

# Technical Datasheet



## AROPOL™ IS 4650 Filament Winding Resin / Isophthalic based

AROPOL IS 4650 is a medium viscosity, medium reactivity, isophthalic based resin with good mechanical properties combined with high temperature resistance.

### Typical liquid resin properties

Property	Value	Unit	Method
Viscosity at 25 °C , Brookfield	650	mPas	ISO 2555
Styrene content	37	%	SFS 4864
Geltime at 25 °C ( resin diluted at 300 mPas)	15	min	R-103
+ Co-Octoate (1%)	1,0	%	
+ MEKP-50	1,1	%	
Gel time at 25°C-35°C ( resin diluted at 300 mPas)	20	min	R-103
+Co-Octoate (1%)	1,0	%	
+MEKP 50%	1,1	%	
Gel time to peak exotherm	37	min	R-103
Peak exotherm	170	°C	R-103
Acid value ( 100% solids)	13	mg KOH/g	DS-09-119
Colour	80	Hazen	DS-09-056

### Typical cured resin properties

Property	Value	Unit	Method
Tensile strength	82	MPa	ISO 527
Tensile Modulus	3600	MPa	ISO 527
Elongation at break	4.5	%	ISO 527
Flexural strength	140	MPa	ISO 178
Flexural Modulus	3800	MPa	ISO 178
Heat deflection temperature (HDT)	82	°C	ISO 75-A



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Hardness	45	Barcol	ASTM D2583
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Application and use	<p>AROPOL IS 4650 resin is suitable for Filament winding and production of high quality laminates, surface linings or other composites exposed to a corrosive environment and for production of composites where good mechanical properties are important.</p> <p>For special applications, an Ashland paraffine solution in styrene can be added.</p> <p>AROPOL 4650 resin can be be coloured with standard colourants/pigments used in polyester resins, and it is advisable to add thixotropic additives when working on vertical, inclined surfaces.</p> <p>AROPOL IS 4650 resin is used in manufacturing a variety of products like; water equipment, silos, shunt boxes, protecting plaques, vessels, pipes, protecting screens, ship equipments etc.</p>
Certificates and approvals	<p>The manufacturing, quality control and distribution of products, by Ashland Performance Materials, are complying with one or more of the following programs or standards: Responsible Care, ISO 9001, ISO 14001 and OHSAS 18001 by .</p>
Handling and storage	<p>It is highly recommended that all material is stored at stable temperatures under 25°C preferably indoors, and away from direct sunlight. Prolonged storage outside of recommended conditions can influence liquid resin properties like viscosity and gel time. It is also strongly recommended to mix resin thoroughly before use. Shelf life of AROPOL IS 4650 resin is six (6) months.</p>
Notice	<p>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,</p>



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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 sole 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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