



## TECHNICAL PRODUCT INFORMATION ECOPLAS NEOS PE EB

**GENERAL**                      Polymers or plastic are high molecules, and very stable and inert to normal environments. This is important property of polymer resins to convert into many different types of articles. In the packaging and plastic industry, while it is important to use polymers for films, bottles, caps for consumer products; it can be an environment problem as the packages remain very stable after use. In certain applications, it is desirable to enable the polymer package to be self degradable after usage for a certain period of time.

<b>DESCRIPTION</b>	ECOPLAS is a biodegradable resin made from tapioca starch.
<b>APPLICATIONS</b>	Ecoplas Bag, Daily Landfill Cover, Packaging, etc
<b>PHYSICAL PROPERTIES</b>	
<b>Physical Form</b>	Pellets
<b>Color</b>	White to brown
<b>Odor</b>	Odorless
<b>Density</b>	1.0561 g/cm <sup>3</sup> (ASTM D 792-13)
<b>Melt Index</b>	0.894 ± 0.013 g/10 min (ASTM D 1238)
<b>Melting Point</b>	104.71 °C
<b>Moisture Content</b>	0.26 % (AOAC 1999)
<b>Tensile Strength</b>	MD/TD 21/11 MPa - film thickness 30 μ (ASTM D 882)
<b>Elongation</b>	MD/TD 458/464 % - film thickness 30 μ (ASTM D 882)
<b>DOSAGE</b>	100% for normal loading
<b>ADDITIONAL PROCESSING INFORMATION</b>	ECOPLAS can be processed under normal operating conditions of polyolefin resins. Melt Temperature 145-155 °C. Blow up ratio 1.5 – 3.5  The product is non-toxic and requires no additional safety equipment.
<b>REMARK</b>	ECOPLAS currently come in 25 kg packing. It should be stored in a cool and dry place, away from direct sunlight. Shelf-life of the product is about 1 year under this storage condition.
<b>BIODEGRADABLE PROCESS</b>	Biodegradation of ECOPLAS is defined as a decrease in properties and weight loss due to the action of natural organisms such as bacteria and fungi. ECOPLAS also could be degraded by mechanical energy, increased temperature and enzyme produced by organism. Plastics film/bags should last about 10 weeks depending on microorganism activity in the soil.

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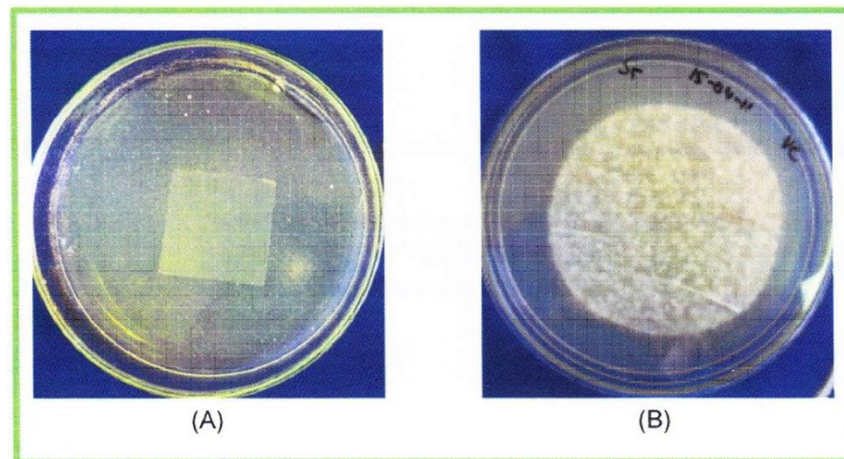
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Biodegradation profile of ECOPLAS film as follows:



**Growth of fungi on the surface of Polyethylene (A) and ECOPLAS films (B)**  
(ASTM G21-09: Standard Practice for Determining Resistance of Synthetic polymeric Materials to Fungi)

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