



TECHNICAL PRODUCT INFORMATION OXIUM 2003 EB-S

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.

DESCRIPTION	OXIUM additive is a degradable additive concentrate for environmentally friendly plastic.
PHYSICAL FORM	Pellets
APPLICATIONS	Environmentally <i>Polyethylene</i> for <i>Extrusion Blown Film (transparent)</i> processing industry
DOSAGE	3 % for normal loading, depending on degradation requirement
ADDITIONAL PROCESSING INFORMATION	<p>Oxium can be mixed with a resin and processed under normal operating conditions of Polyethylene resins. There is no adjustment in machine or process condition. What should be done is blends OXIUM with main resin and others additive and then temperature setting adjusted to the resin carrier i.e Polyethylene.</p> <p>It's recommended to keep moisture content of <0.4%.</p> <p>Dosing unit/additive mixer is recommended to used to ensure the dispersion of OXIUM in the product.</p> <p>Very little or no change of temperature profile is necessary in the process. The product is non-toxic and requires no additional safety equipment.</p>
REMARK	Oxium additives 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.
OXIDATION AND BIODEGRADATION PROCESS	Oxidative chain breaking which triggered by heat, sun light or enhance mechanical stress linked to molecular weight reduction and speeding up of biodegradation process. Noted that after being process, product which contains 3 % of Oxium degradable additives should last about 5 years depending on storage conditions.

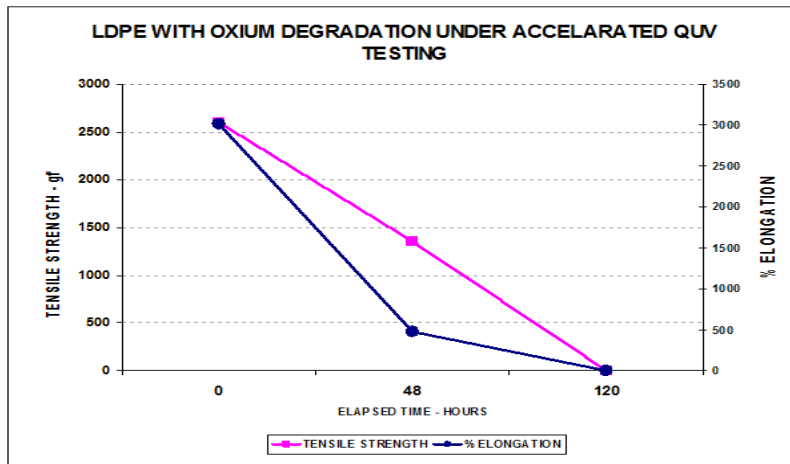
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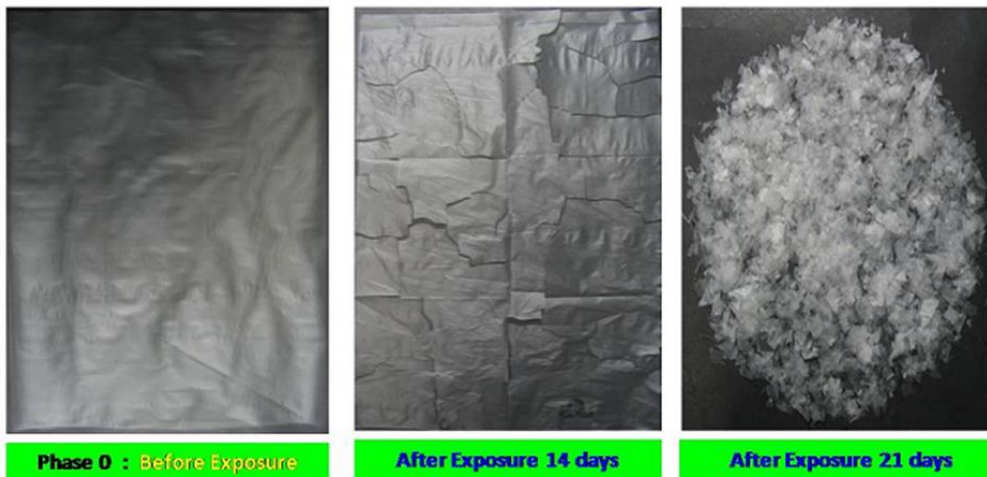
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Irradiation profile for product is under testing process.
 Herewith Polyethylene film which containing an Oxium degradable additive under accelerated QUV testing equipment as follows:



Progressive Degradation
Polyethylene Film with Oxium Degradable Additive
(According to ASTM D-5208 : Standard Practice for Exposure of Photo degradable Plastics)