CALCINED NEUBURG SILICEOUS EARTH
POLYKETONE (PK)
30 % FILLER CONTENT

OBJECTIVE

Performance of Aktifit AM and Aktifit PF 115

Unfilled Polymer
Hyosung Polyketone M330A

Neuburg Siliceous Earth:
Aktifit AM
Aktifit PF 115

RESULTS

		M330A *unfilled*	Aktifit AM	Aktifit PF 115
Melt Volume-flow Rate	$cm^3/10$ min	53.2	9.3	6.9
Crosslinking during Processing		No	No	No
Tensile Modulus	GPa	1.74	2.85	2.88
Tensile Yield Stress	MPa	65.5	67.8	69.1
Tensile Yield Strain	%	17.0	16.5	16.2
Flexural Modulus	GPa	1.5 *	3.08	3.16
Flexural Strength	MPa	57 *	89.2	90.0
Impact Strength 23 °C	kJ/m^2	No break	No break	No break
Charpy, 1eU -30 °C	kJ/m^2	-	No break	No break
Notched Impact Strength 23 °C	kJ/m^2	8 *	10.2	10.6
Charpy, 1eA -30 °C	kJ/m^2	2 *	3.1	3.4

* acc. data sheet

SUMMARY

Benefits vs. the unfilled polymer:

- Higher stiffness
- Slightly higher strength at comparable yield strain
- Markedly higher flexural strength
- Similar or slightly higher notched impact strength
- Good unnotched impact strength: no break with 4 J pendulum, even at low-temperature

Aktifit AM and **Aktifit PF 115** are attractive mineral fillers for polyketone, because they do not cause premature crosslinking during processing.

In addition, **Aktifit PF 115** leads to brighter, more color neutral compounds.