



DE 4301.05

Developmental Elastomer

DE 4301.05 Developmental Elastomer is a resin with a high melt flow rate suitable for a wide variety of applications and fabrication processes, including extrusion and injection molding. It is an excellent resin for films and soft compounds, and is an excellent choice for PP modification, giving consistent performance in hot and cold conditions.

Note: DE 4301.05 Developmental Elastomer complies with the requirements for use in contact with food of the EU Directive 2002/72/EC. Contact a Dow Sales Office to obtain a detailed food contact compliance letter for this product. Such a letter covers the food contact status of this product in the various European countries and in addition gives information about the imposed migration requirements.

When used unmodified for food contact applications, this resin will comply with the U.S. Food and Drug Administration as a food contact substance (FCN) as a result of a pre-market notification with an effective date of June 5, 2007 under FCN 708. This notification allows for use of this product as articles or components of articles used in contact with all food types under Conditions of Use A through H, as described in Table 2 of U.S. FDA CFSAN/Office of Food Additive Safety April 2006, Definitions of Food Types and Conditions of Use for Food Contact Substances (<http://www.cfsan.fda.gov/~rdb/opa-fcn3.html>).

The preceding statements refer to regulatory requirements only, not to the product's physical utility. It is the responsibility of the article producer or food packager to determine that the article is suitable for its intended use. The notification and regulations should be consulted for complete details.

Main Characteristics

- White pellet
- Free flowing
- High flow
- Excellent elasticity
- Excellent compatibility with PP

Applications

- Masterbatch Concentrates
- Overmolding
- Films
- Soft Compounds
- PP modification

Product Characteristics

Properties ⁽¹⁾	Test Method	Units	Value	Method	Units	Value
Physical						
Melt Flow Rate (230°C, 2.16kg)	ASTM D 1238	g/10 min	25	ISO 1133	g/10 min	25
Density	ASTM D 792	g/cm ³	0.866	ISO 1183	g/cm ³	0.866
Mechanical ⁽²⁾						
Hardness, Shore A	ASTM D 2240	-	86	ISO 868	-	76
Hardness, Shore D	ASTM D 2240	-	28	ISO 868	-	22
Ultimate Tensile Strength ⁽³⁾	ASTM D 638	psi	440	ISO 527-1.2	Mpa	3
Flexural Modulus (1% Secant)	ASTM D-790	psi	5075	ISO 178	MPa	14
Thermal						
Total Crystallinity	Dow Method	%	18			
Glass Transition Temperature	Dow Method	°F	-26	Dow Method	°C	-32
Optical ⁽⁴⁾						
Clarity	ASTM D 1746	%	> 98			
Haze	ASTM D 1003	%	< 10			



- (1) Typical values, not to be construed as specifications. Users should confirm results by their own tests.
- (2) Measured in injection molded samples, aged two weeks (\pm 3 days) prior to testing.
- (3) Strain rate of 50mm/min.
- (4) Measured in injection molded specimens (2 mm thickness).

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- b. use in cardiac prosthetic devices regardless of the length of time involved ("cardiac prosthetic devices" include, but are not limited to, pacemaker leads and devices, artificial hearts, heart valves, intra-aortic balloons and control systems, and ventricular bypass-assisted devices);
- c. use as a critical component in medical devices that support or sustain human life; or
- d. use specifically by pregnant women or in applications designed specifically to promote or interfere with human reproduction.

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