Technical Datasheet

Ashland Performance Materials

AROPOL™

AROPOL™ D 1680-1 Pultrusion Resin

AROPOL D 1680-1 Resin is a medium reactivity DCPD based unsaturated polyester resin formulated for use in pultrusion applications.

APPLICATIONS AND USE

AROPOL D 1680-1 resin has excellent mechanical properties and toughness. AROPOL D 1680-1 is used primarily in pultrusion applications.

TYPICAL LIQUID RESIN PROPERTIES

Property(1) at 25°C (77°F)	Value	Unit
Non - Volatiles	73.5	%
Viscosity, Brookfield #2 spindle @ 30 rpm	400	MPas (cps)
Color, Gardner	5	maximum

(1) Properties are typical values based on material tested in our laboratories. Typical values should not be construed as a guaranteed analysis of any specific lot or as specification items.

TYPICAL CURING CHARACTERISTICS

Curing properties have been measured using 1.0 gm BPO powder in 100 grams of resin.

SPI Gel Time (180°F)	Value	Unit
Gel Time	5.0	minutes
Peak Exotherm Time	8.0	minutes
Peak Exotherm Temperature	375	°F

TYPICAL MECHANICAL PROPERTIES

Property of cured casting at 25°C (77°F)	Value (SI)	Value (US)	Method
Tensile Strength	62 MPa	8950 psi	ASTM D638
Tensile Modulus	3600 MPa	520 ksi	ASTM D638
Tensile Elongation	2.0 %	2.0 %	ASTM D638
Flexural Strength	75 MPa	10,600 psi	ASTM D790
Flexural Modulus	3600 MPa	520 ksi	ASTM D790
Heat Deflection Temperature	92°C	198°F	ASTM D648

Responsible Care*

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CERTIFICATES AND APPROVALS	The manufacturing, quality control and distribution of products, by Ashland, comply with one or more of the following programs or standards: Responsible Care, ISO 9001, ISO 14001 and OHSAS 18001.
STANDARD PACKAGE	Non-Returnable Drum with Net Weight of 220 Kgs (485 Lbs) DOT Label Requirement: Flammable Liquid
COMMERCIAL WARRANTY	Three months from date of shipment, when stored in accordance with the conditions stated below.
STORAGE	Drums - Store at temperatures below 25°C (77°F). Storage life decreases with increasing storage temperature. Avoid exposure to heat sources such as direct sunlight or steam pipes. To avoid contamination of product with water, do not store outdoors. Keep containers sealed to prevent moisture pick-up and monomer loss. Mild mixing is recommended after prolonged storage. Rotate stock. Bulk - See Ashland's Bulk Storage and Handling Manual for Polyesters and Vinyl Esters. A copy of this may be obtained from Ashland at +1.614.790.3333 or 1.800.523.6963. All other conditions being equal, higher storage temperatures will reduce product stability and lower storage temperatures will extend product stability.
Notice	All information presented herein is believed to be accurate and reliable, and is solely for the user's consideration, investigation and verification. The information is not to be taken as an express or implied representation or warranty for which Ashland assumes legal responsibility. Any warranties, including warranties of merchantability or non-infringement of intellectual property rights of third parties, are herewith expressly excluded. Since the user's product formulations, specific use applications and conditions of use are beyond the control of Ashland, Ashland makes no warranty or representation regarding the results which may be obtained by the user. It shall be the responsibility of the user to determine the suitability of any of the products mentioned for the user's specific application. Ashland requests that the user reads, understands and complies with the information contained herein and the current Material Safety Data Sheet.

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