



AMPLIFY™ TY 1054H Functional Polymer

Overview

AMPLIFY™ TY 1054H Functional Polymer is a maleic anhydride grafted (MAH) polymer concentrate designed as a blend component for unmodified polyethylene. In tie layers for flexible packaging, AMPLIFY TY 1054H Functional Polymer promotes adhesion of polyethylene to barrier polymers such as polyamide and ethylene vinyl alcohol (EVOH). The functionality of this polymer also promotes adhesion between metal, polyolefins, cellulose, polyester, polycarbonate, glass, and foil.

Typical blending levels in polyethylene let-down resin are 20-25% for EVOH and 10-15% for nylon.

Main Characteristics:

- Maleic anhydride modified HDPE
- Adhesive concentrate for use in blown, cast, and coating applications
- Tie layer for food packaging and pipe coating
- Adhesive layer in multi-layer flexible film applications
- Polymer compatibilizer

Complies with:

- U.S. FDA 21 CFR 175.105

Consult the regulations for complete details.

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	0.898 g/cm ³	0.898 g/cm ³	ASTM D792
Melt Index (190°C/2.16 kg)	2.0 g/10 min	2.0 g/10 min	ASTM D1238 ISO 1133
MAH Graft Level	High	High	Dow Method ¹
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Strength (Break)	1200 psi	8.27 MPa	ASTM D638 ISO 527-2/51
Tensile Elongation (Break)	730 %	730 %	ASTM D638 ISO 527-2/51
Flexural Modulus - 2% Secant	13100 psi	90.3 MPa	ASTM D790A ISO 178
Hardness	Nominal Value (English)	Nominal Value (SI)	Test Method
Durometer Hardness			ASTM D2240 ISO 868
Shore A	96	96	
Shore D	35	35	
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Glass Transition Temperature (DSC)	-56.0 °F	-48.9 °C	Dow Method
Vicat Softening Temperature	151 °F	66.1 °C	ASTM D1525 ISO 306
Melting Temperature (DSC)	239 °F	115 °C	Dow Method

Additional Information

Molded in accordance with ASTM D4976.

Notes

These are typical properties only and are not to be construed as specifications. Users should confirm results by their own tests.

¹ Low: <0.25 wt%, Medium 0.25-0.5, High >0.5 wt%, Very High >1.0 wt%.

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