

AMPLIFY™ TY 1053H

Functional Polymer
The Dow Chemical Company

Message:

AMPLIFY™ TY 1053H 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 1053H 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 12-20% for EVOH and 6-12% 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 177.1520(c)6

EU, No 10/2011

Consult the regulations for complete details.

General Information			
Agency Ratings	FDA 21 CFR 177.1520(c) 6		
	Europe No 10/2011		
Forms	Particle		
Physical	Nominal Value	Unit	Test Method
Density	0.958	g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	2.0	g/10 min	ASTM D1238, ISO 1133
MAH Graft Level ¹	Very High		Internal method
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240, ISO 868
Shaw A	98		ASTM D2240, ISO 868
Shaw D	67		ASTM D2240, ISO 868
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength			
Fracture ²	15.9	MPa	ASTM D638
Fracture	15.9	MPa	ISO 527-2/51
Tensile Elongation			
Fracture ³	300	%	ASTM D638
Fracture	300	%	ISO 527-2/51
Flexural Modulus - 2% Secant	924	MPa	ASTM D790A, ISO 178
Thermal	Nominal Value	Unit	Test Method
Vicat Softening Temperature	129	°C	ASTM D1525, ISO 306
Melting Temperature (DSC)	130	°C	Internal method

Additional Information

Molded in accordance with ASTM D4976.

NOTE

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|----|------------------------------------|
| 1. | Low: 0.5 wt%, Very High > 1.0 wt%. |
| 2. | 51 mm/min |
| 3. | 51 mm/min |

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