) germ cell mutagenicity</b>	No data available
<b>(f) carcinogenicity</b>	Substance is not classified as carcinogenic under ACGIH, NIOSH, IARC, NTP or OSHA
<b>(g) reproductive toxicity</b>	No data available
<b>(h) STOT-single exposure</b>	No data available
<b>(i) STOT-repeated exposure</b>	No data available
<b>(j) aspiration hazard</b>	No data available

## **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**

<b>Component</b>	<b>Freshwater Fish</b>	<b>Water Flea</b>	<b>Freshwater Algae</b>
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</i> <i>subcapitata</i>
Urea (carbamide) CAS No 57 - 13 - 6	LC50 (96h) = 16200 - 18300 mg/l, <i>Poecilia reticulata</i>	EC50 (48h) = 3910 mg/l, <i>Daphnia magna</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. 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

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



Valid from: 30-07-2021

Revision date: 29-03-2024

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## 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.

## 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

Urea (carbamide) CAS No 57 – 13 – 6; EINECS 200-315-5

**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



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RMCC LLC

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



Valid from: 30-07-2021

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Version number: 3

## 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

## 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 <sup>1</sup>	/	/	/
Urea (carbamide) CAS No 57 – 13 – 6	x	x	x	x	x	x	x <sup>2</sup>	x	x	x	x

Legend: X – Listed / - Not Listed

x<sup>1</sup> – Brucite, Japan: ENCS No C022-972-30A

x<sup>2</sup> - Urea (carbamide): KECL No KE-35144

## 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

### 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



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**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  
**IMO/MDG** - International Maritime Organization/International Maritime Dangerous Goods Code  
**OECD** - Organisation for Economic Co-operation and Development  
**BCF** - Bioconcentration factor

**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  
**VOC** - (Volatile Organic Compound)

Key literature references and sources for data

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

<https://www.guidechem.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**