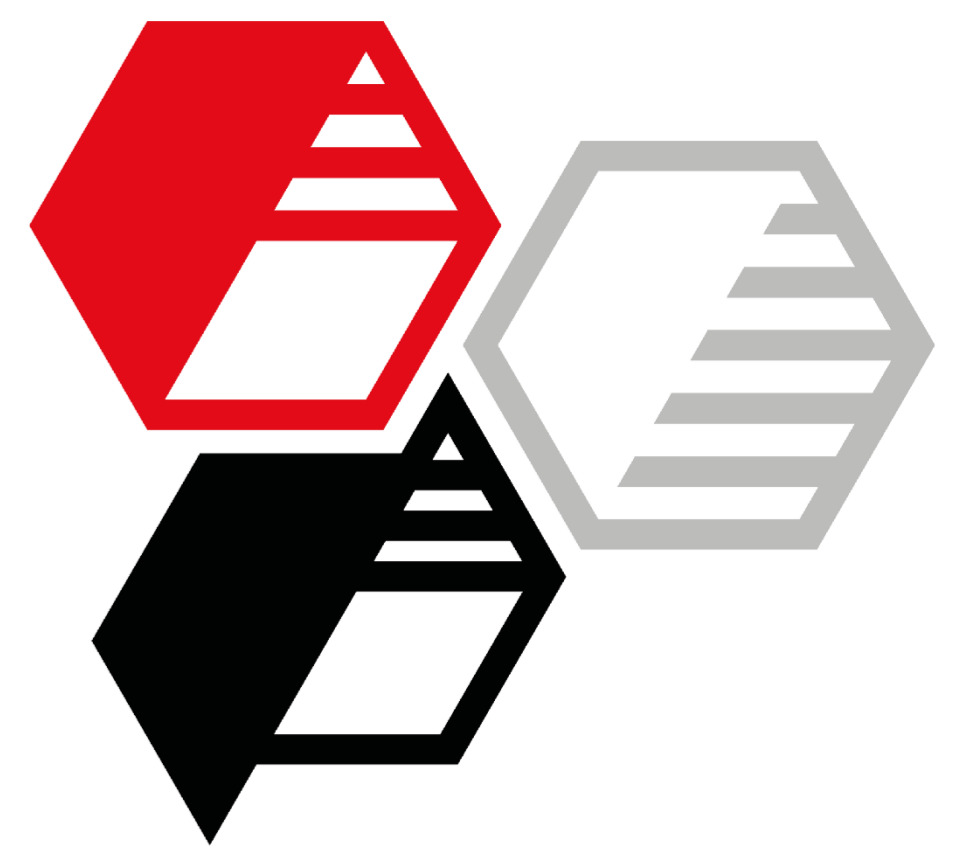
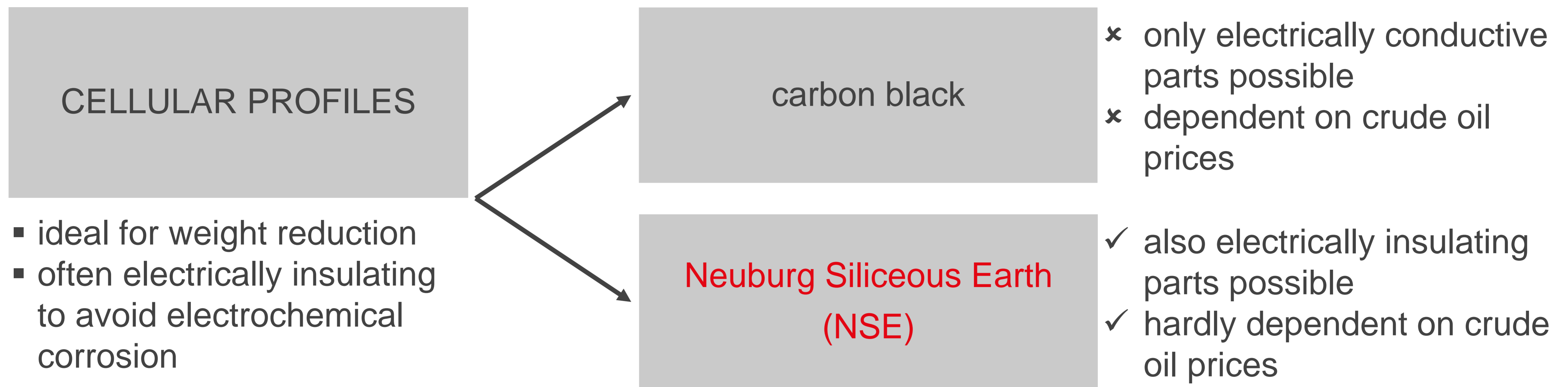


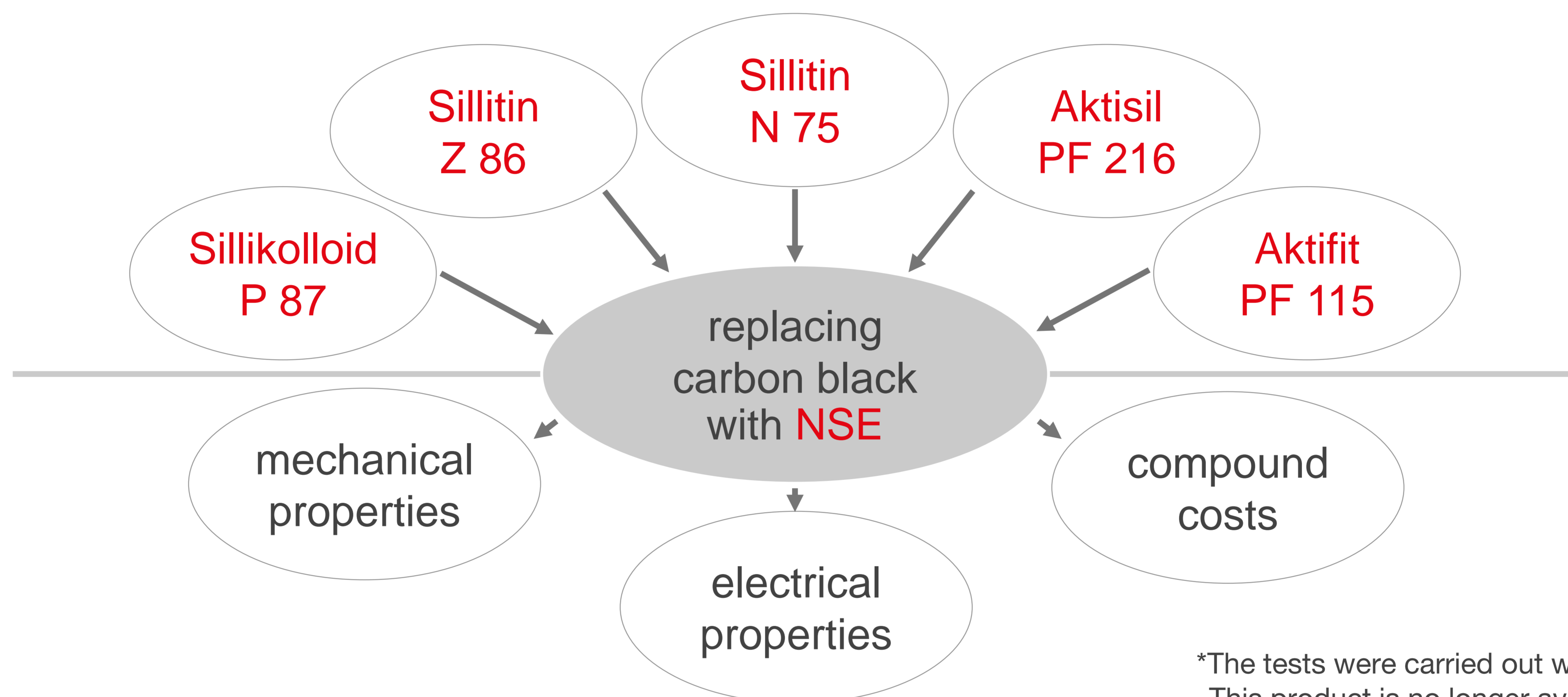
# Partial replacement of carbon black with Neuburg Siliceous Earth in cellular EPDM profile compounds



## Status quo



## Objective

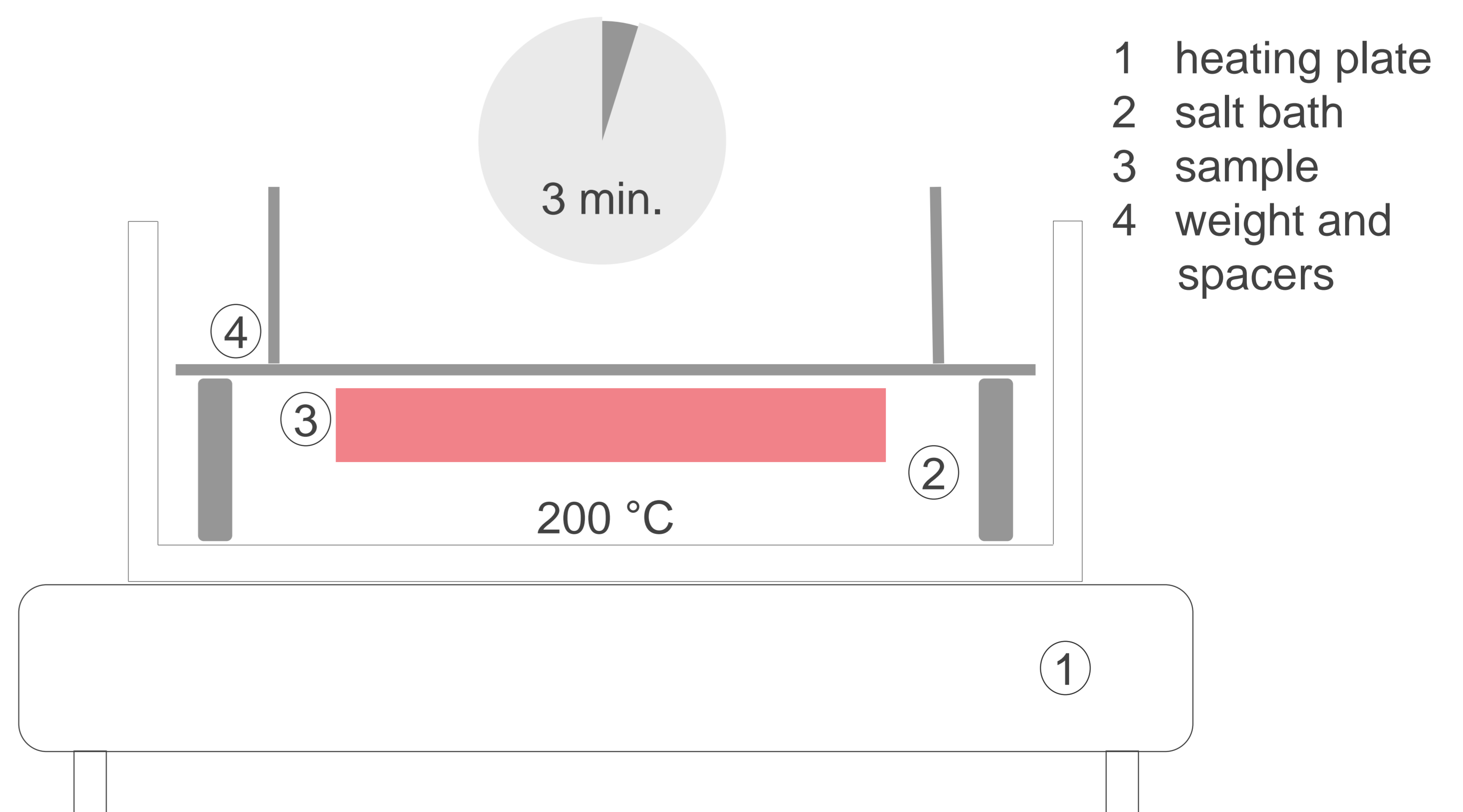


\*The tests were carried out with Sillitin N 82. This product is no longer available. Recommended: Sillitin N 75.

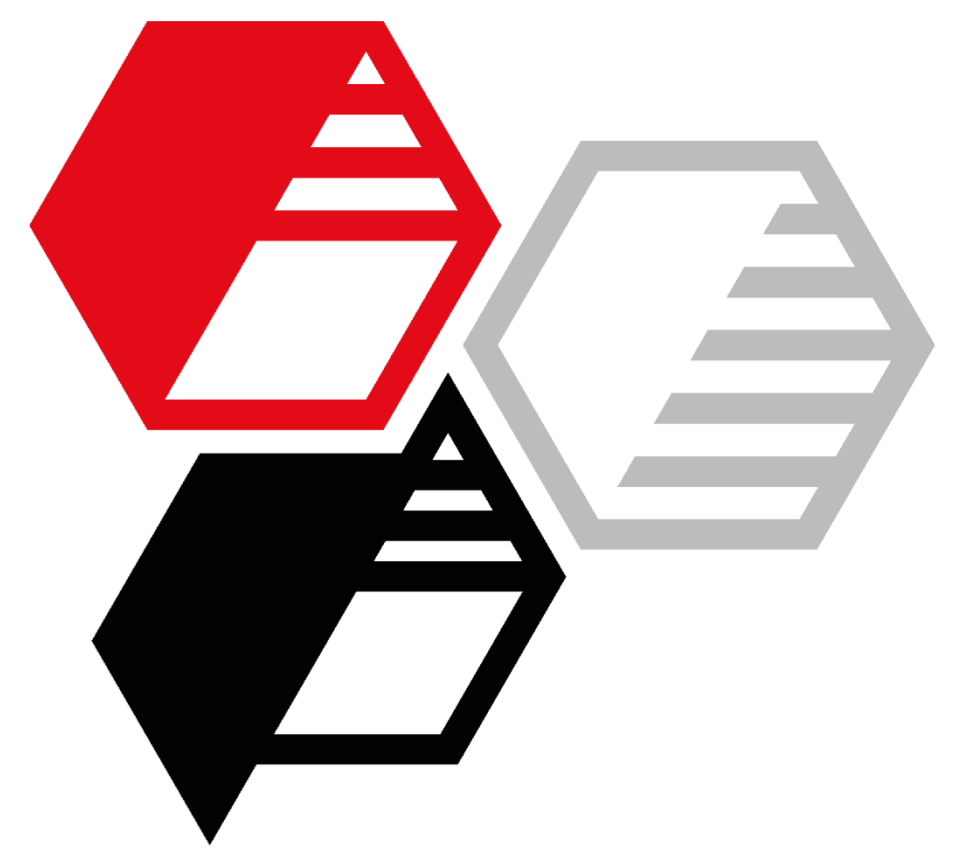
## Formulation and curing in salt bath

Ingredients	phr
Keltan 8550C	100
Carbon Black N 550	as indicated
<b>NSE</b>	<b>as indicated</b>
Process Oil P 460	70
Zinkoxyd aktiv	8
Stearic acid	1
Kezadol GR	2.25
PEG 4000	2
Rhenogran DPG-80	1.1
Rhenogran MBT-80	2
Rhenogran ZBEC-70	2
Rhenogran TP-50	4
Sulfur	1.52
Rhenogran CLD-80	1
TRACEL K 3/95	2.5
TRACEL OBSH 75 EPR-1	1.9

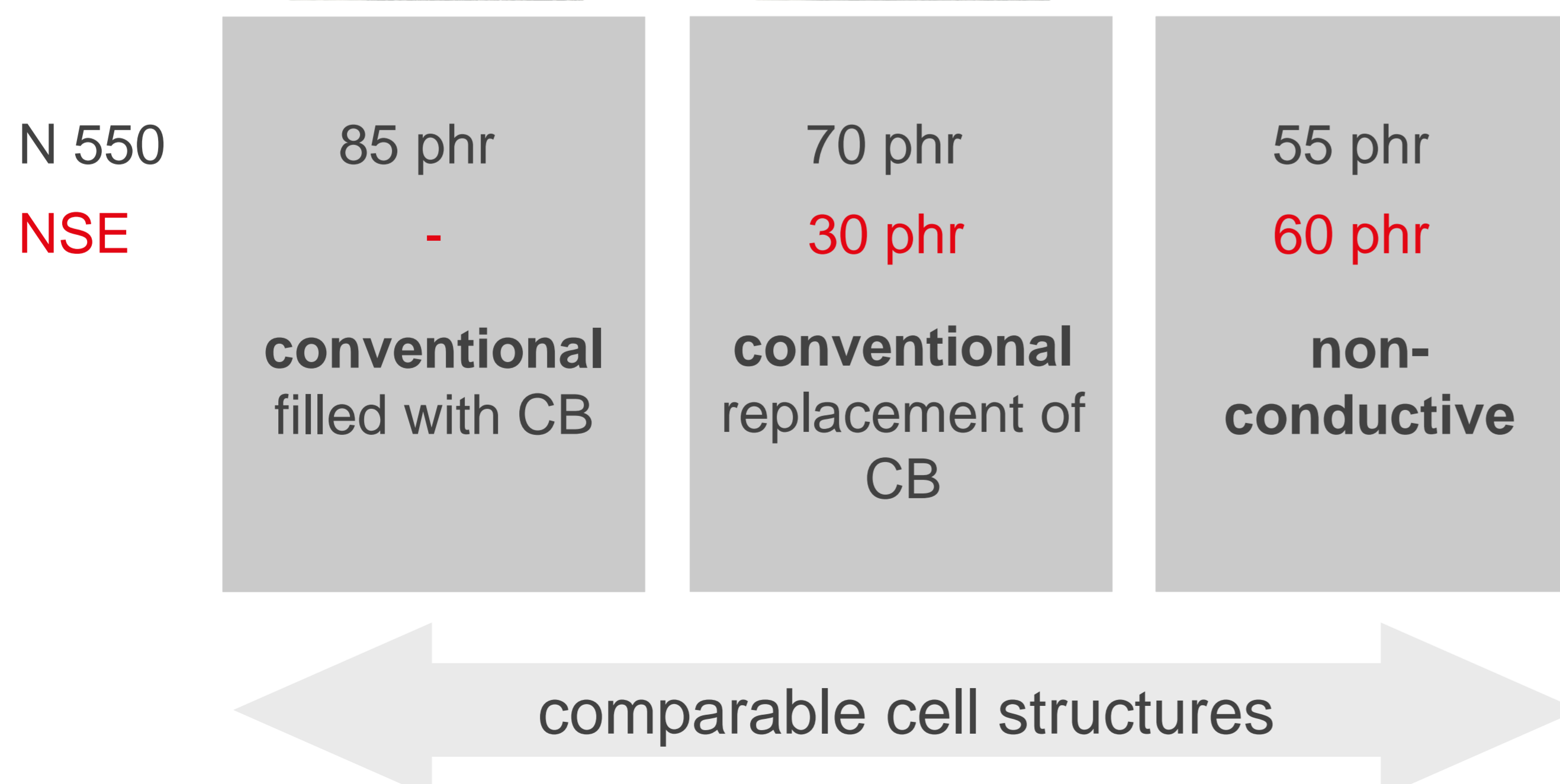
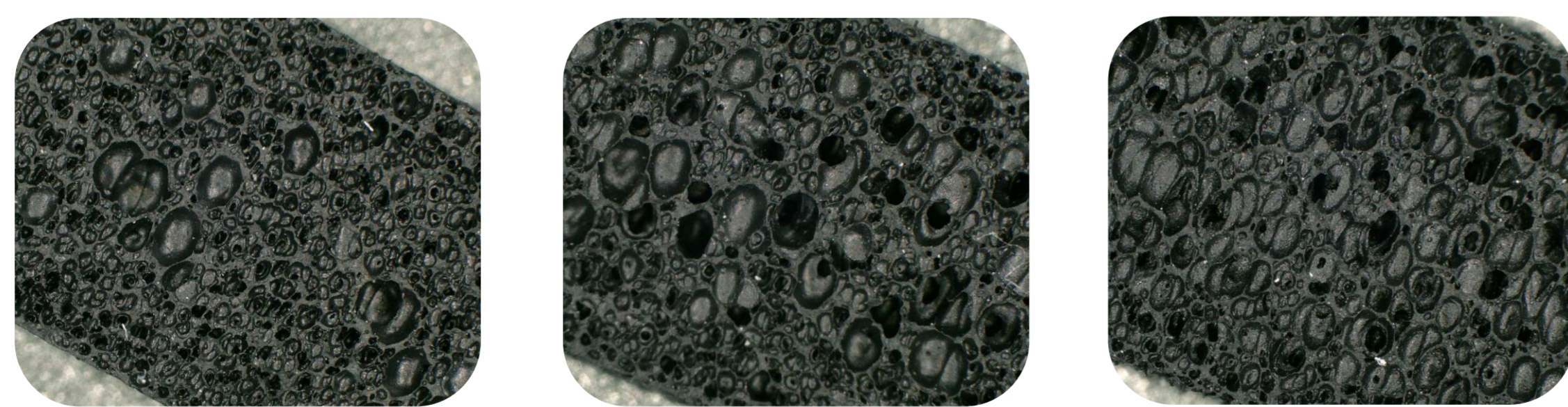
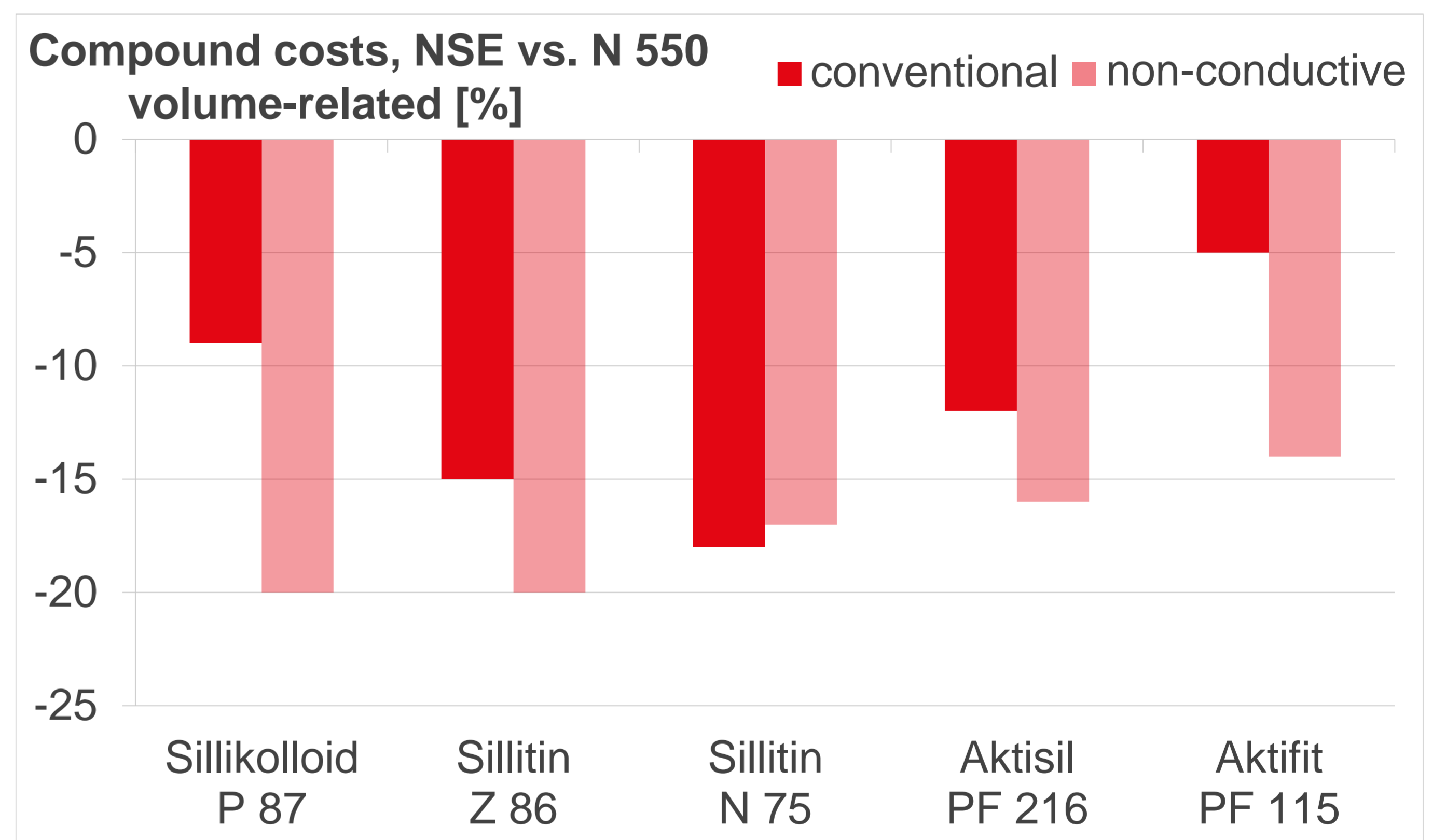
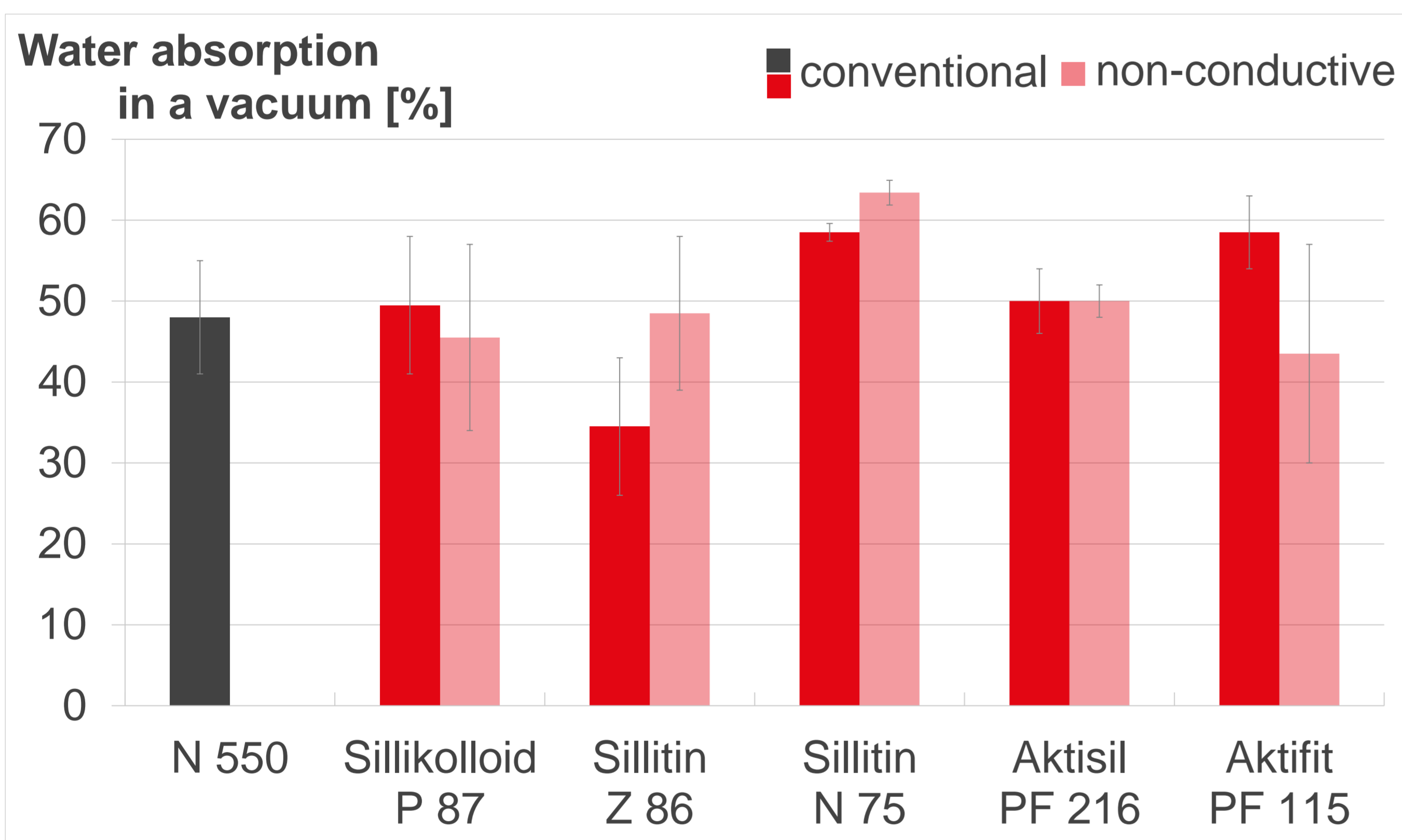
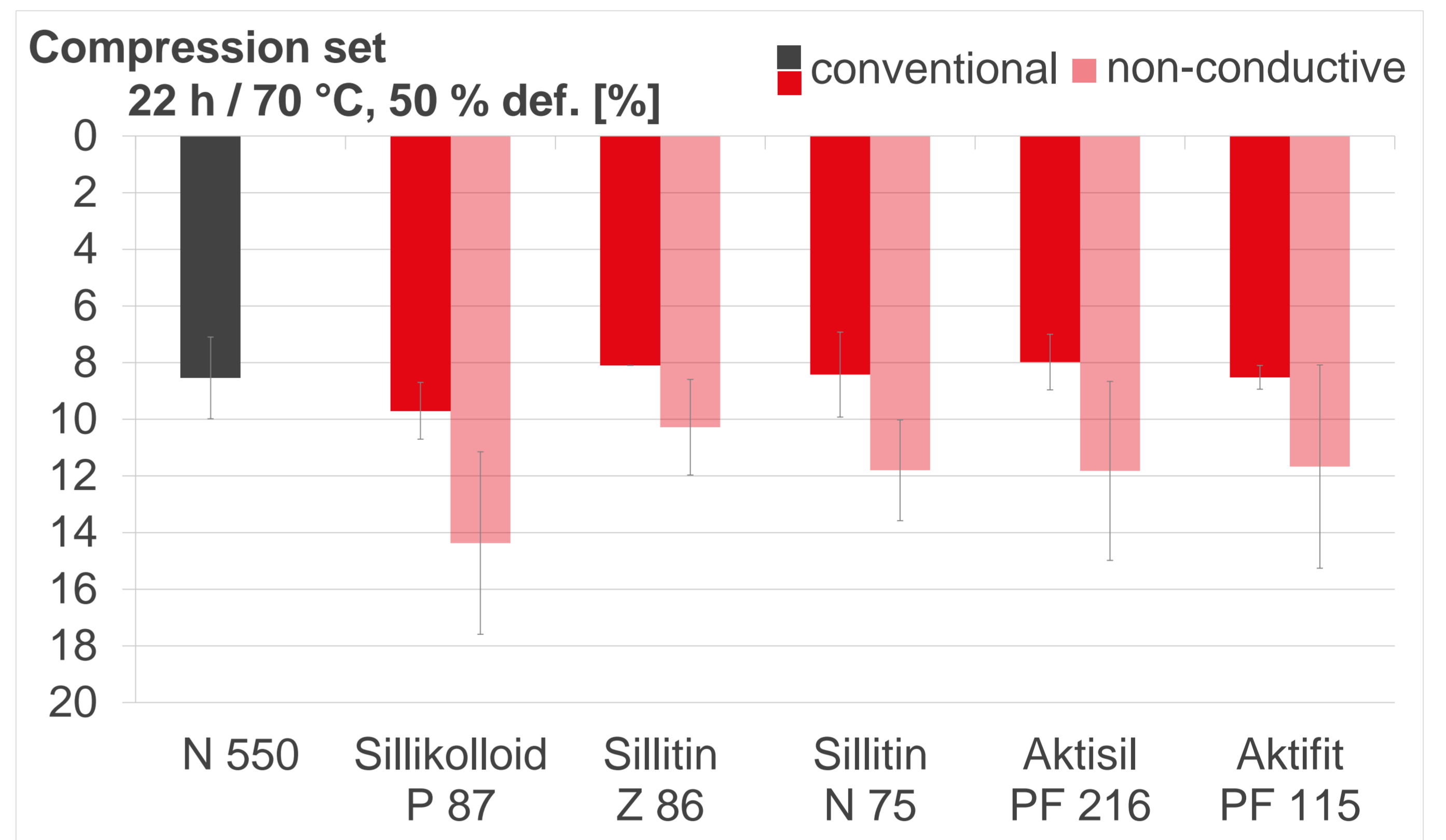
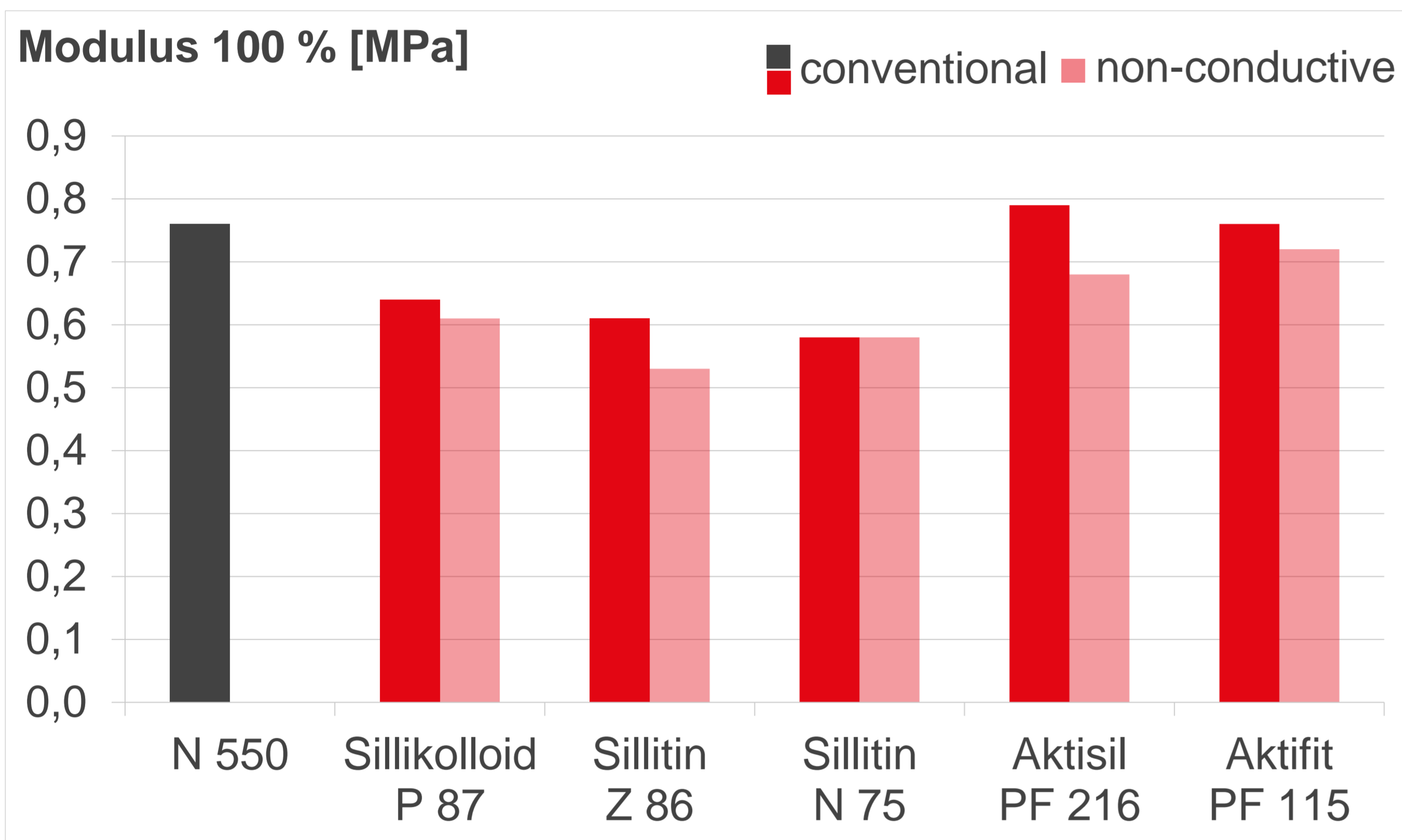
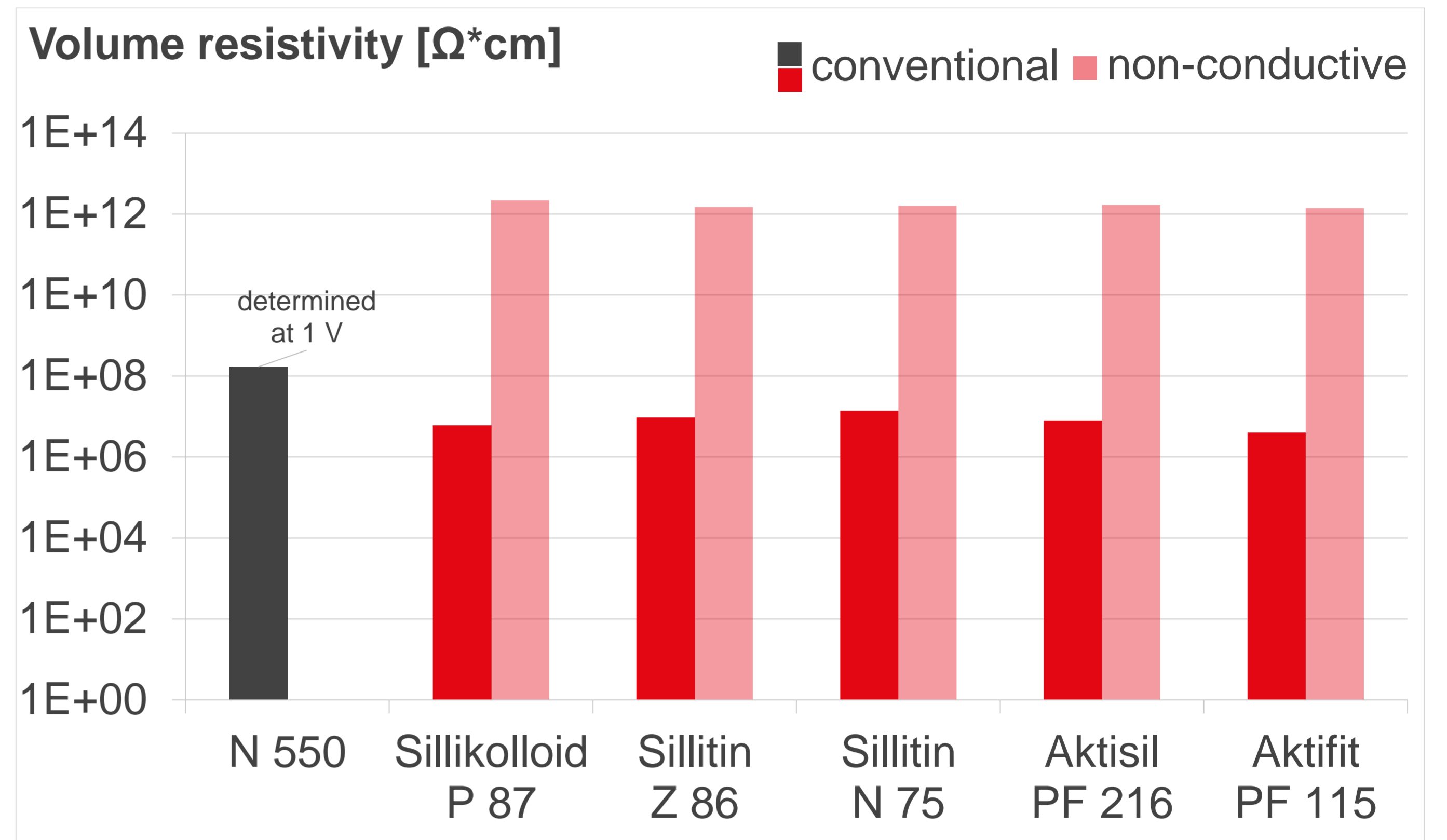
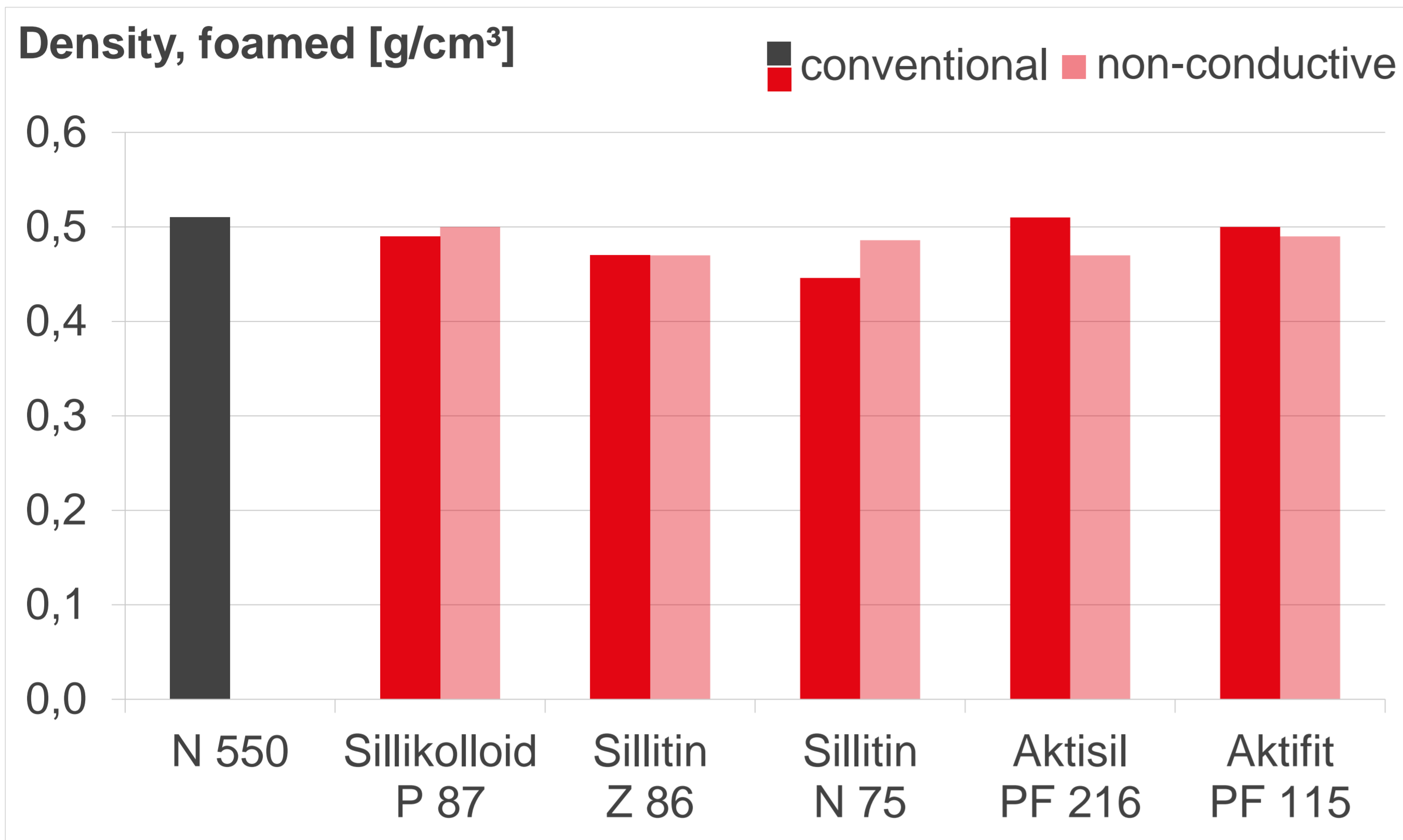
in phr	conventional filled with CB	conventional replacing CB	non-conductive
<b>N 550 [vol.%]</b>	18.8	15.3	11.9
N 550	85	70	55
<b>NSE</b>	-	<b>30</b>	<b>60</b>



# Partial replacement of carbon black with Neuburg Siliceous Earth in cellular EPDM profile compounds



## Results



## Summary

### Replacing carbon black with NSE

generally:

- ➔ comparable cell structures
- ➔ reduced compound costs
- ➔ comparable modulus levels with **Aktisil PF 216** and **Aktifit PF 115**

+ in **conventional** compound version:

- ➔ comparable compression set
- ➔ reduced water absorption with **Sillitin Z 86**

+ in **non-conductive** compound version:

- ➔ increased volume-resistivity