



Oxo-biodegradation refers to the conversion of polyolefin products (such as PE/PP) into biodegradable materials at the end of their useful life. The plastic undergoes oxidation, reducing its molecular weight to a level where it becomes accessible to bacteria, fungi or other microbes in the disposal environment, allowing it to be recycled back into nature.



1. EP-OBD Eco-protect additive masterbatch (EP-OBD MB) can be incorporated at 1% LDR into products (such as film, bags or final articles) ensuring a stable shelf life without mechanical deterioration during its intended service life and promoting biodegradation after disposal.

2. After service life, the products begin to degrade in the presence of light and/or heat and oxygen. Once the film/final article with EP-OBD MB fragmented due to photo-thermal oxidation then micro-organisms will begin to colonize on the surface.

3. The oxo-biodegradable process is accelerated by environmental factors such as sunlight and air. Therefore, products made with EP-OBD MB should be stored in a cool, dry place, away from direct sunlight, and kept at temperatures below 35°C to ensure the desired shelf life.



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EnerPlastics is the only approved manufacturer and supplier that produces Oxo-biodegradable Additive Masterbatch EP-OBD ECO-PROTECT, EP-OBD-1 and EP-OBD-2

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Our EP-OBD Eco-protect Additive MB grades comply with UAE S5009, ASTM D6954, SASO 2879, BS 8472, and SPCR 141 Appendix 4 standards. Additionally, EP-OBD-2 meets the criteria set by the Protocol designed by AFNOR ACT-51-808 norms. EnerPlastics is the only company that has its own state-of-the-art, ISO/IEC 17025:2017 accredited laboratory which can perform abiotic biodegradation testing in accordance with UAE S5009, ASTM D6954, SASO 2879, BS 8472 standards and AFNOR ACT-51 808 norm. We provide test reports to our customers for their registration with various conformity bodies, including SASO, ESMA, SEC – Bahrain and others.

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EnerPlastics is the only approved manufacturer of Oxo-biodegradable additive masterbatches in the MENA region, utilizing its own patented technology to provide tailored solutions for various applications based on market needs.

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Advantages and Specialized Packaging

1. EP-OBDB is suitable for all one-time use polyolefin based disposable items.
2. It can be processed using existing facilities and equipment with processing parameters nearly identical to conventional plastics.
3. It is safe for food contact applications.
4. EP-OBDB Masterbatch leaves no harmful residues in soil.
5. It does not cause pollution to oceans or shorelines.
6. It has no toxic effects on plants or animal life.

EP-OBDB is available in specialized 20/25 kg multilayer, multi-barrier packaging designed to protect the additive from light and oxygen during transport and storage. EP-OBDB MB grades are sealed in vacuum packed aluminum bags which are then placed inside laminated polypropylene bags with polyethylene liners.

EnerPlastics is the only manufacturer in the MENA region offering customized OBD grades tailored to meet diverse customer and market needs.



EP-OBDB is susceptible to light, heat and oxygen. It is highly recommended that once the aluminium bag of EP-OBDB MB is opened, it should be consumed in the shortest time possible. It is also strongly advised that EP-OBDB MB should be stored away from direct sunlight in a cool environment below 35°C, if stored correctly according to these conditions, the EP-OBDB MB will have a shelf life as specified on the EP-OBDB MB packaging and TDS.



<https://www.sgs.com/en/certified-clients-and-products/certified-client-directory>



EnerPlastics is a prominent Masterbatch Manufacturing Company, established in 1999, with 25 years of industry experience. Based in Dubai, UAE, we specialize in producing custom Colour and Additive Masterbatches, serving clients in over 58 countries, including regions across Europe, Middle East, Africa and South Asia. We operate with an integrated management system and hold ISO 9001:2015, ISO 14001:2015 and ISO 45001:2018 certifications. Our state-of-the-art Research and Development laboratory is ISO/IEC 17025:2017 accredited, enabling us to conduct precise analytical, physical and chemical testing on plastic products.



Globally recognized as a leader in Colour and Additive Masterbatch manufacturing, our success lies in our ability to quickly understand and respond to our customers' needs providing tailored solutions. Our clients value the added business benefits we deliver through our innovative and responsive approach.

EP-OBD Eco-Protect Credentials



NTSQP



Normec
OWS



Resolution AP(89)1/
EU10/2011



- Certified by Emirates Authority for Standardization & Metrology (ESMA) according to UAE S. 5009 ASTM D6954.
- Certified by Saudi Standard, Metrology & Quality Org (SASO) as per SASO 2879/2016 Degradable Plastic Products.
- Tested in China National Centre for Quality Supervision & Test of Plastic Products according to GB/T 20197-2006 and HJ/T 209-2005 Standard of degradable plastics (Applicable for OBD-2).
- Tested and validated by OWS Belgium according to ASTM D6954 & SASO 2879.
- Certified by CNEP (Centre National d'Evaluation de Photoprotection), Clermont-Ferrand, France, and biodegradability has been studied & confirmed by the Institut de Chimie de Clermont-Ferrand (ICCF), Clermont Auvergne University, France as per AFNOR ACT 51-808 norms.
- AP (89)1, EU10/2011 & its recent amendments food contact approval certificates from SGS & TUV Rheinland.
- Halal Certified by Al-Waiz Certification & Training Services.
- EP-OBD-MB studies & testing done by EnerPlastics Advance Lab, an ISO/IEC 17025:2017 accredited laboratory.