Technical Datasheet

INEOS Composites

HETRON™ 197P Polyester Resin

HETRON 197 P resin is a low viscosity, thixotropic, promoted, halogenated, flame retardant(1) polyester resin.

- Excellent corrosion resistance to acidic and other oxidizing environments
- High heat resistance - gases and vapors to 177°C (350°F)
- Excellent strength retention at elevated temperatures
- Good flame retardancy - Has met ASTM E-84 Class II rating with addition of 5% antimony trioxide

APPLICATIONS AND USE

HETRON 197 P resin is recommended for corrosion resistant fiberglass reinforced plastic (FRP) equipment. Applications include filament wound and hand lay-up tanks, pipes, pumps, stacks, scrubbers and other equipment handling highly corrosive gases, vapors, or liquids.

HETRON 197-3 resin is a non-promoted version of HETRON 197 P.

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	56	%
Viscosity, Brookfield #3 spindle @ 60 rpm	500	mPa·s (cps)
Brookfield #3 spindle @ 6 rpm	1500	mPa·s (cps)
Thixotropic Index	2.5	
Specific Gravity	1.14	gm/cc
Monomer	styrene	

TYPICAL CURING CHARACTERISTICS

Gel Time(2) , 1.25% LUPERSOL(3) DDM-9 catalyst at 25°C (77°F)	Value	Unit

Technical Datasheet

INEOS Composites

HETRON™ 197P Polyester Resin

Gel Time	15	minutes
Gel to Peak Exotherm	11	minutes
Peak Exotherm	193 (380)	°C (°F)

(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 characgterized 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 materials tested in our laboratories. Typical values should not be construed as a guaranteed analysis of any specific lot or as specification items.
(3) Registered trademark of Atofina Chemicals, Inc.

TYPICAL MECHANICAL PROPERTIES

Property(2) of a cured casting(4) at 25°C (77°F)	Value (SI)	Value (US)	Method
Barcol Hardness	40	40	ASTM D2583
Tensile Strength	38 MPa	5500 psi	ASTM D638
Tensile Modulus	3516 MPa	5.1 x 10^5 psi	ASTM D638
Tensile Elongation	1.1%	1.1%	ASTM D638
Flexural Strength	69 MPa	10,000 psi	ASTM D790
Flexural Modulus	3790 MPa	5.5 x 10^5 psi	ASTM D790
Heat Deflection Temperature	140°C	284°F	ASTM D648

(4) Catalyzed with 1.25% LUPERSOL DDM-9 catalyst, cured at room temperature for 24 hours and postcured for 2 hours at 138°C (280°F).

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.

Technical Datasheet

INEOS Composites

HETRON™ 197P Polyester Resin

STANDARD PACKAGE	Non-Returnable Drum with Net Weight of 230 Kgs (507 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 INEOS Composites's Bulk Storage and Handling Manual for Polyesters and Vinyl Esters. A copy of this may be obtained from INEOS Composites at 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 requests that the user reads, understands and complies with the information contained herein and the current Material Safety Data Sheet.