

Biograde WS-50

Biodegradable Polymers

Biograde Group of Companies

Message:

A fully biodegradable resin for dispersible film applications
Water soluble, biodegradable and compostable
Used for thin and thick gauge film applications
Biograde WS-50 is a water dispersible, biodegradable and compostable resin for manufacture of plastic film based on thermoplastic starch (TPS). The solubility of the film is controllable and it dissolution increases with water temperature and agitation. Biograde has developed an optimum formulation which is cost effective and produces a strong film with excellent mechanical properties.
Biograde WS-50 resins comply with EN14987 for water dispersibility but also comply with ISO14851 for biodegradation in an aqueous aerobic environment with both test carried out at room temperature.
Biograde WS-50 is perfectly positioned to be integrated into modern organic waste recycling system as it is compatible with commercial composting, aerobic digestion and anaerobic digestion.
Applications
"Environmentally friendly" Biograde WS-50 can be used to make:
Dispersible laundry bags (for 100% infection control)
Dispersible dog poo bags for toilet disposal
Dispersible scallops bags for seeding juvenile scallops
Dispersible Pigment Bags
Dispersible bags for industrial chemicals (measured dose applications)
Dispersible bags for agro-chemicals (measured dose applications, no exposure to chemicals by operator, ease of use and convenience).

| General Information | |
|---------------------|----------------------------|
| Features | Acid Resistant |
| | Antistatic |
| | Biodegradable |
| | Dispersible |
| | Excellent Printability |
| | Good Toughness |
| | High Clarity |
| | High Elongation |
| | High Gloss |
| | High Strength |
| | Non-Toxic |
| | Oil Resistant |
| | Oxygen Barrier |
| | Renewable Resource Content |
| | Soft |
| Uses | Bags |
| | Film |
| | Liners |
| Forms | Pellets |

| | | | |
|--|---------------|--|-------------|
| Processing Method | Blown Film | | |
| Physical | Nominal Value | Unit | Test Method |
| Density | 1.34 | g/cm ³ | ASTM D4883 |
| Melt Mass-Flow Rate (MFR) (230°C/5.0 kg) | 2.6 | g/10 min | ASTM D1238 |
| Mechanical | Nominal Value | Unit | Test Method |
| Tensile Strength (Break) | 14.8 | MPa | ASTM D883 |
| Tensile Elongation (Break) | 250 | % | ASTM D883 |
| Flexural Modulus | 23.3 | MPa | ASTM D790 |
| Films | Nominal Value | Unit | Test Method |
| Oxygen Transmission Rate (Wet) | 0.350 | cm ³ /m ² /24 hr | ASTM F1927 |
| Additional Information | Nominal Value | Unit | |
| Blown Film Melt Temperature | 170 to 185 | °C | |

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