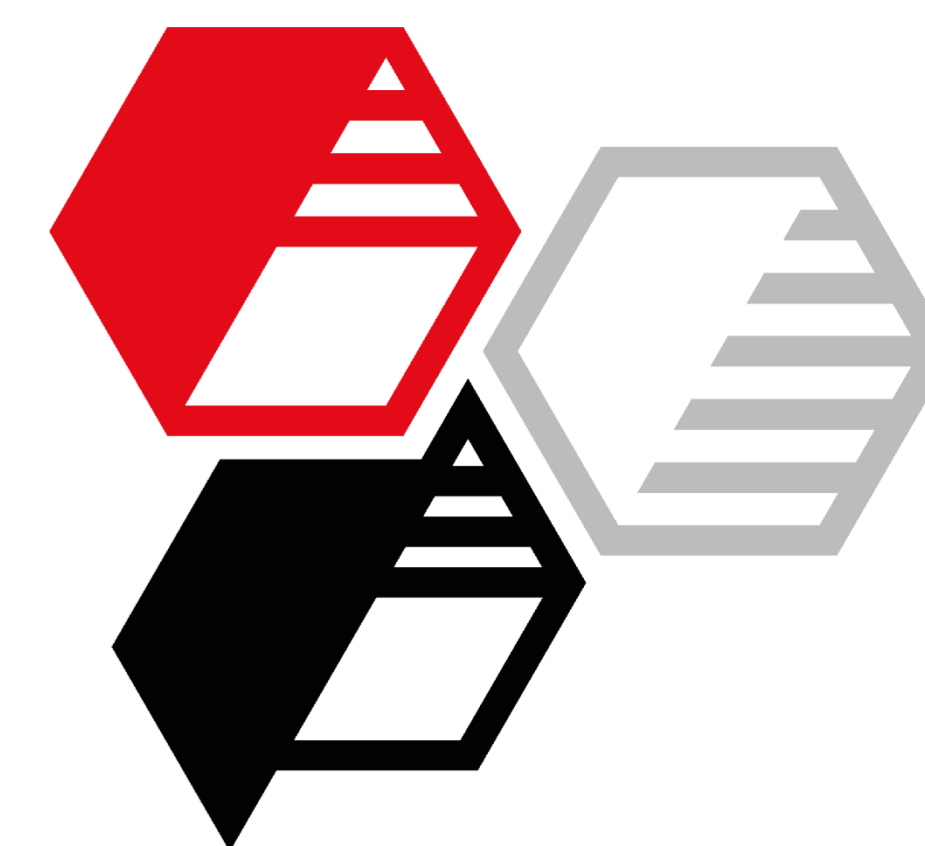





Neuburg Siliceous Earth (NSE) in FKM, peroxide cured, acid resistant and tintable alternative to carbon black N990



Issue

Wollastonite very weak	Barium sulfate weak	After exposure to acetic acid pH3, 168 h / 100 °C	Wollastonite	Original size	Barium sulfate
acid resistance in peroxide cured FKM					
			Volume	+500 %	-
Carbon black N990 good, but not tintable			Hardness	-30 Shore A	-32 Shore A
			Tensile strength	-86 %	-

Objective

Performance of NSE in Peroxide Cured FKM

N990



Aktisil and Aktifit Grades

Formulation

Hardness range: 65 – 70 Shore A		N990	NSE
Viton GAL-200S	66 % fluorine, 25 MU (ML1+10, 121 °C) terpolymer (HFP+VFD+TFE)	100	100
Zinkoxyd aktiv	ZnO	3	3
Diak No. 7	Coactivator TAIC	3	3
Varox DBPH-50	2,5-dimethyl-2,5-di(tertbutylperoxy)-hexane	2	2
N990	Carbon black	30	-
NSE	Neuburg Siliceous Earth	-	30

Summary

Benefits of NSE vs. N990	Aktifit VM	Aktifit PF 111	Aktifit PF 115	Aktisil AM	Aktisil Q
Tintable	yes	yes	yes	yes	yes
Viscosity	+	+	+	+	+
Tensile strength	+	=	=	+	=
Elongation at break		+	+	=	
Modulus 100 %	+	+	+	+	+
Tear resistance		=	+	=	=
CS ISO 200 °C, no post-cure	=	=	=	=	+
CS VW	+	+	=	+	=
Hot air resistance	+	=		=	+
Oil resistance		+		+	+
Resistance to acetic acid	=	=	=	=	+

+ improvement + improvement, best grade = no effect

Special features

All tested NSE grades:

Aktisil AM:

Aktifit VM, PF 111, PF115

equal fuel resistance compared to N990

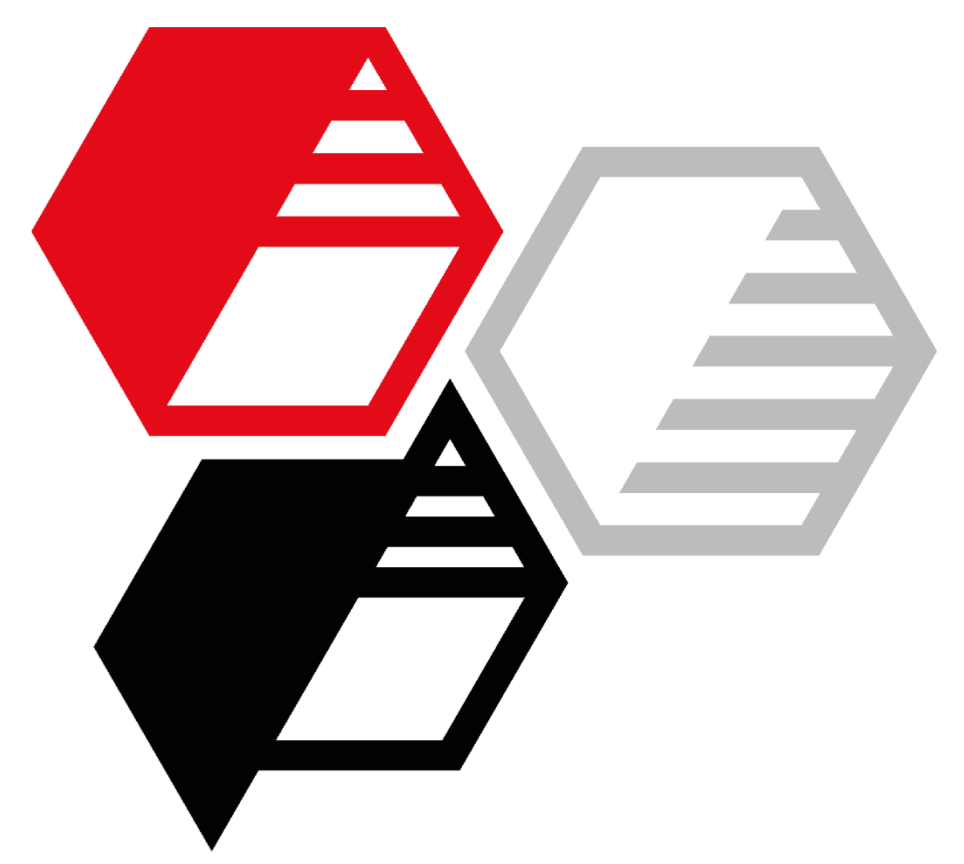
fast cure

lowest weight and hardness change after immersion in acetic acid

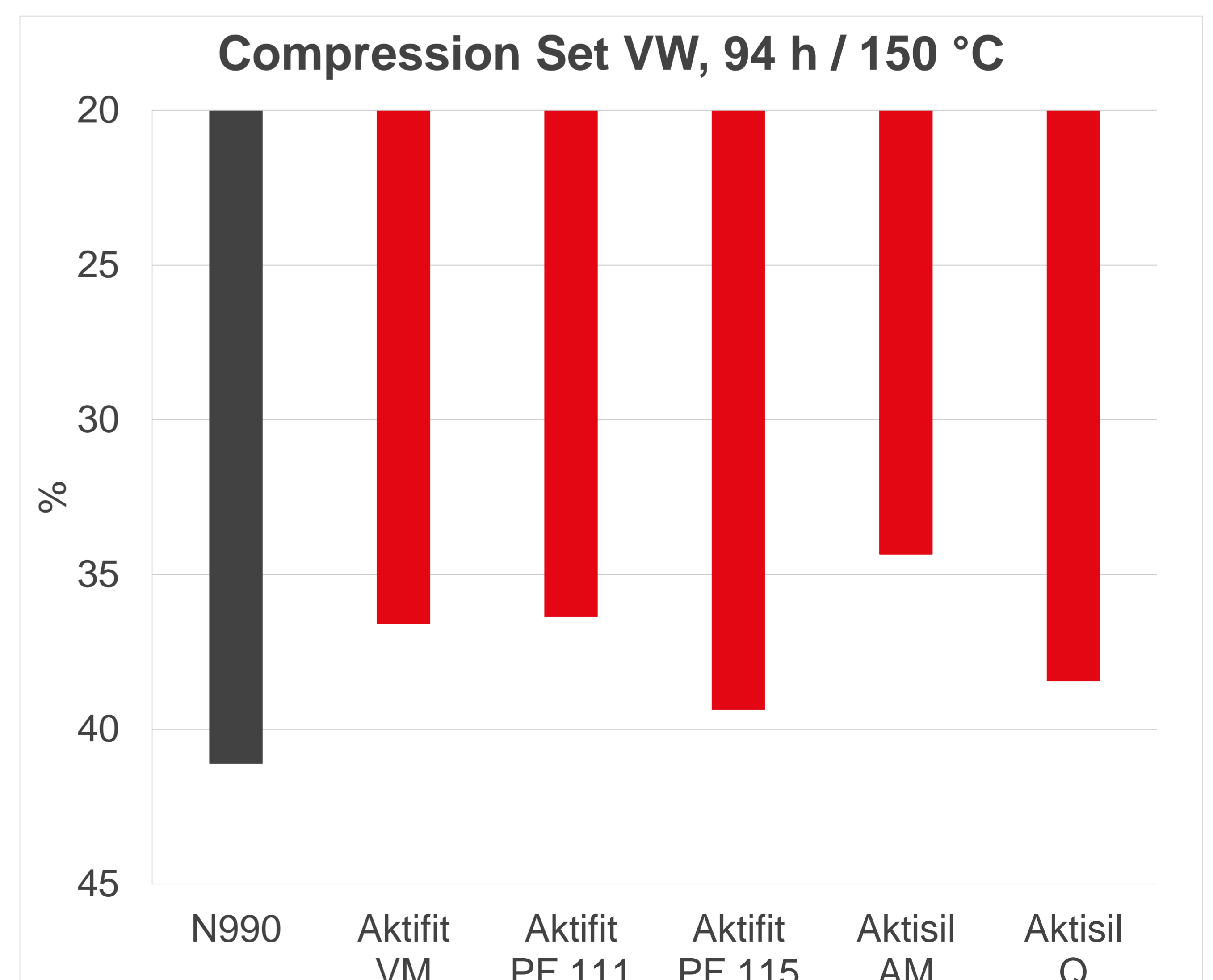
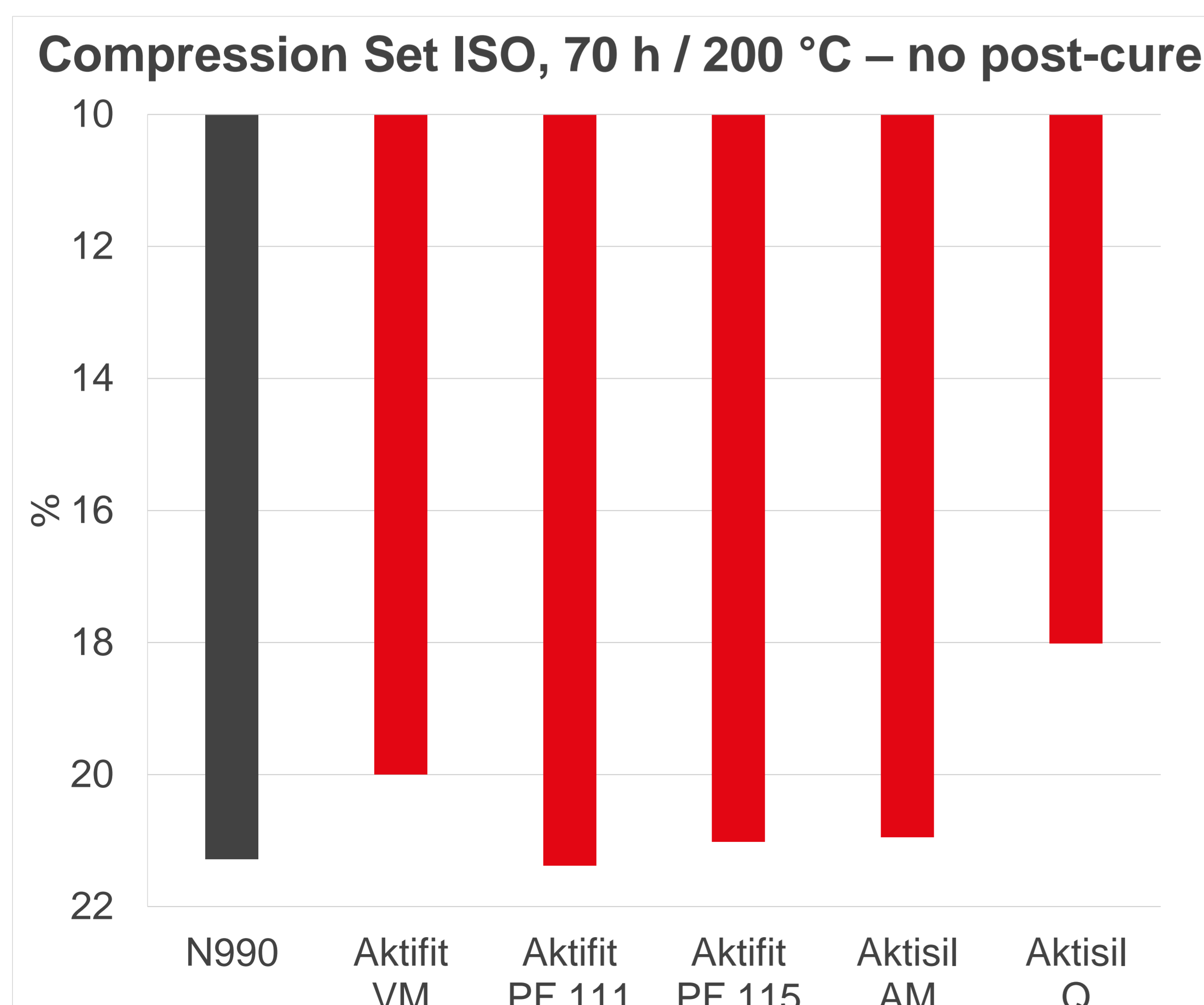
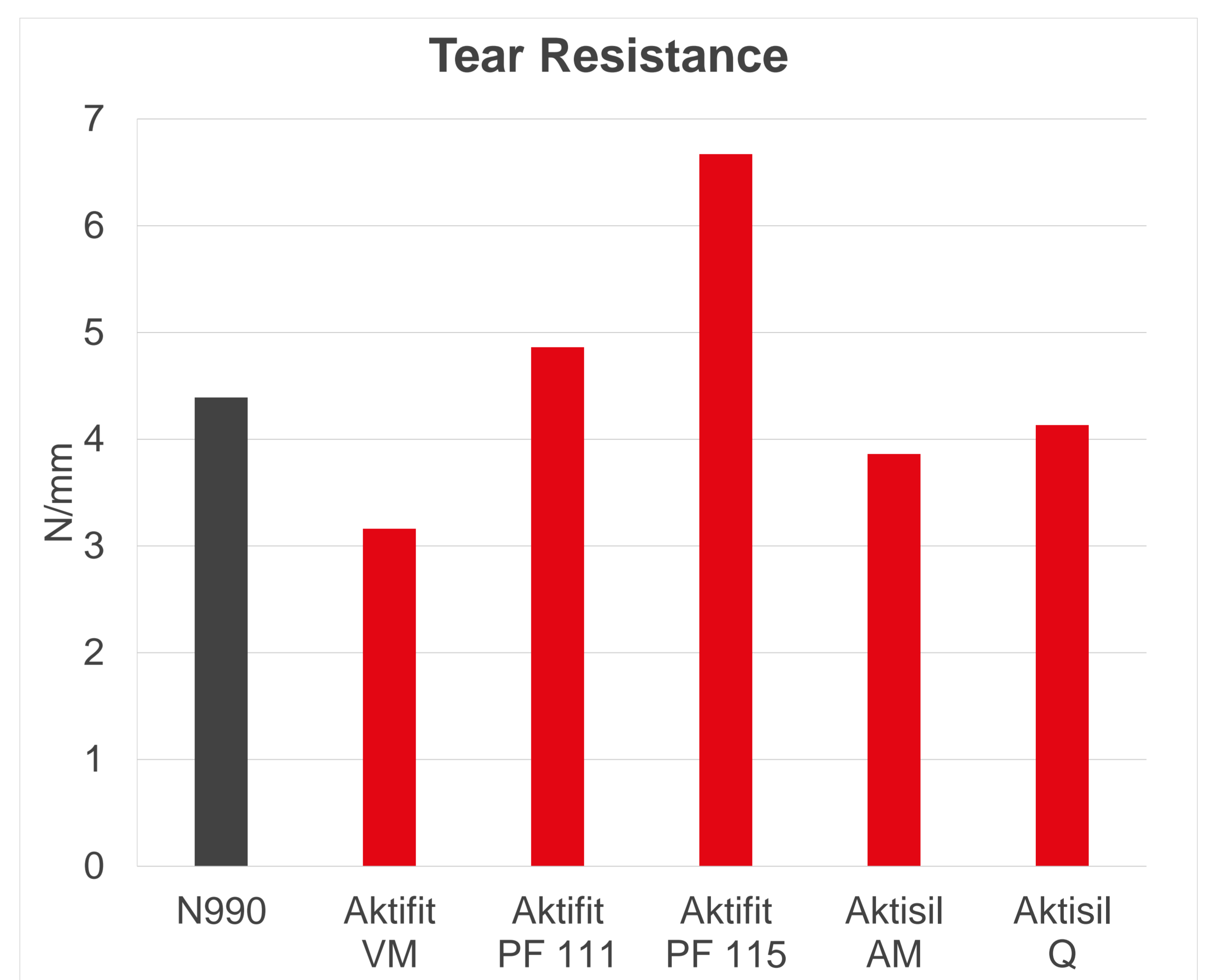
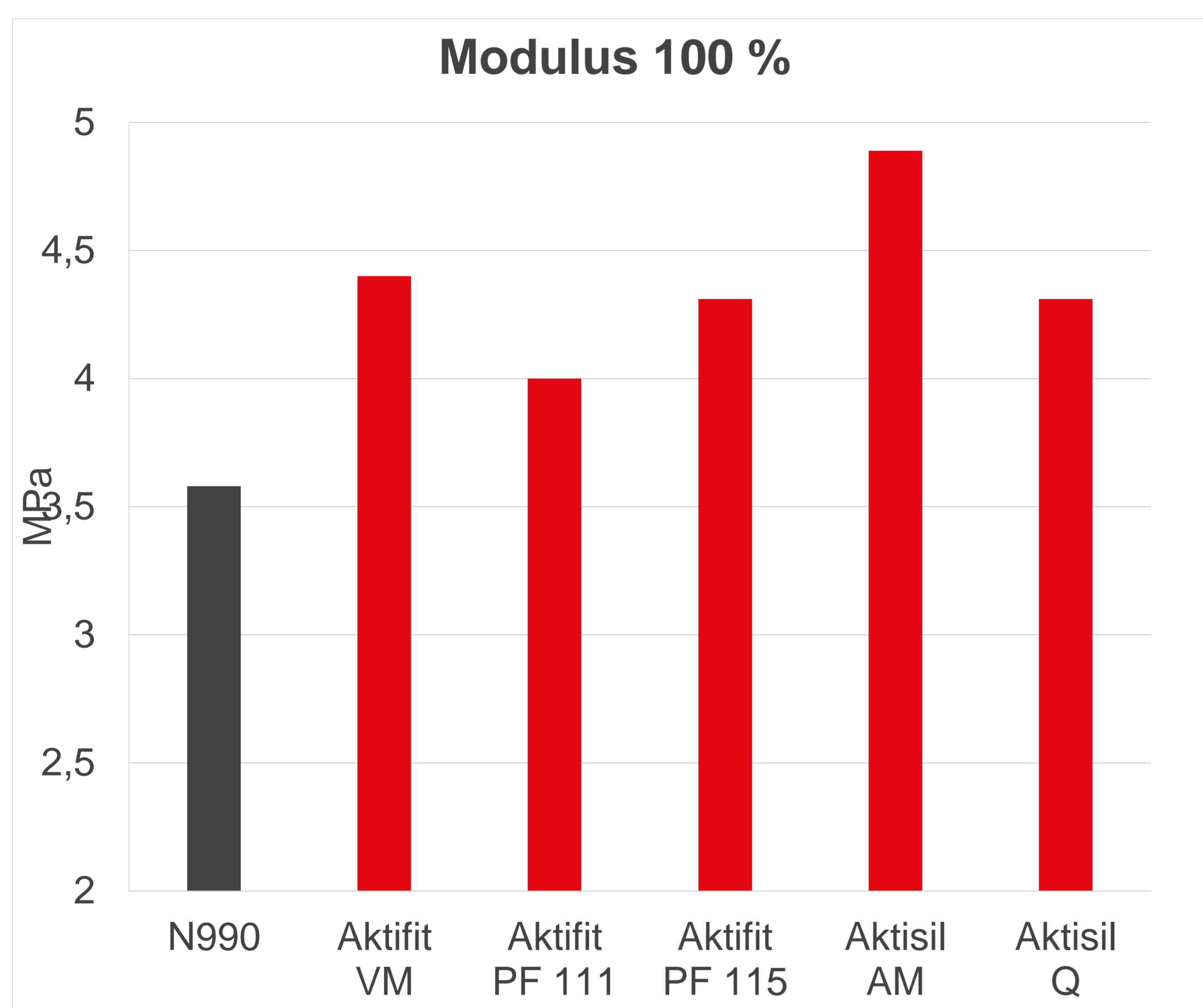
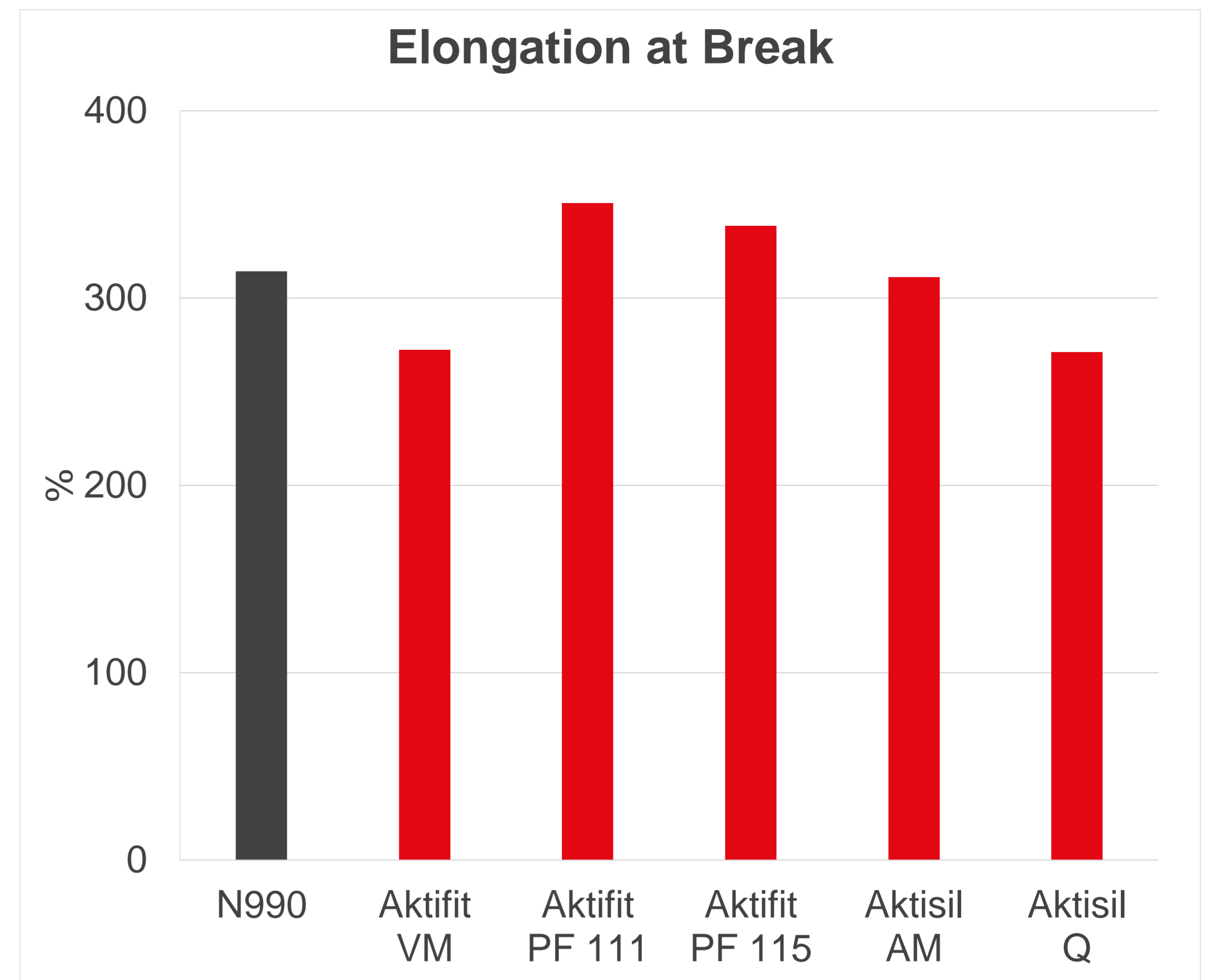
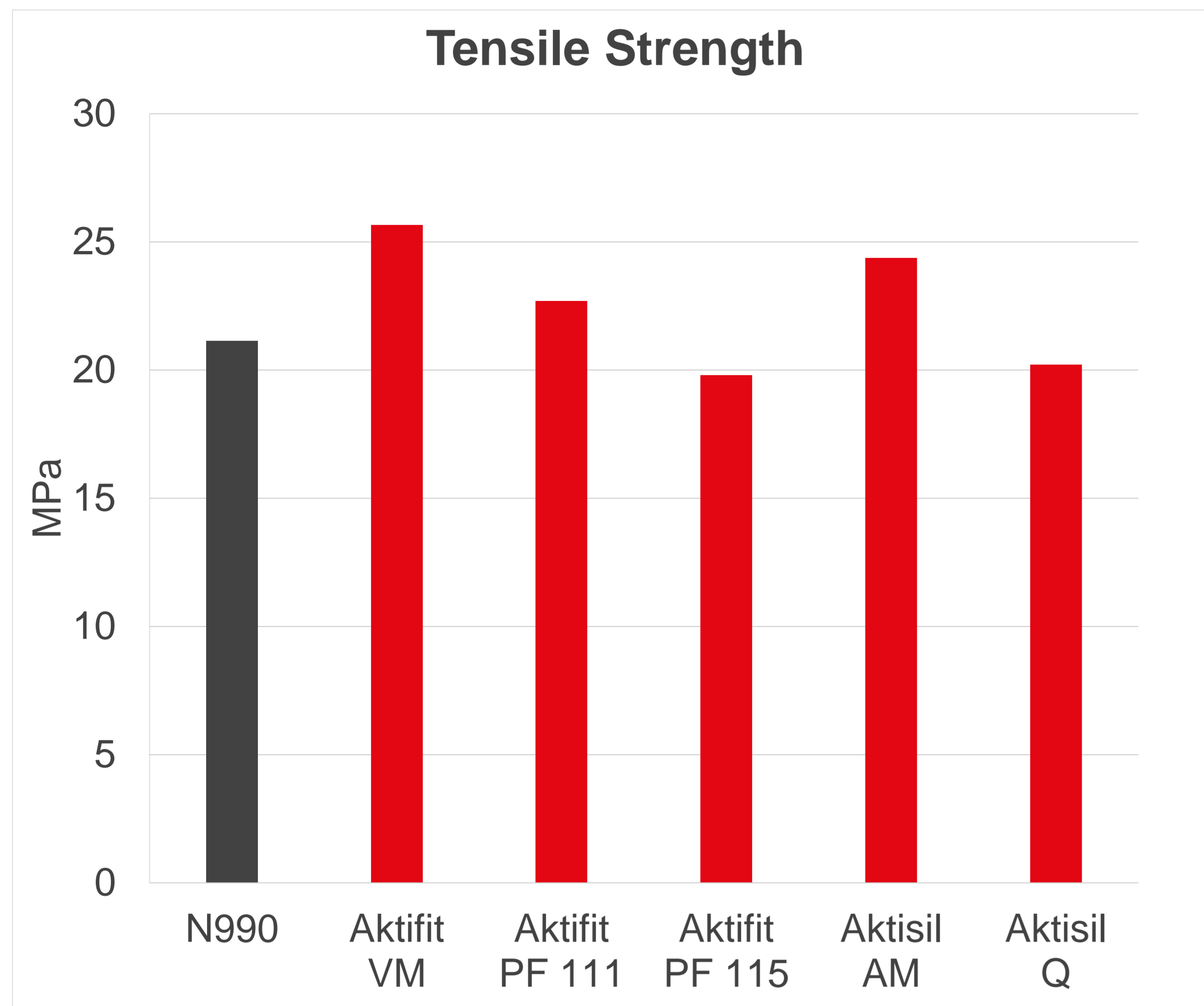
Aktisil Q:

no loss of tensile strength and elongation at break neither after immersion in oil or acetic acid nor in hot air and excellent compression set

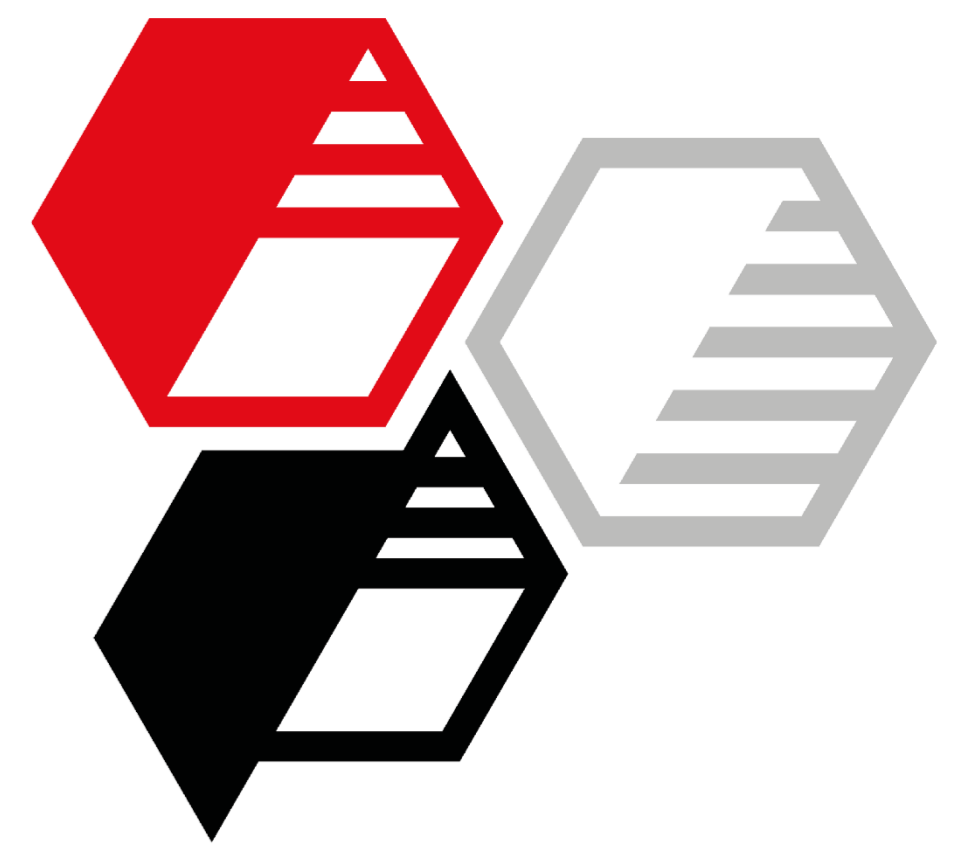
Neuburg Siliceous Earth (NSE) in FKM, peroxide cured, acid resistant and tintable alternative to carbon black N990



Results – samples post-cured, 2 h / 232 °C



Neuburg Siliceous Earth (NSE) in FKM, peroxide cured, acid resistant and tintable alternative to carbon black N990



Results – samples post-cured, 2 h / 232 °C

