

# MAGNESIUM CARBONATE

Naikai Salt Industries Co., Ltd. has manufactured and supplied various grades of Magnesium Hydroxide from 1962, and has just started the production of Basic Magnesium Carbonate (BMC) with the initial production capacity of 6,000 ton/year from October, 2010. The consistency production process of BMC via Magnesium Hydroxide by continuous innovation can provides high quality BMC suitable for stringent requirements from diverse fields of chemical, food, cosmetics, footwear and rubber industries

## Physical Properties

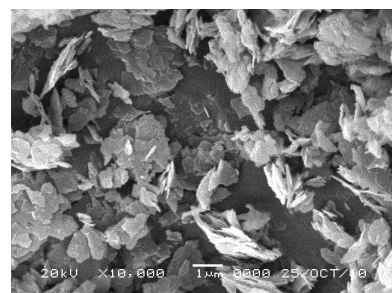
Trade and Proper Shipping Name : Magnesium Carbonate TT  
Magnesium Carbonate TT Food Grade  
CAS No. : 546-93-0, 1309-42-8, 39409-82-0  
Chemical Name : Magnesium Carbonate Hydroxide  
Molecular Formula :  $4\text{MgCO}_3 \cdot \text{Mg}(\text{OH})_2 \cdot 4\text{H}_2\text{O}$   
Molecular Weight : 467.7  
Crystalline : Plate crystal  
Refractive Index : 1.52 - 1.53  
Specific Gravity : 2.1 - 2.2 g/cm<sup>3</sup>



Production facilities of BMC

## General Properties

		TT	TT Food Grade*
Appearance	--	White fine powder	White powder
Bulk Density	g/cm <sup>3</sup>	0.20~0.25	--
75μm Residue	%	≦ 0.5	--
Moisture Content**	%	≦ 2.0	--
Ignition Loss	%	54.0~56.0	--
MgO	%	40.0~43.0	40.0~44.0
Fe <sub>2</sub> O <sub>3</sub> +Al <sub>2</sub> O <sub>3</sub>	%	≦ 0.10	--
T-Cl	%	≦ 0.15	--
Insoluble Matter in HCl	%	≦ 0.10	--
Soluble Matter in Water	%	≦ 1.0	≦ 1.0
CaO	%	≦ 0.60	≦ 0.60
Arsenic (as As <sub>2</sub> O <sub>3</sub> )	μg/g	--	≦ 4.0
Heavy Metals	μg/g	--	≦ 30
Clarity of solution	--	--	Very slightly turbid

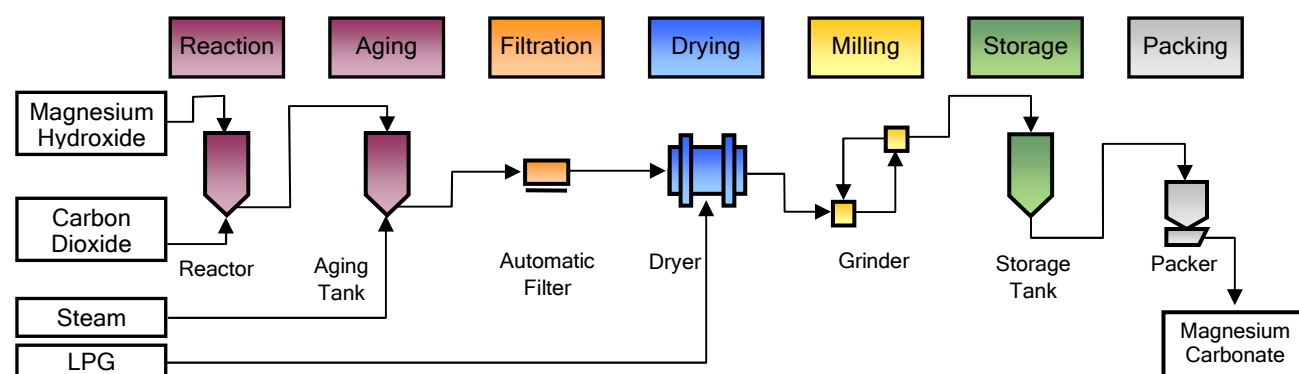


SEM image of BMC

Standard package style is 25 kg paper bag.  
The material of these paper bags is three layered craft.

\* Japan's Specifications and Standards for Food Additives \*\* Measured just after production due to its absorptency

## Production Process



Magnesium Carbonate is used for .....

## Product Markets

### Rubber

Reinforcing filler  
To give the highest transparency to natural rubber  
Antiblocking agent, Stabilizer in the automotive PVC plastisols  
To preserve a colored parts in rubber products  
Fireproofing and heat insulating in manufacture of plastics  
Forming adjuster for foamed EVA

### Elastomer

### Plastics

### Paint

### Ink

### Paper

Fillers and anti-misting in manufacture of paint and ink  
Material for pigments  
Deadening in manufacture of paintand ink  
Oil absorbent in manufacture of paper,

### Food Additives

### Animal Feedstuffs

### Agriculture

Anti-caking agent in the cooking salt/powdered drinks  
Enrichment of magnesium for various foods, forming agent for various foods  
Demolding agent in the manufacture of biscuits  
Carbonate source in the soft drinks  
Magnesium source for animal's diet  
Magnesium source in the agricultural materials.

### Hygiene

### Cosmetics

### Toiletries

Gypsum impressions in dentistry  
A base in talcum powders/baby powders/face powders  
Rheological agent  
Moisture stabilizer in manufacture of soap  
Hold-back agent for fragrant material in manufacture of toothpaste.

### Ceramics & Glass

### Catalysts

### Construction

### Steel Industry

Matting agent in the manufacture of ceramics  
Molten material for glass,  
Adjuster for permittivity in manufacture of ceramic capacitor  
Magnesium source for the manufacture of catalyst compounds  
Suspending agent in mixing cement, denitrificator in manufacturing of special stainless steel.

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