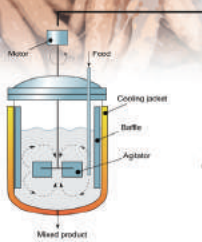
DUAL-FUNCTION SIZING AGENT from ANIONIC TAPIOCA STARCH

(PI 2018701087)

TAPIOCA STARCH



MIXING PROCESS
Modifying starch

BLENDING PROCESS
Modified starch and polymer

> *"Sizing agent is added/applied to improve the water resistance of the fibre-based products."*

Cost based on raw materials = RM35.90/kg
Selling price = RM70/kg

PRODUCT FEATURES

- Exhibit dual function sizing agent; as internal or external sizing agent.
- Environmentally friendly product; made of water-based polymer and natural polymer (starch). Economical packages; improve water and oil
- resistance, aesthetical effect, physical properties improvement in single use.

NEEDS

- Degradable fibre-based packaging vs plastic packaging.
- Current fibre-based packaging do not repel both water and oil.
- To date, higher price synthetic polymers are used i.e. polyurea-polyamide and fluoropolymer.

APPROACH

- Environmentally friendly starch-based sizing agent through simple process.
- Can be used on any the fibre-based packaging either as internal or external sizing agent.

ENVIRONMENTAL FRIENDLINESS

- Low cost; renewable resource.
- Environmentally friendly; natural polymer/ waterborne polymer/low VOC.
- Degradable; reduce plastics pollution.

NOVELTY

- Anionic tapioca starch modified with waterborne polymer; 3 in 1 features .
- Dual-function sizing agent; can be internal or external sizing.

BENEFITS PER COST

- Dual functional can act as external or internal sizing agent.
- Environmentally friendly water-based sizing agent.
- Repel both water and oil in single application.
- Low cost; locally available cassava starch.

COMPETITORS

- Laminated paper packaging.
- Commercial fluoro-based sizing agent.

POTENTIAL MARKET

- Fibre-based products.
- Woods and furniture.
- Healthcare facilities (bedpan).
- Paper and craft industry.

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