Bring a New Wave
PHACT

TECHNICAL DATASHEET

MA1250P-A

MA1250P-A is a masterbatch that is composed of polylactic acid (PLA) and an amorphous polyhydroxyalkanoate (aPHA). Specifically, the aPHA used is PHACT A1000P grade from CJ Biomaterials and the PLA used is Ingeo 4060D from Natureworks. This masterbatch is ideally used in skin/seal layers of multi-layered film products. The PLA/aPHA composition of MA1250P-A is 55/45 by weight. MA1250P-A may be added (dry-blended) during the conversion of PLA based products to add the following performance features to the PLA product:

- Faster composting rate
- Improved flexibility and film handling capability
- Good seal performance
- Significant impact toughening
- Enhanced tear propagation resistance
- Maintain the bio-based carbon content and clarity of PLA

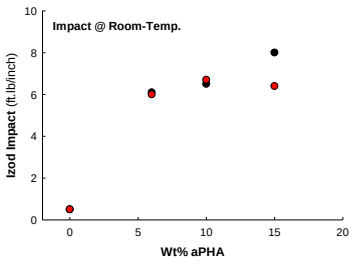
Properties

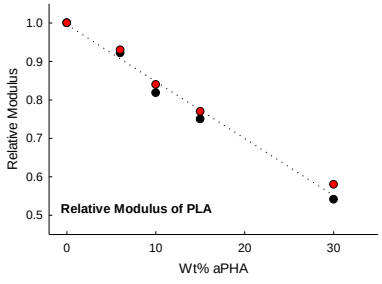
Melt Index (ASTM D1238; 190 °C, 2.16 kg)	5 – 8 g/10 minutes
Density (ASTM D1505)	~ 1.22 g/cc
Glass Transition Temperature	~ -17 °C (aPHA) and ~ 57 °C (PLA)

PLA and aPHA are not miscible and the masterbatch will reveal two distinct glass transition temperatures. The values reported are based on DSC re-heat scan at 10 °C/min after cooling from 200 °C at 10 °C/min.

Seal Initiation Temperature (ASTM F88)	~ 80 °C

MA1250P-A will be supplied in pellet form in aluminum foil-lined packaging with a moisture content of 400 ppm or less when packed. Because MA1250P-A is designed to be blended into PLA, the drying and processing of this product will have to mimic the guidelines put forth for the PLA grade and process this product will be used with. In-line drying is highly required with a target moisture content of less than 0.025% (250 ppm). Typical drying conditions are 4 hours at 110°F (45°C) or to a dew point of -30°F (-35°C), with an airflow rate greater than 0.5 cfm/lb of resin throughput.





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