

Domat/Ems, October 18, 2016

PRESS INFORMATION

Press release K 2016

Dimensional stability redefined

Grivory G6VX-AP (Advanced Performance) – the new generation of high-performance polyamides for high precision components – is characterised by extraordinary stiffness and impact strength with simultaneous high dimensional stability.

Smartphones and tablets, as well as more recently a varied range of wearables such as digital watches, fitness monitors, virtual-reality-glasses, etc., are continuing to show progressive development. Practically every well-known manufacturer now has at least one oversized model in the assortment. This involves displays which have a diagonal size of five or six inches or even more. In addition to the trend towards larger displays, Smartphones and tablets should also be thinner, which enormously increases the requirements on the mechanical properties.

The most significant requirements of new high-performance polymers are:

- high dimensional stability
- high stiffness, even with low wall thicknesses
- high impact strength
- high flow capability with simultaneous low flash formation
- low warpage
- excellent surface quality
- simple processability

Grivory G6VX-AP products satisfy all these demands.

New product group for high precision and light-weight construction

EMS-GRIVORY is specialised in the manufacture of high-performance polyamides for use in mobile and wearable applications. The partially aromatic polyamide Grivory GV grades show practically unchanged stiffness and strength values even in a conditioned state. Reinforced Grivory GV high-performance polyamide grades exhibit very little warpage and are easy to process.

With the new Grivory G6VX-AP products, EMS-GRIVORY takes a further step forward and creates new solution approaches for highly stressed structural components. The Grivory G6VX-AP grades are based on a new partially aromatic

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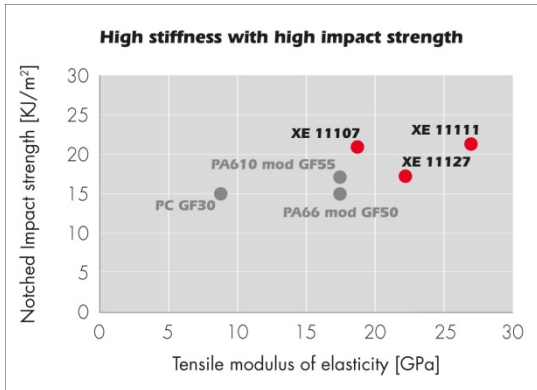


Diagram 1: Grivory G6VX-AP products show high stiffness with high impact strength.

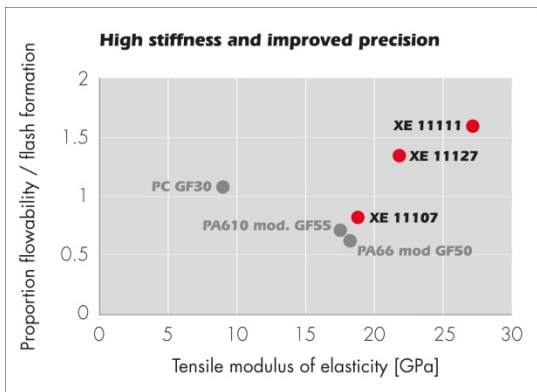


Diagram 2: Grivory G6VX-AP products show high flow capability with simultaneous low flash formation.

Mechanical properties Grivory G6VX-AP

		Standard	Unit	State	Grivory XE 11107	Grivory XE 11127	Grivory XE 11111
Glass/fibre content			%	dry	55	60	70
Tensile Modulus	1 mm/min	ISO 527	MPa	dry	18'500	22'000	27'000
Strength at break	5 mm/min	ISO 527	MPa	dry	245	250	290
Elongation at break	5 mm/min	ISO 527	%	dry	2.7	2.3	1.5
Impact strength	Charpy, 23°C	ISO 179/ 1eU	kJ/m²	dry	>100	100	70
Notched impact strength	Charpy, 23°C	ISO 179/ 1eA	kJ/m²	dry	21	17	21
Water absorption	23°C, 24hr	ISO 62	%		0.06	0.05	0.04
Flowability					+	+++	++

Table 1: Mechanical properties of Grivory G6VX AP grades.



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