

Magicoh® Pellet Binder

Low inclusion, all purpose

FOR ALL YOUR
TECHNICAL REQUIREMENTS



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MagicoH Pellet Binder

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PHYSICAL QUALITY OF PELLET FEED

Pelleting improves the feed properties, it increases the digestibility of starches and nutrient absorption, hence improving the feed conversion ratio and production index of the farm. The common challenges are listed as below, and Magicoh can satisfy all these rigid quality requirement.

- ✓ **Stability (particularly water stability for shrimp feed)**
- ✓ **Durability (Minimum dust percentage and loss in transportation)**
- ✓ **Uniformity in pellet size and shape**
- ✓ **Uniformity of the ingredients.**



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WATER DURABILITY OF SHRIMP FEED

Shrimp feeds: dominant output is pelletized

Characteristics: Protein: 25-55% Lipids: 5-10% Water resistance: 2 hrs Min.

Both feed manufacturers and shrimp farmers focus on:

More nutrients of protein, vitamin and amino acids

Longer lasting time in aquatic environment

Less waste on farm

Less cost

MagicoH can satisfy all the above rigid product requirements.



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▶ 2. What Magicoh Is

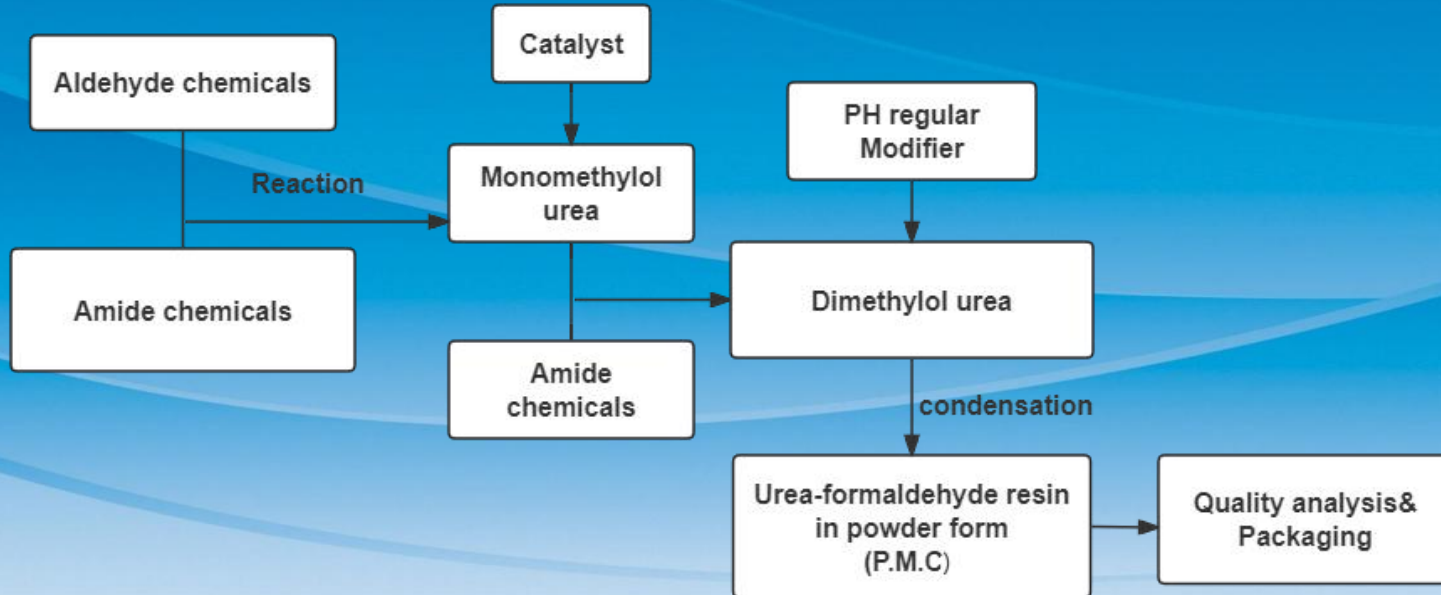
Magicoh Pellet Binder is P.M.C. based binding aid in a spray-dried powder form. (anti-caking agent is added)
Polymethylolcarbamide (PMC) is a modified urea-formaldehyde resin.

Chemical Structure:



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Production flow chart



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Stock Pile-up

Storage:

Magicoh is sensitive to the heat and moisture, that means excessive heat and moisture is likely to cause cake and lump.

Store in the original package and use up as soon as the package is open.

Storage temperature: below 25°C



Warehouse



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Toxicity Test

Dosage of MagicoH (mg/kg b/w)	Number of experimental animals	Mortality	Death Rate (%)
1000	10	0	0
2150	10	0	0
4640	10	0	0
10000	10	0	0

The test is conducted by Zhejiang Province Hygiene and Disease Control Station
Test for toxicological tolerance shows MAGICOH does not have any pronounced physiological action, and non-toxic for fish, shrimp and their consumers.

Melamine test : negative.

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TECHNICAL SPECIFICATION:

Appearance: White free flowing powder
Moisture content: $\leq 4\%$
Bulk density: 0.50 - 0.46
Fineness: $>95\%$ passed 80 mesh sieve
Solubility: Soluble in water
Viscosity (50% in water): 100 - 300 cps.
PH value : 7.0 - 8.0
CaCO₃ or SiO₂ : 6.0-8.0% as anti-caking agent

Lab test GUARANTEE:

Nitrogen $\geq 26.0\%$

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The Test on the Stability of the Pelleted Feeds with Different Binders.

	Binder Dosage	1.5 Hours	2 Hours	4 Hours
The Control Feed	No binder	++++	++++	++++
CMC—Na 2%	2.0%	++	++	+++
Wheat gluten 4%	4.0%	++	++	+++
Sodium Alginate 2%	2.0%	++	++	+++
MagicoH 0.4%	0.4%	—	+	+

The test was conducted by Shanghai Fishery University.

“--”:No change in the shape of the feed pellet.

“+” ~ “++++”: Breakage in water.

More “+” means more breakage of the feed pellet.

Conclusion: MagicoH performs well in the water stability of pellet feed.

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MAGICOH BENEFITS

- ❑ Allows more space in feed formulation for nutrients, due to low inclusion.
- ❑ Maximizes water stability up to 6 hrs.
- ❑ Increases bulk density and durability of finished feeds (increase PDI), so to minimize the breakage and loss during transportation and storage.
- ❑ Reduces dust and fines of the finished feeds.
- ❑ Improves the uniformity in pellet size, shape and texture.
- ❑ Reduces farming costs and improves the return on investment.
- ❑ Minimize the contamination and pollution of the pond to prevent the disease.



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Features

Long shelf life.

Low inclusion

**No negative effect to the
feed palatability and digestibility.**

Easy to handle and use.

**Facilitates bulk
transportation and storage.**

**Non-toxic and residue-free
Safe for environment and consumers.**



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▶ 3.How to use

Mechanism of Operation

Performance is based on the formation of molecular chain and condensation reaction. During granulation, condensation reaction occurs due to high temperature water vapor, that is, the polymer is solidified into a network structure. MagicoH and feed raw materials have an adhesive effect, forming cellulose ether bond with cellulose, starch ether bond with starch, and N, N-methylene ether bond with protein. After curing, solid and stable pellets are obtained.

Digestion Mechanism

MagicoH is hydrolyzed by acidic digestive enzymes and converted partly to non-protein nitrogen (1 kg MagicoH is equivalent to 169% of the nutritional value of crude protein) and partly to energy in the animal's body. 16,573 kJ/kg of MagicoH are calories.

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MAGICOH BENEFITS

Low inclusion, Optimal performance

The inclusion rate of a few commercial binders commonly used in shrimp feed

Pellet binder	Dosage
CMC—Na	2%
Wheat gluten	4%
Sodium Alginate	2%
Magicoh	0.5%

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MAGICOH DOSAGE

RECOMMENDED INCLUSION

- Shrimp feed : 2 to 6 kg/ton.
- Fish feed : 2 to 4 kg/ton.
- Poultry feed : 1 to 2 kg/ton
- Cattle & piglet feed: 1 to 2 kg/ton.

The inclusion rate should depend on the different product standards, raw materials and processing conditions, etc.



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DIRECTION FOR USE

Add MAGICOH, as the last ingredient in the sequence, directly into the feed mixer at the recommended rate and mix completely with other ingredients (recommended 2 or 3 times step-by-step mixing to ensure uniform mixing), then follow standard conditioning, pelleting and extrusion processing guidelines.

Post-cooling for 24 to 72 hours can optimize the binding performance.



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APPLICABLE ANIMALS

- * Shrimp, loster, crab
- * Fish, Eel
- * Chicken
- * Duck
- * Pig
- * Dairy cow
- * Other farming animals



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▶ 4. How to Contact Us

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