

# NIGABIND PS

A Comprehensive pelleting partner...

**" What look like pellet may not be a complete PELLET "**



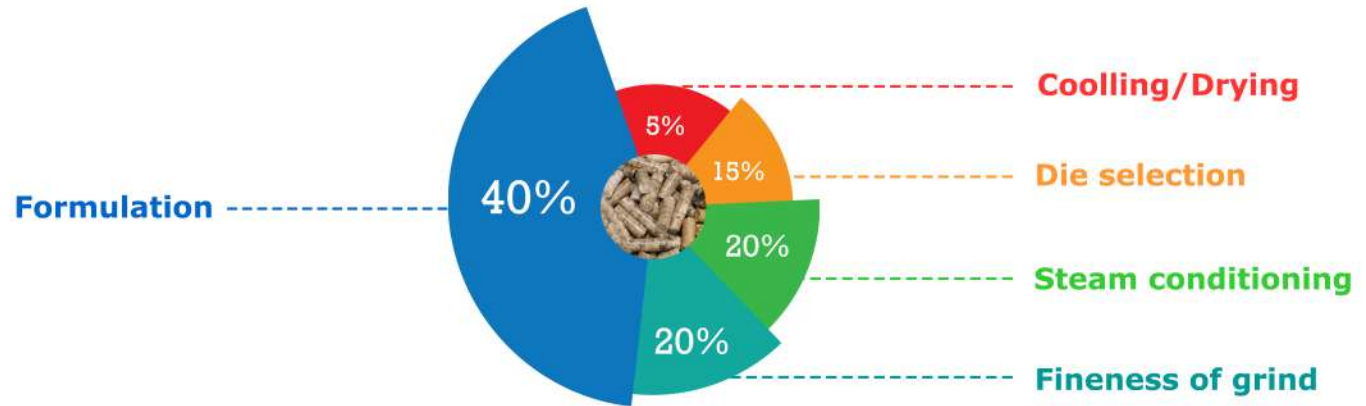
**"Aquaculture animal's performance highly depends on the pellets by holding the nutritional value until it is consumed by the animals. "**

**"Seeing is not believing"**



The pelleting of animal feed is more art than science. There are many variables which affect the pelleting process, viz. machinery used, feed materials processed and the conditioning of the feed. Mean particle size, inherent binding capacity and fat content of the feed mixture plays major role in pellet durability

### Factors contributing pellet quality



### Factors affecting pellet quality

**Particle size** – Optimum particle size determines pellet quality. Decreasing particle size allows absorption of condensing steam and increases surface area available for binding.

**Nature of Ingredients** – Factors influencing ingredients like Starch, protein and fibre. Addition of fat compromises pellet durability but adding Protein and fibre increases pellet quality

**Mixer** – Suitable mixer with sufficient mixing time is important to allow pellet binder mix with feed particles completely to get optimum CV Ratio. If mixing is perfect, rest of the process will also be uniform.

**Preconditioning** - Steam quality, initial moisture content, meal initial temperature and retention time are important parameters in preparation of pelleting

**Die and rolls** - Die and rolls quality, proper speed of rotation, maintenance of die and role is ultimate check point to get perfect pellet output. L : D ratio ( Thickness and hole diameter ratio ). Thinner die increases the pellet durability and also negatively related to throughput and energy consumption.

**Steam conditioning** - high quality steam determines the pellet quality overall. High quality steam allows thinnest possible die which gives better pellet output.

**Conditioning time** – longer retention time > better penetration of moisture > better distribution of heat > better binding of feed particles > better pellet quality. Optimum moisture 13 - 17 % and temperature 77 to 880 C as the feed enters the die.

**Steam pressure** - Increasing the pressure of the steam used for conditioning improves pellet durability.

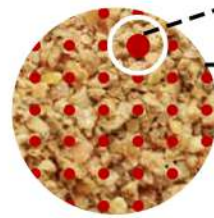
## **NIGABIND PS**

NIGABIND PS is a scientifically formulated thermo-reactive synthetic resin based pellet binder. Its unique technology to function effectively in all stages of aqua feed production process to produce durable and high quality pellet feed especially for aquatic animals. NIGABIND PS make sure the pellet quality is optimum to serve complete Nutrient in the feed to the aquatic animals by maintaining water stability.

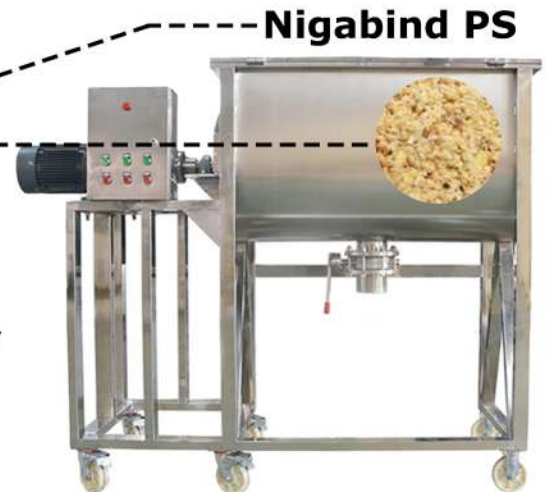
**Composition :** A spray-dried urea-formaldehyde resin.Low level of free formaldehyde & melamine free.

### **NIGABIND PS contribution in the process of production.**

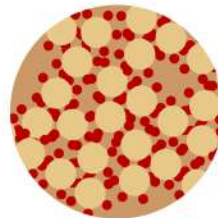
**Mixer** - NIGABIND PS mixes with all size of feed particles irrespective of any density and nature. "Mixing uniformly is the primary function of getting high quality pellet output in the pellet machine."



**Mixing evenly**



**Conditioner** - NIGABIND PS quickly converts gelatinisation when it contacts with optimum temperature and steam in the conditioner within the retention time and chelate on the surface of the feed powder particles and binds each other. "A good binder plays important role in conditioner by binding the micro particles completely for better pelleting"



**Gelatinisation**



**Durable pellet**

**Pellet machine** - NIGABIND PS does major role in the pellet mill by optimally lubricating the feed materials in the lower energy and penetrating through die smoothly to bring complete pellet in good shape, size, finish and durable.

## NIGABIND PS is the only choice



**1** Attracting appearance

**2** Reduces the energy consumption

**3** Uninterrupted production

**4** Supports top coating medicines in the pond level

**5** Quality pellet in shape, size & durability

**6** Supports digestibility

**7** Reduces fines during production & transportation

### 10 Reasons why NIGABIND PS should be your choice for pellet binding to serve precious Feed to the Aquatic animals

1. Nigabind PS uniformly mixes with raw materials in mixer irrespective of its size, shape, nature and density.
2. Uniquely formulated binding efficacy with differently natured raw materials as NIGABIND PS has superior gelling technology.
3. Optimum pellet durability by holding the Nutritional value and extreme Pellet durability index until the Livestock animals consume the feed.
4. The greater micro particles binding nature reduces fines during production, Transportation and multiple handling condition.
5. Nigabind PS supports to reduce the energy consumption also improves the productivity.
6. It reduces the die frictions so die life increases obviously.
7. Nigabind PS has no residual effects and it is nontoxic
8. The low inclusion Level reduces the cost and provide space to add precious ingredients.
9. Nigabind PS not only binds the surface of each pellet, it also binds each particles from inside the pellet to improve the durability.
10. Pellet quality would NOT decrease even during strong friction between pellets during transportation and handling.

Application: **NIGABIND PS** can be directly added in the feed mixer before pelletizing and extrusion process at the following recommended dose depending on feed formulation and processing conditions.

#### Dosage

Poultry & Cattle feed : 1.0 to 2.0 kg / Ton of feed.

Product of India

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