

# Mahesh Manglesh Plastics Pvt. Ltd.

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## Comparison Between Durethan BKV30GH2.0 & Akulon GA - XL G6

Property	Durethan BKV30GH2.0	Akulon GA-XLG6
<b>Material Type</b>	PA6, 30% GF, heat-aging stabilized, weather stabilized	PA6 / semi-aromatic blend, 30% GF, UV stabilized
<b>Density</b>	1360 kg/m <sup>3</sup>	1360 kg/m <sup>3</sup>
<b>Molding Shrinkage (parallel)</b>	0.27%	0.2%
<b>Molding Shrinkage (transverse/normal)</b>	0.58%	0.6%
<b>Tensile Modulus</b>	10,000 MPa	9,600 MPa
<b>Tensile Strength @ Break</b>	180 MPa	170 MPa
<b>Tensile Strain @ Break</b>	3.0%	3%
<b>Flexural Modulus</b>	9,300 MPa	8,500 MPa
<b>Flexural Strength</b>	270 MPa	270 MPa
<b>Charpy Impact Strength (Un-notched, +23°C)</b>	75 kJ/m <sup>2</sup>	65 kJ/m <sup>2</sup>
<b>Charpy Notched Impact Strength (+23°C)</b>	10 kJ/m <sup>2</sup>	9.5 kJ/m <sup>2</sup>
<b>Melting Temperature</b>	221°C	222°C
<b>HDT @ 1.8 MPa</b>	195°C	196°C
<b>HDT @ 0.45 MPa</b>	215°C	216°C
<b>CLTE (parallel)</b>	0.3 ×10 <sup>-4</sup> /K	0.2 ×10 <sup>-4</sup> /K
<b>CLTE (transverse)</b>	0.8 ×10 <sup>-4</sup> /K	0.7 ×10 <sup>-4</sup> /K
<b>Water Absorption (23°C saturation)</b>	6.5%	—
<b>Water Absorption (50% RH equilibrium)</b>	1.9%	2.2% (similar test)
<b>UL 94 Flammability</b>	HB (1.5 mm)	Not given

## Summary :-

- **Mechanical stiffness:**  
Durethan is slightly **stiffer** (higher tensile and flexural modulus).
- **Strength:**  
Both materials have **nearly identical flexural strength**; Durethan has slightly higher tensile strength.
- **Impact resistance:**  
Durethan shows **higher un-notched impact**, while notched impact is almost identical.
- **Thermal properties:**  
Extremely close — melting point and HDT values are essentially the same.
- **Shrinkage:**  
Very similar; Akulon shows slightly **lower parallel shrinkage**, higher transverse shrinkage.
- **Water uptake:**  
Similar equilibrium absorption; Durethan reports full saturation while Akulon does not.

Overall, the materials are **very close equivalents** for PA6-GF30, with Durethan being slightly stiffer and tougher, and Akulon having marginally lower parallel shrinkage.

