Technical Datasheet

INEOS Composites

HETRON™ 99P Polyester Resin

HETRON 99P resin is a promoted, thixotropic, flame retardant(1), corrosion resistant, halogenated isophthalic polyester resin. HETRON 99P resin is suitable for spray-up or hand lay-up operations. Typical laminates made with HETRON 99P resin have achieved a flame spread of <75, and with the addition of 3% antimony trioxide, the flame spread may be reduced to <25 per the ASTM E-84 Tunnel Test.

APPLICATIONS AND USE

Ducts, hoods, blowers, fans, stacks, and other corrosive fume handling equipment operating at elevated temperatures. Also decorative architectural and structural applications where high fire retardance and/or good corrosion resistance is required.

HETRON FR 998/35 resin can be used where maximum flame retardancy is required along with excellent corrosion and heat resistance.

Recommendations for specific services and environments can be provided by contacting us at hetron@ineos.com.

TYPICAL LIQUID RESIN PROPERTIES

Property(2) at 25°C (77°F)	Value	Unit
Solids	60	%
Viscosity, Brookfield, #2 spindle @ 60 rpm	500	MPa·s (cps)
Acid Number (solids)	25	
Specific Gravity	1.23	gm/cc
Thixotropic Index	2.4	
Appearance	cobalt promoted	

(1) HETRON polyester resin will burn if provided with a sufficient amount of heat and oxygen. The degree of flame retardancy of the cured polyester resin is characterized by the ASTM E-84 tunnel test. This test is performed under strictly controlled conditions where a flame spread rating is assigned according to comparisons with test set-point materials. The behavior of the cured composite under these controlled conditions can vary from an actual fire situation.
(2) 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.

INEOS Composites is committed to the continuous evolution of technology and service solutions that promote health, safety and environmental protection around the world.
®Registered trademark or ™Trademark, INEOS or its subsidiaries, registered in various countries.

Technical Datasheet

INEOS Composites

HETRON™ 99P Polyester Resin

TYPICAL CURING CHARACTERISTICS

LUPERSOL(3) DDM-9 Catalyst	Temperature, °C (°F)	Gel Time, minutes
1.00	16-21 (60-70)	43
1.00	21-27 (70-80)	22
1.00	27-32 (80-90)	14
1.25	16-21 (60-70)	32
1.25	21-27 (70-80)	16
1.25	27-32 (80-90)	11
1.50	16-21 (60-70)	25
1.50	21-27 (70-80)	13
1.50	27-32 (80-90)	9

TYPICAL MECHANICAL PROPERTIES

Property(2) of clear casting(4) at 25°C (77°F)	Value (SI)	Value (US)	Method
Tensile Strength	52 MPa	7500 psi	ASTM D638
Tensile Modulus	3790 MPa	5.5 x 10^5 psi	ASTM D638
Tensile Elongation	1.5%	1.5%	ASTM D638
Flexural Strength	79 MPa	11,500 psi	ASTM D790
Flexural Modulus	4068 MPa	5.9 x 10^5 psi	ASTM D790
Compressive Strength	205 MPa	29,700 psi	ASTM D695
Compressive Modulus	378 GPa	548 x 10^5 psi	ASTM D695
Deformation at Yield	7.0%	7.0%	ASTM D695
Izod Impact	130 J/m	2.4 ft-lbs/in	ASTM D256
Heat Distortion Temperature	92°C	199°F	ASTM D648

(3) Registered trademark of Atofina Chemicls, Inc.
(4) Catalyzed with 1.25% LUPERSOL DDM-9 catalyst, cured at room temperature for 24 hours, post cured two hours at 138°C (280°F).

INEOS Composites is committed to the continuous evolution of technology and service solutions that promote health, safety and environmental protection around the world.
®Registered trademark or ™Trademark, INEOS or its subsidiaries, registered in various countries.

Technical Datasheet

INEOS Composites

HETRON™ 99P Polyester Resin

CERTIFICATES AND APPROVALS	The manufacturing, quality control and distribution of products, by INEOS Composites, comply with one or more of the following programs or standards: ISO 9001, ISO 14001 and OHSAS 18001 by .
STANDARD PACKAGE	Non-Returnable Drum with Net Weight of 250 Kgs (551 Lbs) DOT Label Requirement: Flammable Liquid
COMMERCIAL WARRANTY	Three months from date of shipment, when stored in accordance with the conditions stated below.
HANDLING AND 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 INEOS Composites's Bulk Storage and Handling Manual for Polyesters and Vinyl Esters. A copy of this may be obtained from INEOS Composites at +1.614.790.3333 or 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 INEOS Composites assumes legal responsibility. Any warranties, including warranties of merchantability, fitness for use 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 INEOS Composites, INEOS Composites 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.

INEOS Composites is committed to the continuous evolution of technology and service solutions that promote health, safety and environmental protection around the world.
®Registered trademark or ™Trademark, INEOS or its subsidiaries, registered in various countries.

Technical Datasheet

INEOS Composites

HETRON™ 99P Polyester Resin

INEOS Composites requests that the user reads, understands and complies with the information contained herein and the current Material Safety Data Sheet.

More Information

INEOS Composites
5220 Blazer Parkway
Dublin, OH, 43017

Tel: +1 614 790 9299
Email: Americascustomer.composites @INEOS.com

INEOS Composites is committed to the continuous evolution of technology and service solutions that promote health, safety and environmental protection around the world.
®Registered trademark or ™Trademark, INEOS or its subsidiaries, registered in various countries.