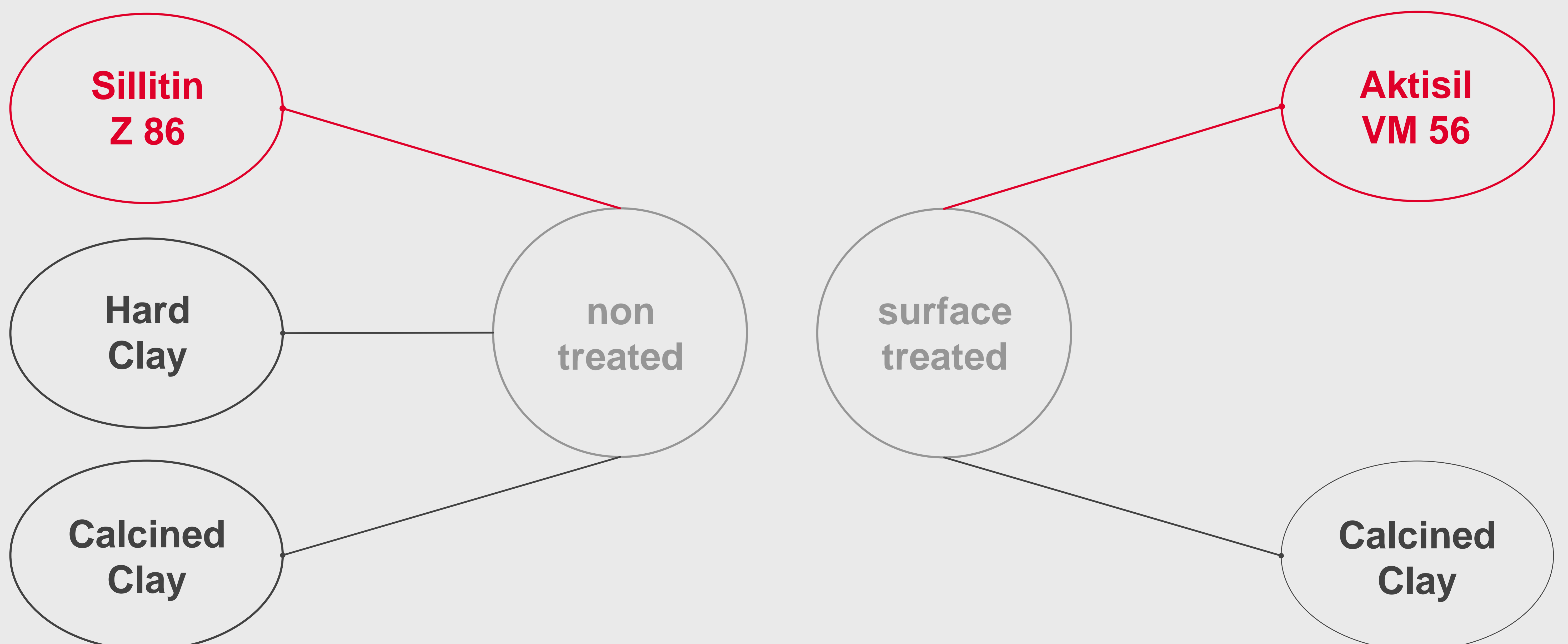


NEUBURG SILICEOUS EARTH IN NON-BLACK FILLERS IN PEROXIDE CURED EPDM CABLE INSULATION COMPOUNDS

FORMULATION

| in phr | without whiting | with whiting |
|------------------------------|-----------------|--------------|
| Buna AP 258 (Buna EP G 3963) | 130.0 | 100.00 |
| Stearic acid | 1.0 | 14.61 |
| Zinkoxyd aktiv | 5.0 | 1.28 |
| Paraffin 54/56 | 4.0 | 4.0 |
| Mineral Filler | 225.0 | 125.0 |
| Whiting | - | 100.0 |
| Sunpar 2280 | 15.0 | 15.0 |
| Vulkanox HS/LG | 1.0 | 1.0 |
| Vulkanox MB/MG | 0.5 | 0.5 |
| TAC GR 50 % | 2.0 | 2.0 |
| Perkadox 14/40 pd | 8.0 | 8.0 |
| Total | 391.5 | 391.5 |

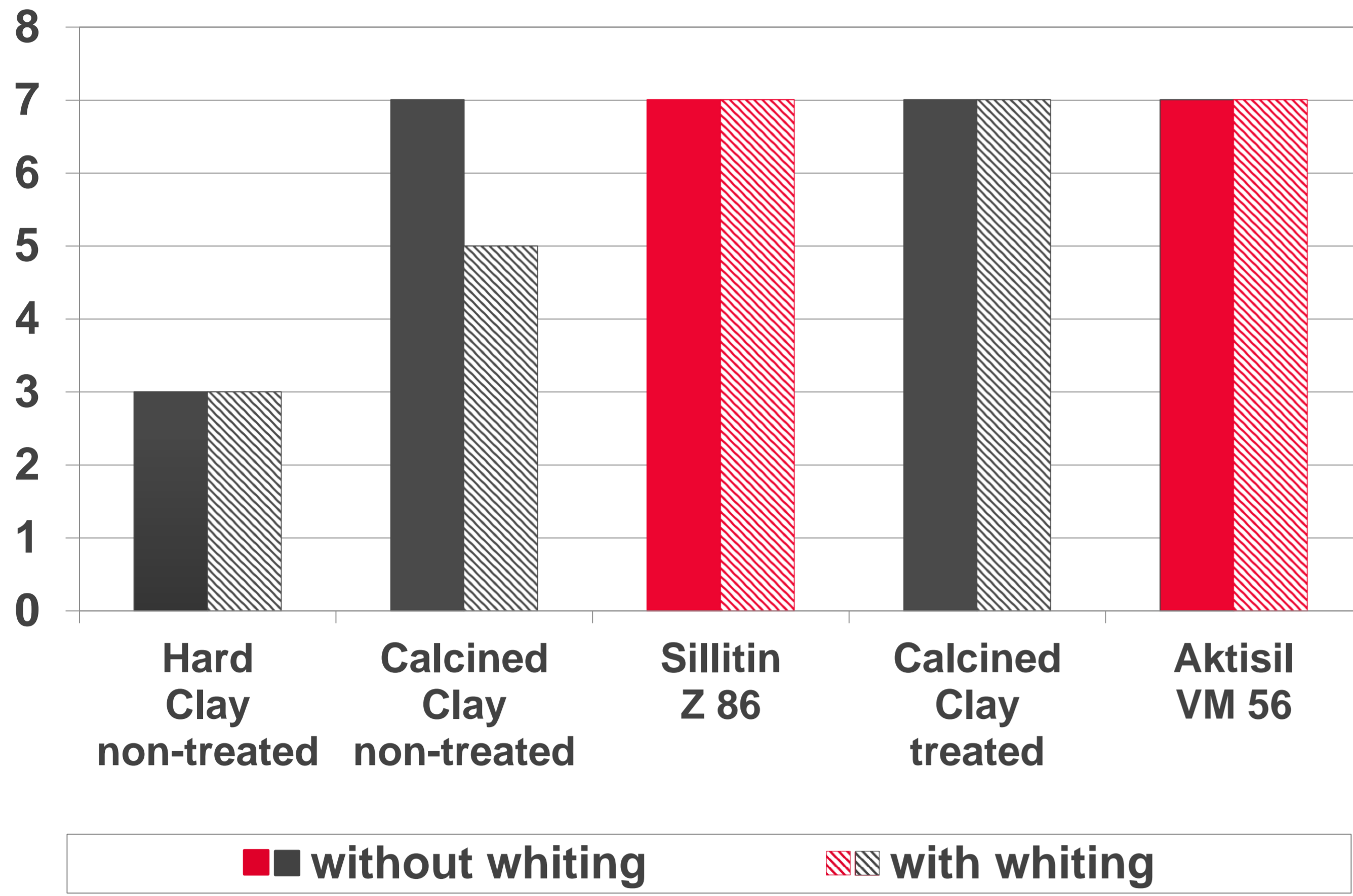
MINERAL FILLERS



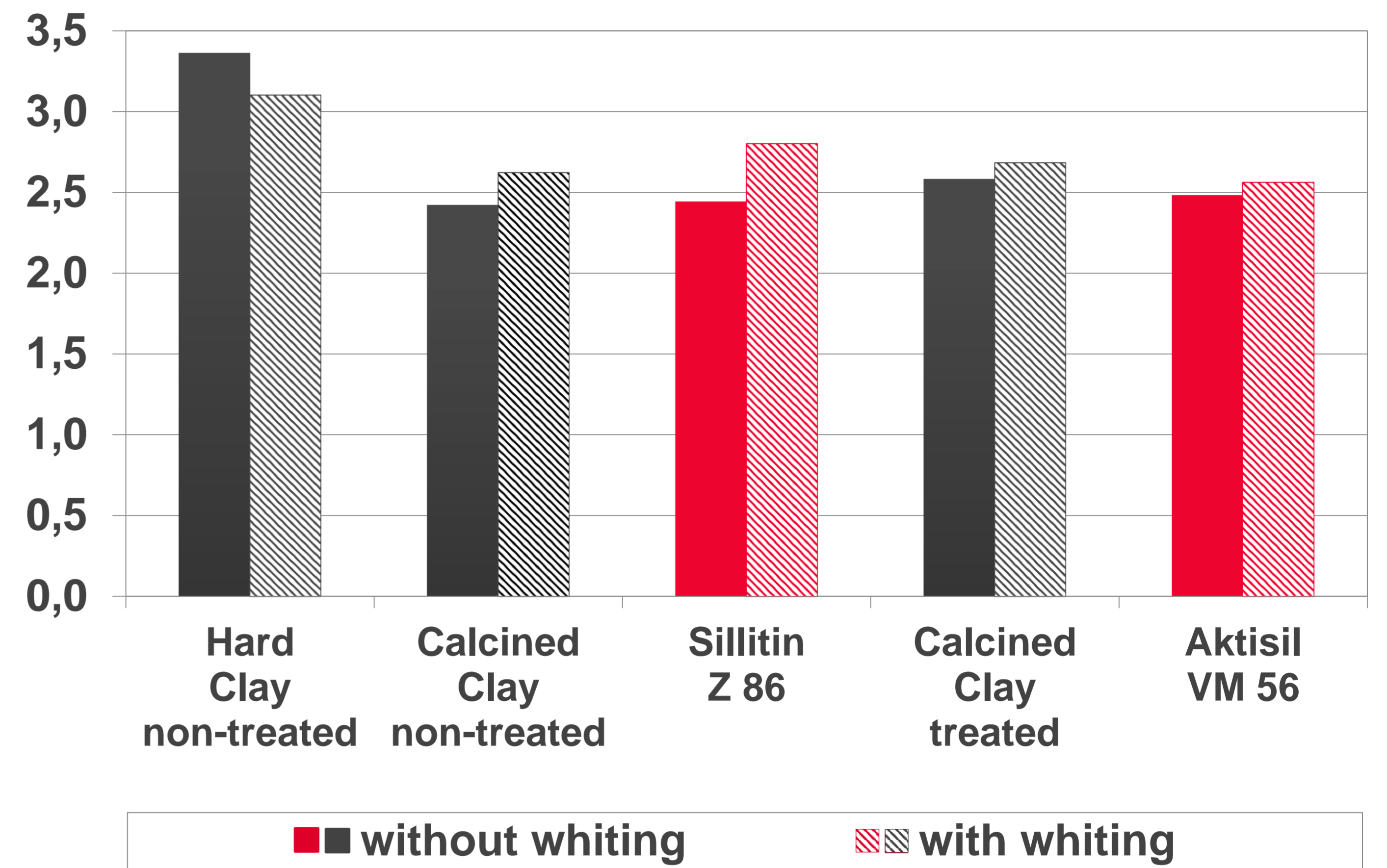
NEUBURG SILICEOUS EARTH IN NON-BLACK FILLERS IN PEROXIDE CURED EPDM CABLE INSULATION COMPOUNDS

RESULTS

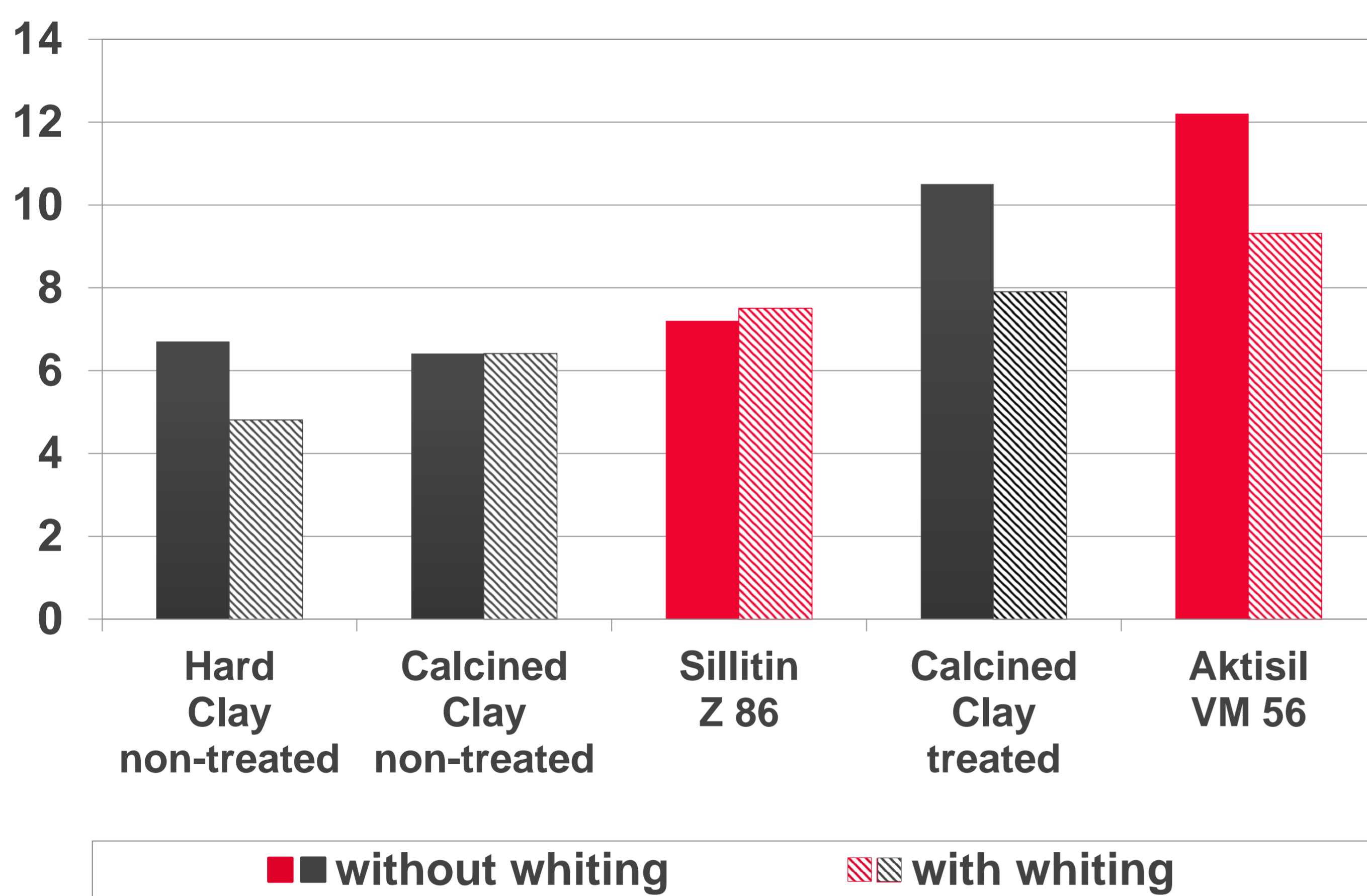
Garvey Extrusion 50 rpm – Rating (Swelling + Surface)



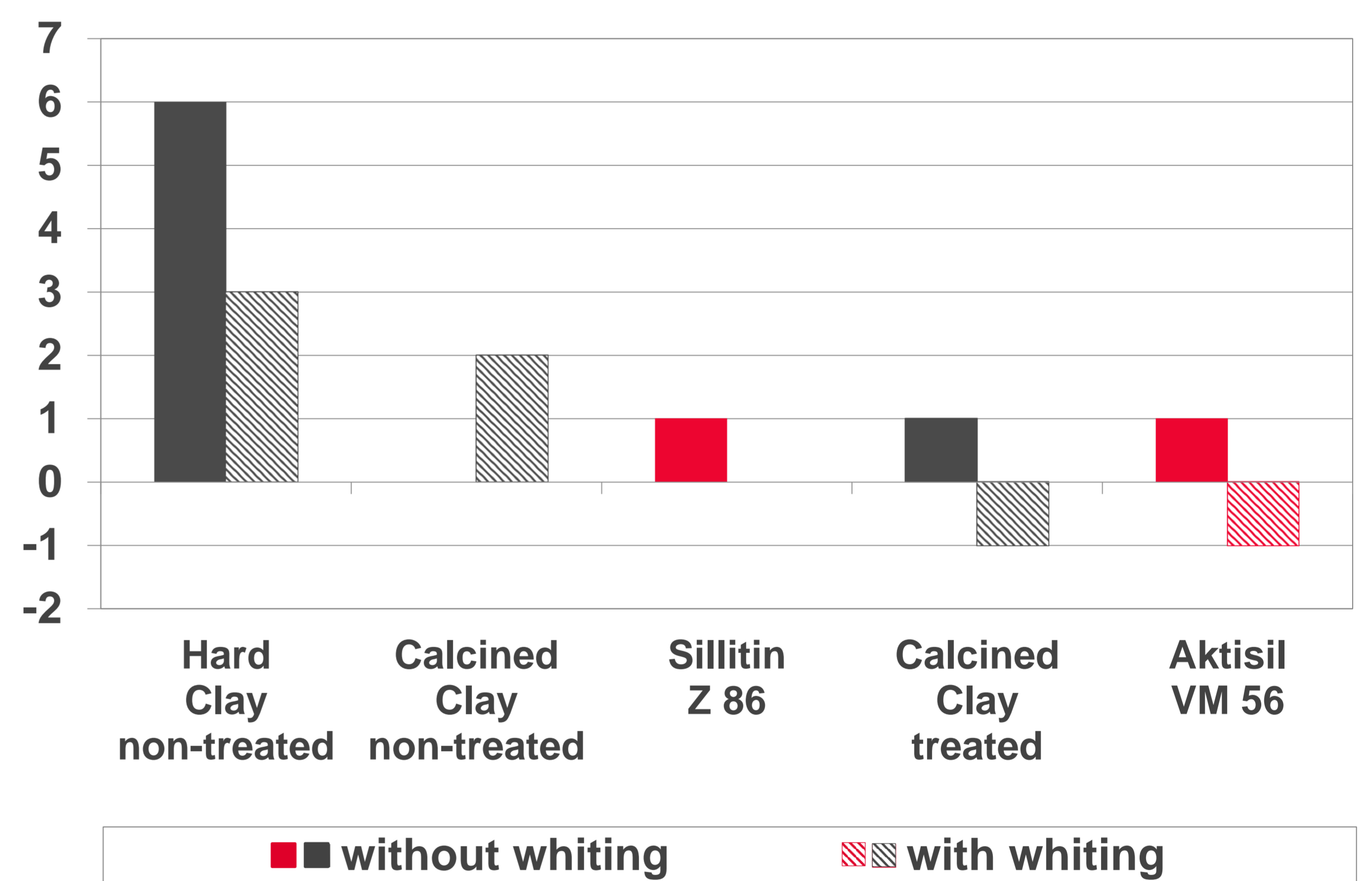
Output 50 rpm [m/min.]



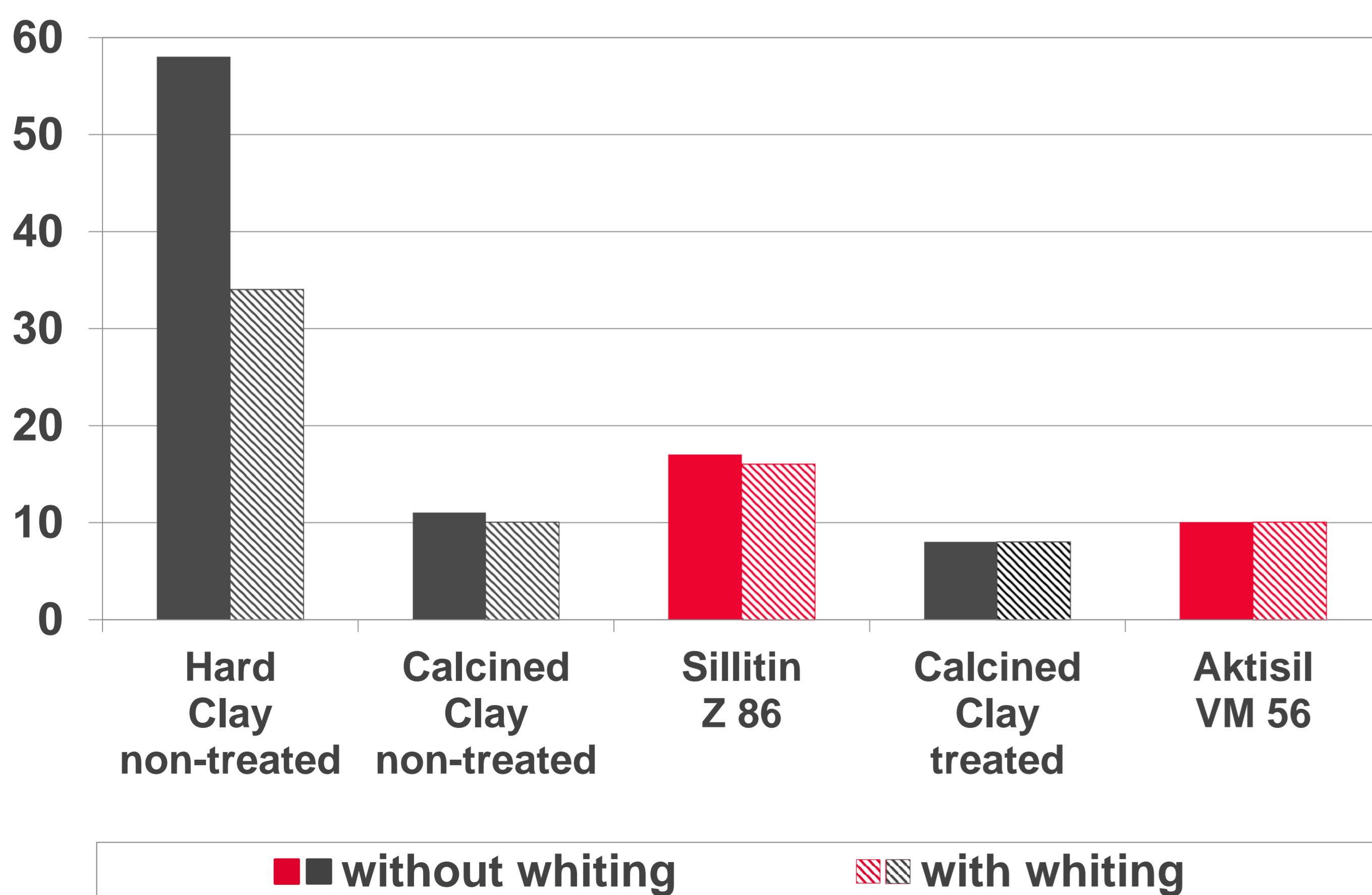
Tensile Strength [MPa]



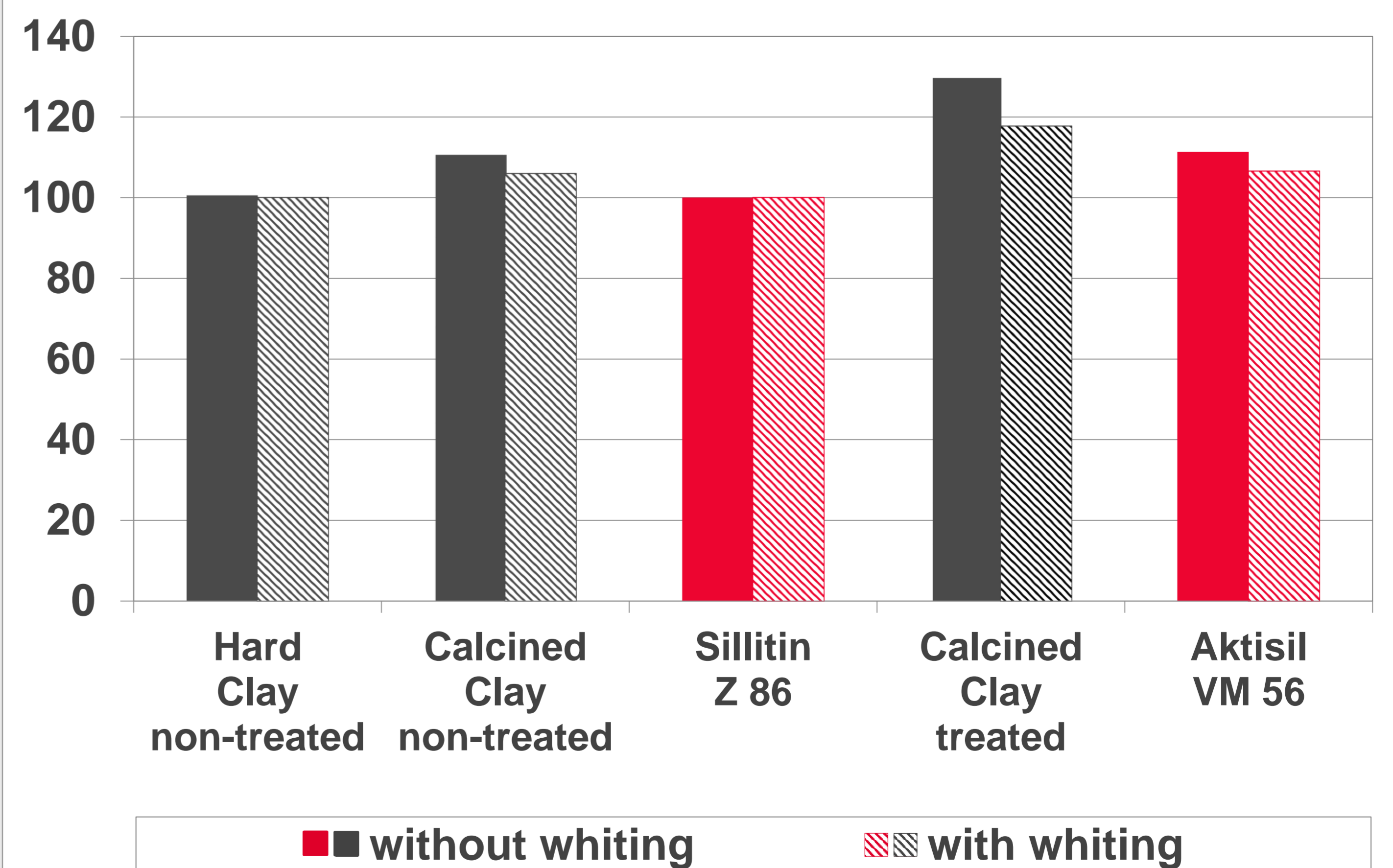
Change of Hardness [Shore A]
after Hot Air Aging, 168 h / 100 °C



Compression Set, 24 h / 100 °C [%]



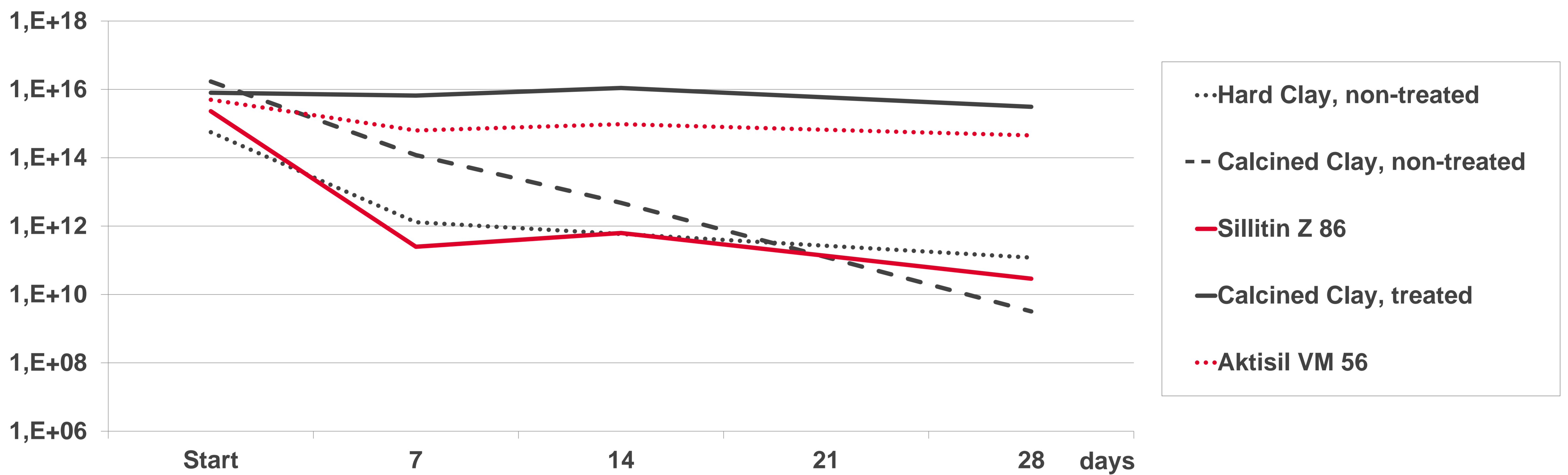
Compound Raw Material Cost Indices, Volume Related
Germany 2009, Basis: Sillitin Z 86



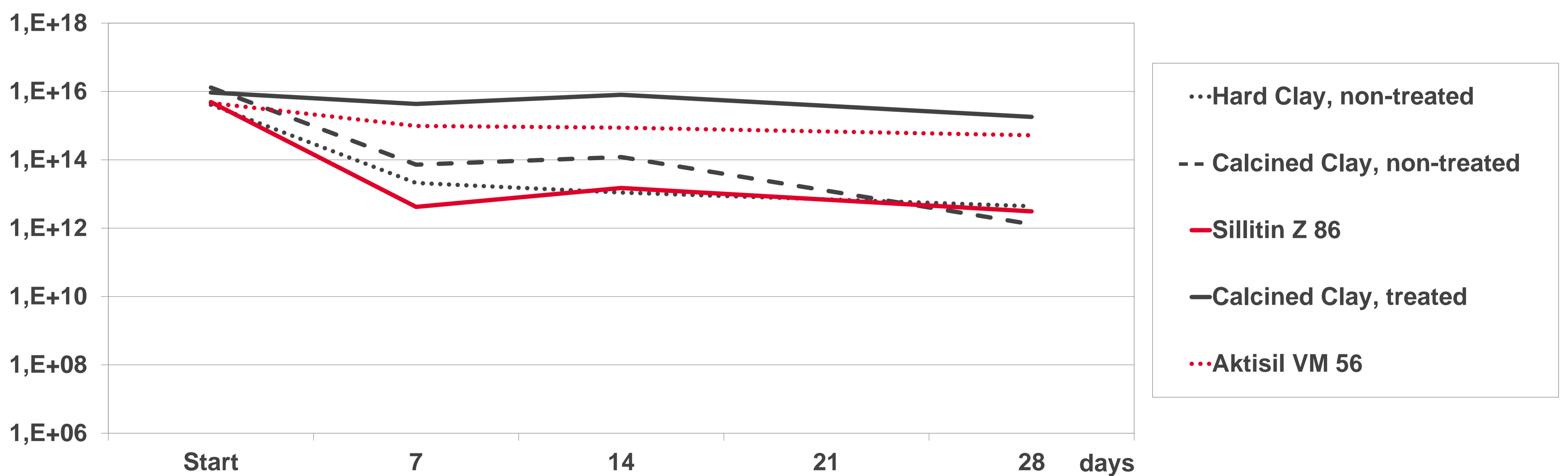
NEUBURG SILICEOUS EARTH IN NON-BLACK FILLERS IN PEROXIDE CURED EPDM CABLE INSULATION COMPOUNDS

RESULTS

Volume Resistivity [$\Omega \cdot \text{cm}$] – without Whiting
Immersion in Deionized Water at 70 °C



Volume Resistivity [$\Omega \cdot \text{cm}$] – with Whiting
Immersion in Deionized Water at 70 °C



Non-treated Fillers

- Hard Clay
 - the weakest filler in combination with as well as without whiting
- Calcined Clay and Sillitin Z 86
 - similar results in combination with whiting
 - Sillitin Z 86 superior without whiting
- best suited non-treated filler including cost considerations
 - ✓ Sillitin Z 86

Surface treated Fillers

- Calcined Clay and Aktisil VM 56
 - equal level in both combinations
- best suited product in this comparison including cost considerations
 - ✓ Aktisil VM 56