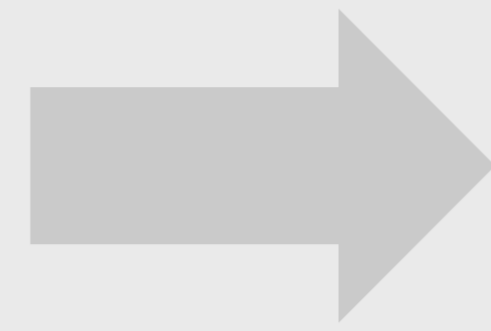


# CALCINED NEUBURG SILICEOUS EARTH POLYKETONE (PK) 30 % FILLER CONTENT

## OBJECTIVE

### Performance of Aktifit AM and Aktifit PF 115

**Unfilled Polymer**  
Hyosung Polyketone M330A



**Neuburg Siliceous Earth:**  
**Aktifit AM**  
**Aktifit PF 115**

## RESULTS

			<b>M330A unfilled</b>	<b>Aktifit AM</b>	<b>Aktifit PF 115</b>
Melt Volume-flow Rate	cm <sup>3</sup> /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 <sup>2</sup>	No break	No break	No break
Charpy, 1eU	-30 °C	kJ/m <sup>2</sup>	-	No break	No break
Notched Impact Strength	23 °C	kJ/m <sup>2</sup>	8 *	10.2	10.6
Charpy, 1eA	-30 °C	kJ/m <sup>2</sup>	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.