



## » TECHNICAL BULLETIN

# Edgetek™ Toughened PPA Formulations

The Edgetek™ Toughened PPA series consists of heat-stabilized, impact-modified polyphthalamide (PPA) formulations with low moisture absorption. These high-performing materials deliver high-temperature performance, mechanical integrity, and excellent impact resistance for demanding engine applications.

The PPA-based formulations offer decreased moisture absorption compared to nylon 66 (PA66), helping to improve durability and long-term performance. These robust materials also incorporate heat stabilization to maintain tensile strength and tensile elongation properties for long-term thermal aging up to 120°C.

The filled and unfilled grades are also highly customizable to achieve a wide range of properties and solve application challenges.

## KEY CHARACTERISTICS

- High-temperature performance
- Excellent impact resistance
- Decreased moisture absorption compared to PA66
- Heat stabilized for long-term thermal aging
- Enhanced chemical resistance
- Customizable formulations in filled and unfilled grades

## MARKETS & APPLICATIONS

The combined performance characteristics make Edgetek Toughened PPA ideal for a range of rigid engine applications. Some possible uses include cooling systems, control system enclosures, water pump housings, and thermostats across the transportation, lawn and garden, marine, and powersports industries.



Leveraging Avient’s material science expertise, Edgetek Toughened PPA formulations can be customized using various glass loading or impact modifier levels to meet specific application needs.

## TECHNICAL PROPERTIES

	<b>Edgetek™ ET9700-0031 HI HS NAT</b>	<b>Edgetek™ ET9700-0033 20GF HI HS NAT</b>	<b>Edgetek™ ET9700-0032 35GF HI HS NAT</b>
<b>Description</b>	Unfilled	GF 20%	GF 35%
<b>Color</b>	Natural & Black	Natural & Black	Natural & Black
<b>Notched Impact (kJ/m<sup>2</sup>)</b>	19.0	13.8	13
<b>Un-Notched Impact (kJ/m<sup>2</sup>)</b>	No Break	73	87
<b>HDT, 1.83 MPa (°C)</b>	112	182	258
<b>Tensile Strength, yield (MPa)</b>	60	106	183
<b>Tensile Elongation, yield (%)</b>	6.0	3.5	2.2
<b>Flexural Modulus (MPa)</b>	2235	5288	9058
<b>Flexural Strength (MPa)</b>	96	170	264
<b>Heat Stabilization</b>	Yes	Yes	Yes

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