

## TECHNICAL PRODUCT INFORMATION OXIUM 5605 SE

<b>GENERAL</b>	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>	OXIUM additive is a biodegradable additive concentrate for environmentally friendly plastic.
<b>PHYSICAL FORM</b>	Pellets
<b>APPLICATIONS</b>	Environmentally <i>Polypropylene</i> for <i>Straw and Rope Extrusion</i> processing industry
<b>DOSAGE</b>	5% for normal loading, depending on degradation requirement
<b>ADDITIONAL PROCESSING INFORMATION</b>	<p>Oxium can be mixed with a resin and processed under normal operating conditions of Polypropylene 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 Polypropylene.</p> <p>It's recommended to keep moisture content of &lt;0.4%.</p> <p>Dosing unit/additive mixer is recommended to use 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>
<b>STORAGE</b>	Oxium additives currently come in 25 kg packing. It should be stored in a cool and dry place, away from direct sunlight. The storage should not exceed 45 °C during transportation and storage in ambient temperature (RH 65-70%). Shelf-life of the product is about 6 months under this storage condition.
<b>OXIDATION AND BIODEGRADATION PROCESS</b>	Oxidative chain breaking which triggered by heat, sunlight or enhance mechanical stress linked to molecular weight reduction and speeding up of biodegradation process. Noted that after being process, product which contains 5% of Oxium biodegradable additives should last about 2-5 years depending on storage conditions.
<b>UNSUITABLE MATERIAL</b>	Oxium and its finished product can't be mixed/contact with materials such as Toluene, Peroxides, Oxidizing Agent, and Natural Oxidizer Oil from animals.

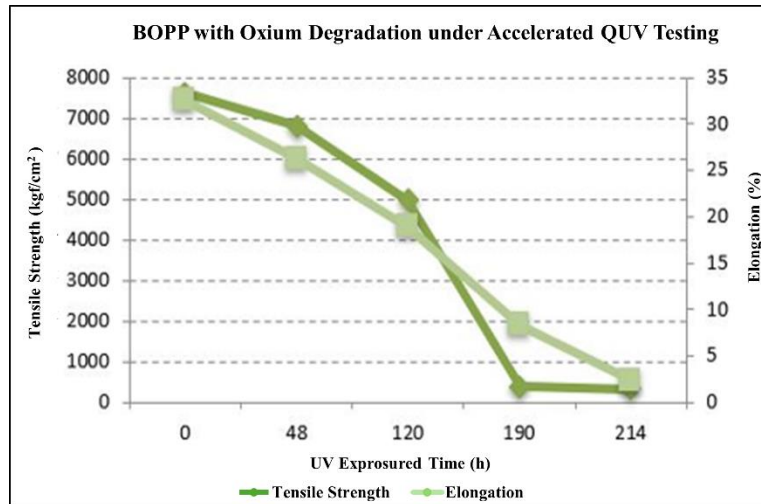
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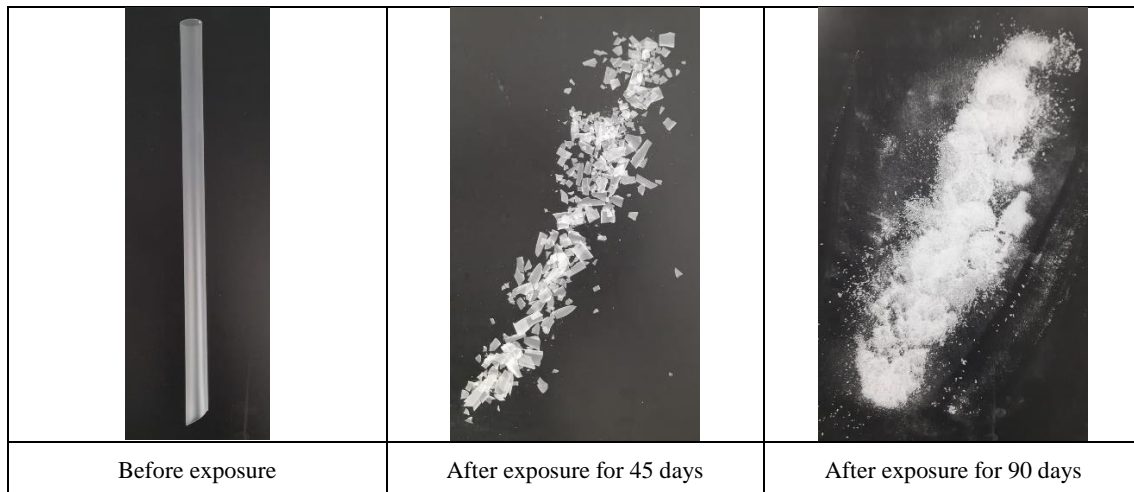


Here is BOPP with OXIUM degradation profile under accelerated QUV testing as reference:



Irradiation profile for product is under testing process.

Herewith PP straw which containing an OXIUM degradable additive under accelerated QUV testing equipment as follows:



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

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