Technical Information

AFFINITY™ PT 1451G1
Polyolefin Plastomer

Overview

AFFINITY™ PT 1451G1 Polyolefin Plastomer (POP) produced using INSITE™ Technology from Dow, is specifically designed for extrusion coating and other cast extrusion processing.

AFFINITY PT 1451G1 Polyolefin Plastomer is a tough and high performance and low temperature sealant. Its ease of processability in combination with other common extrusion coating polyolefins, i.e. LDPE or acid copolymers, provides optimum sensory performance. The high clarity and adhesion to PP makes coatings of AFFINITY PT 1451G1 Polyolefin Plastomer fit for use in combination with OPP or primed PET high clarity films. Coextrusions of AFFINITY PT 1451G1 Polyolefin Plastomer with acid copolymers for adhesion to foil offer cost effective high performance sealant structures with exceptional potential for source reduction.

Note:
AFFINITY PT 1451G1 Polyolefin Plastomer should comply with FDA regulation 21 CFR 177.1520 (c) 3.2c and with most European food contact regulations when used unmodified and processed according to good manufacturing practices for food contact applications. Please contact your nearest Dow office regarding food contact compliance statements. The purchaser remains responsible for determining whether the use complies with all relevant regulations.

Applications:
Flexible packaging

Additive

- Antiblock: No
- Slip: No
- Processing Aid: No

Physical	Nominal Value	(English)	Nominal Value	(SI)	Test Method
Density	0.902	g/cm³	0.902	g/cm³	ASTM D792
Melt Index (190°C/2.16 kg)	7.5	g/10 min	7.5	g/10 min	ISO 1133
Mechanical	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Tensile Stress [1]					ISO 527-2
Yield	725	psi	5.00	MPa	
Break	2900	psi	20.0	MPa	
Tensile Strain [1] (Break)	1000	%	1000	%	ISO 527-2
Films	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Seal Initiation Temperature [2]	181	°F	83.0	°C	Dow Method
Water Vapor Transmission [3]	25	g/100 in²/24 hr	390	g/m²/24 hr	Dow Method
Thermal	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Vicat Softening Temperature	174	°F	79.0	°C	ASTM D1525
Melting Temperature	208	°F	98.0	°C	DSC

Extrusion	Nominal Value	(English)	Nominal Value	(SI)	Test Method
Melt Temperature	518 to 608	°F	270 to 320	°C	
Minimum Coating Weight [1]	< 4.9	lb/ream	< 8.0	g/m²	Dow Method
Neck-in [1] (554°F (290°C))	5.1	in	130.0	mm	Dow Method

Notes

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

[1] At 290°C set temperature.

[2] 25 g/m² coatings at 290°C set temperature

[3] 23°C, 95% R.H.; Divide by coating weight in g/m2 to obtain actual WVTR.

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