Technical Datasheet

INEOS Composites

AME™ 1001 Series Premium Marine Modified Vinyl Ester Resin

AME™ 1001 Series Highlights

AME™ 1001 Premium Marine Resins utilizes the proven history of resilience, excellent fatigue life, blister resistance and the toughness of AME 1000 resins with added technology that increases stability, strength and surface profile for the boat builder that demands flawless, long lasting performance. Technology developments in AME 1001 have resulted in increased physical properties, with a 25% increase in tensile strength and elongation.

Excellent Fatigue Life
Significantly Improved Mechanical Properties
Tensile Elongation Increase of 25%
User Friendly Processing
Minimal Air Entrapment
Good Surface Profiles with Minimal Shrink
Faster Wet-out
Exceeds DNV Grade "2" Requirements

Recommended Product Application

AME 1001 series resins are recommended for marine applications that require low HAP content for hand lay-up or spray-up operations, infusion or closed molding operations, for use above or below the water line.

Typical Liquid Properties

AME 1001 resins come in a wide range of gel times.
The AME 1001 T-12 and AME 1001 INF-20 resins are shown as representative of the series.

Property	AME 1001 T-22	AME 1001 INF-20	Unit	Test Method
Gel Time	22	20	Minutes	HC-04A
Gel to Peak Exotherm	8	10	Minutes	HC-04A
Peak Exotherm	330	320	°F	HC-04A
Brookfield Viscosity (LVT #3 @/60 rpm)	525	175	cps	ISO 2555
Thix Index	2.7			ISO 2555

Gel time was tested @77°F/25°C with 1.5 grams MEKP-9 Catalyst in 100 grams of resin.

Typical Cured Resin Properties

Property	Value	Unit	Test Method
Tensile Strength	9500	psi	ISO 527-1
Tensile Modulus	520	ksi	ISO 527-1

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Tensile Elongation	2.2	%	ISO 527-1
Flexural Strength	14100	psi	ISO 178
Flexural Modulus	560	ksi	ISO 178
Heat Deflection Temperature	83	°C	ISO 75-2
Ultimate Heat Deflection Temperature[1]	99	°C	ISO 75-2

Clear Cast Panels post cured 24hrs @140°F per Det Norske Veritas.
Det Norske Veritas is an international ship classification and material certification system provider.
[1]Ultimate HDT post cured 2 hrs @60°C + 3 hrs @138°C

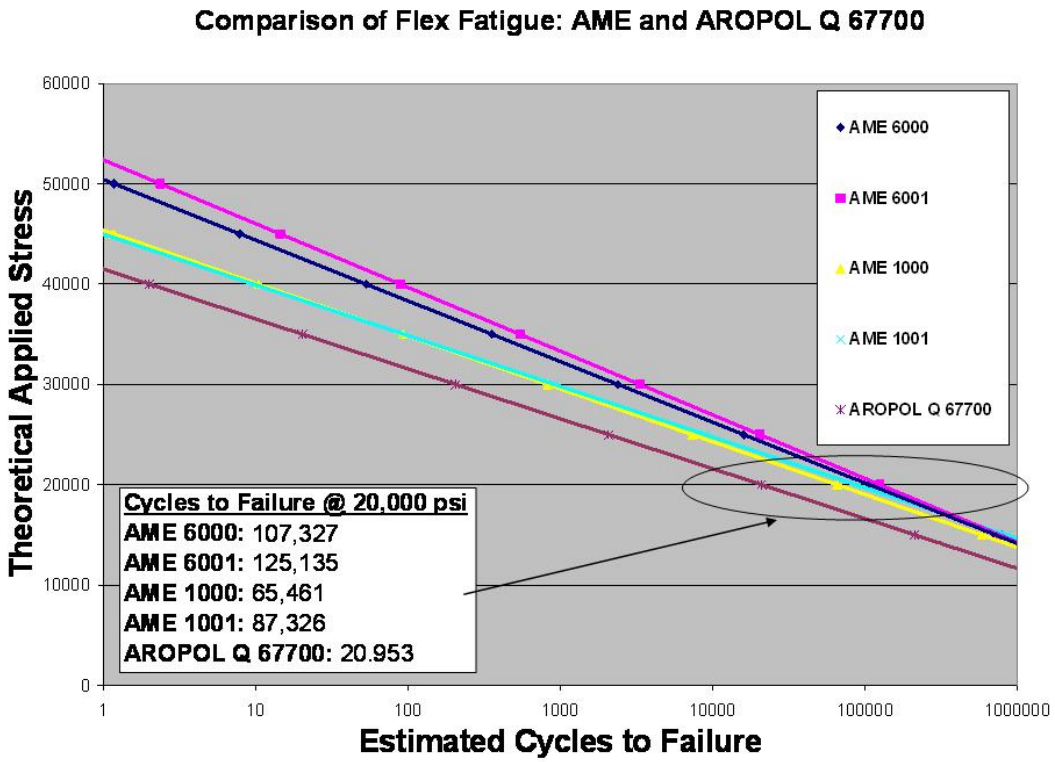
Flex Fatigue Testing

Boat hulls are subjected to repeated, cyclic type stresses in every day use such as waves, wakes and docking. The flex fatigue test is designed to measure the long term durability and resistance to fatigue failure of composite materials used in boat hulls. The flex fatigue test itself accelerates fatigue failure by using even more extreme conditions than a boat hull would normally endure. Those materials with a higher number of cycles to failure can be expected to resist fatigue failure for a longer period of time. AME 1001 demonstrates increased flex fatigue resistance as compared to general purpose resins.

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Product Information	Each end-user should evaluate the performance of the resin in conjunction with their respective gelcoat, under conditions which simulate laminate design, production procedure and anticipated field exposure before use. For technical information on the performance of the resin, contact your INEOS Composites Technical Representative.
Certificates and Approvals	ISO 122-15-1(Small craft - Hull Construction and Scantlings) compliant. The mechanical properties, performed on laminates prepared and post cured according to ISO 12215, meet the minimum requirements of section 4.3 of the standard.
Standard Package	Steel Drum with Net Weight of 220kgs (485lbs)

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Commercial Warranty	Three months from date of manufacture, when stored in accordance with the storage conditions stated below.
Storage	Drums: Store at temperatures below 25°C. 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 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 1-800-523-6963
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.