

# NEUBURG SILICEOUS EARTH IN EPOXY POWDER COATING (FBE), E.G. FOR PIPELINES

## OBJECTIVE

Sillitin Z 86, Aktisil AM and Aktisil MM as Functional Fillers  
in an Epoxy Based Powder Coating

## FORMULATION

Epikote 1055	827	827	827	827	827	827
Epikure curing agent P-104	33	33	33	33	33	33
BYK 368-P	10	10	10	10	10	10
Bayferrox 222	15	15	15	15	15	15
Barium sulfate	120 *		240			
<b>Sillitin Z 86</b>		<b>74</b>		<b>149</b>		
<b>Aktisil AM</b>					<b>149</b>	
<b>Aktisil MM</b>						<b>149</b>
<b>Total (parts per weight)</b>	<b>1005</b>	<b>959</b>	<b>1125</b>	<b>1034</b>	<b>1034</b>	<b>1034</b>
PVC [%]	4.2			7.6		

\* Base formulation by Hexion

## SUMMARY

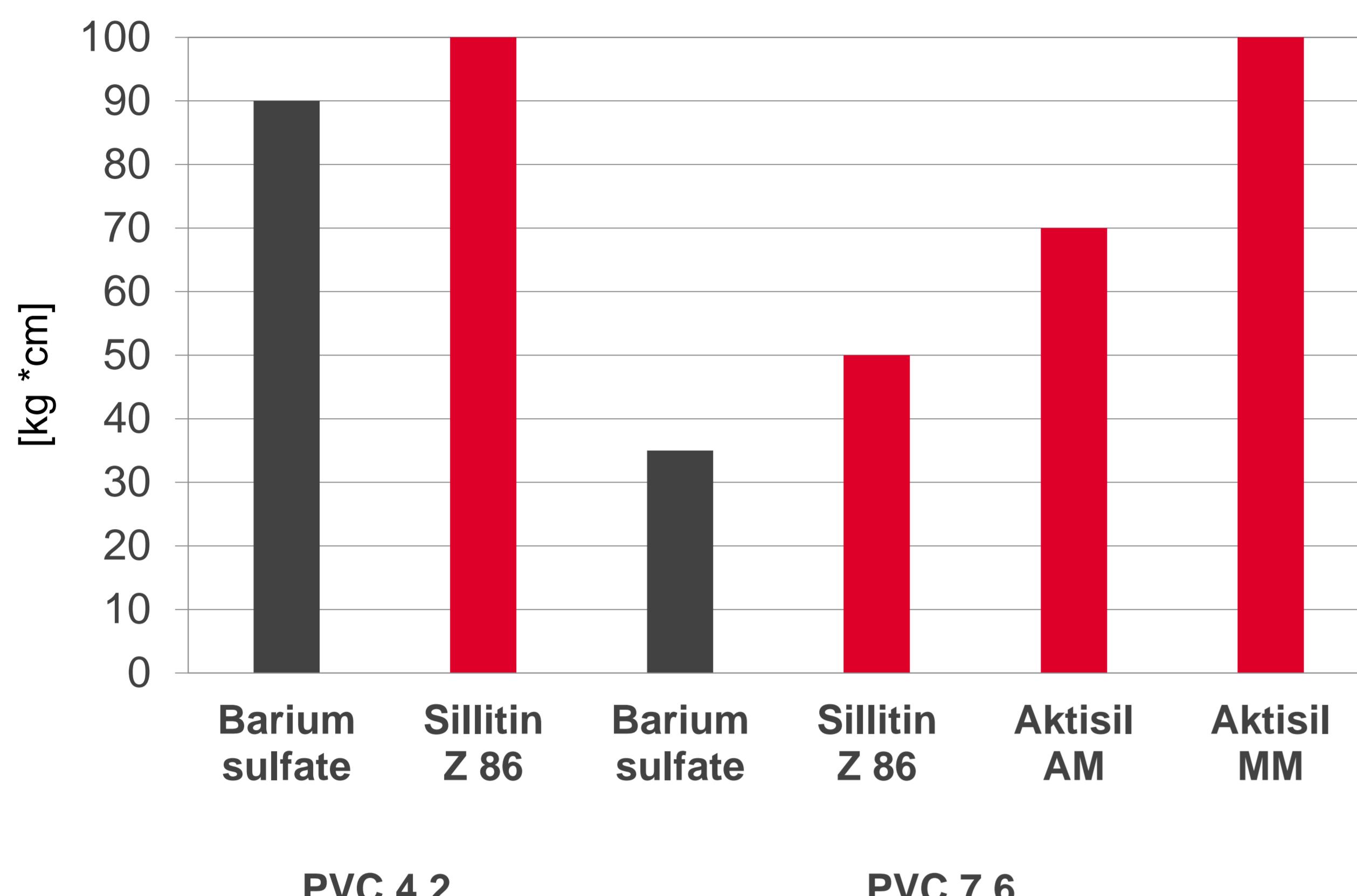
The use of Neuburg Siliceous Earth offer the following benefits:

- better fluidizability
- optical properties remain on a high level
- markedly improved mechanical properties (cupping test, reverse impact test)
- increased abrasion resistance
- markedly reduced delamination, low corrosion at scribe
- increased hot water resistance

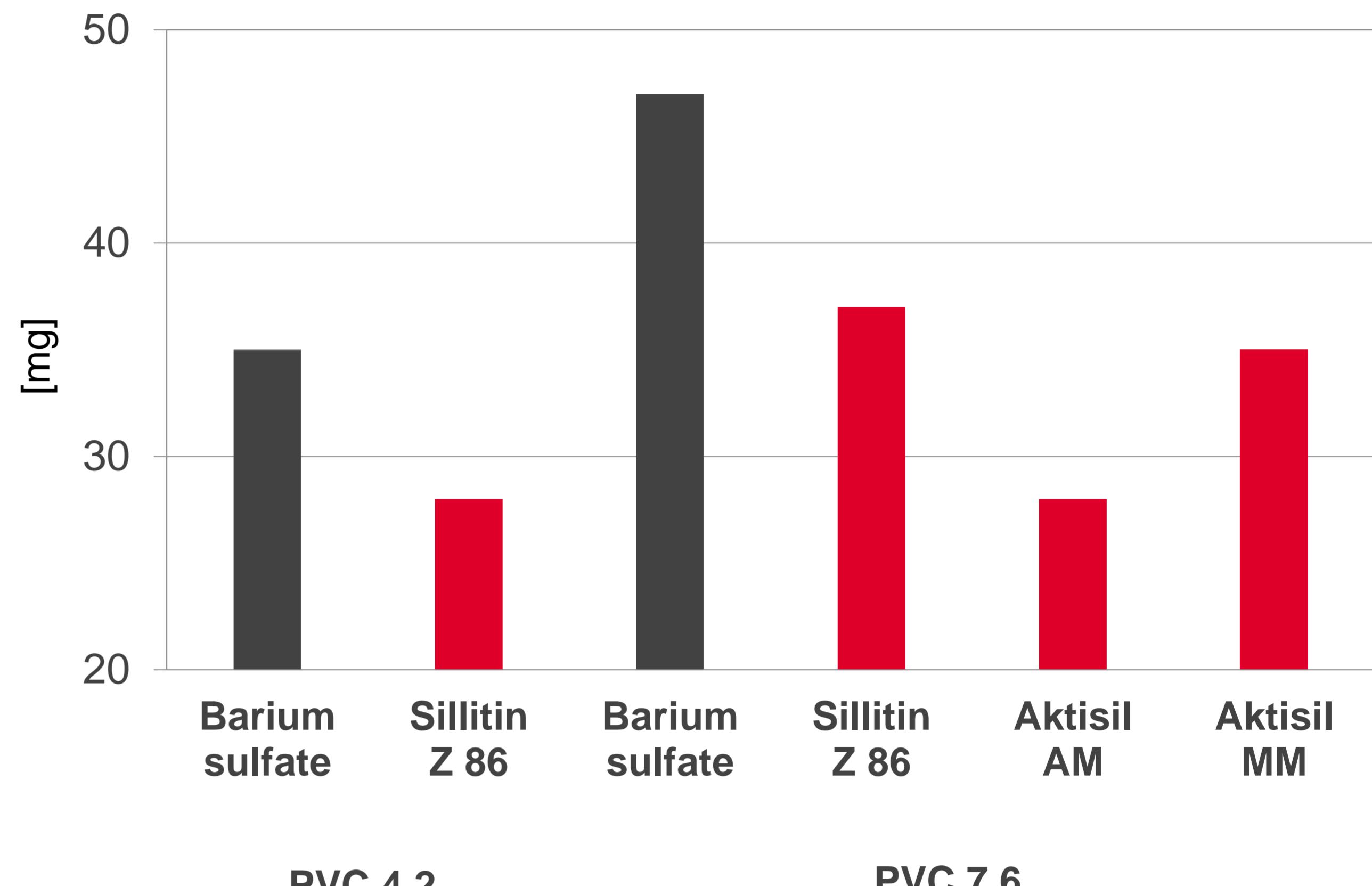
# NEUBURG SILICEOUS EARTH IN EPOXY POWDER COATING (FBE), E.G. FOR PIPELINES

**Substrate:** sandblasted steel (surface roughness 50-70 µm),  
pre-heated to 200 °C; **Curing:** 10 min PMT 200 °C, DFT 300-600 µm

Reverse Impact Test  
DIN EN ISO 6272

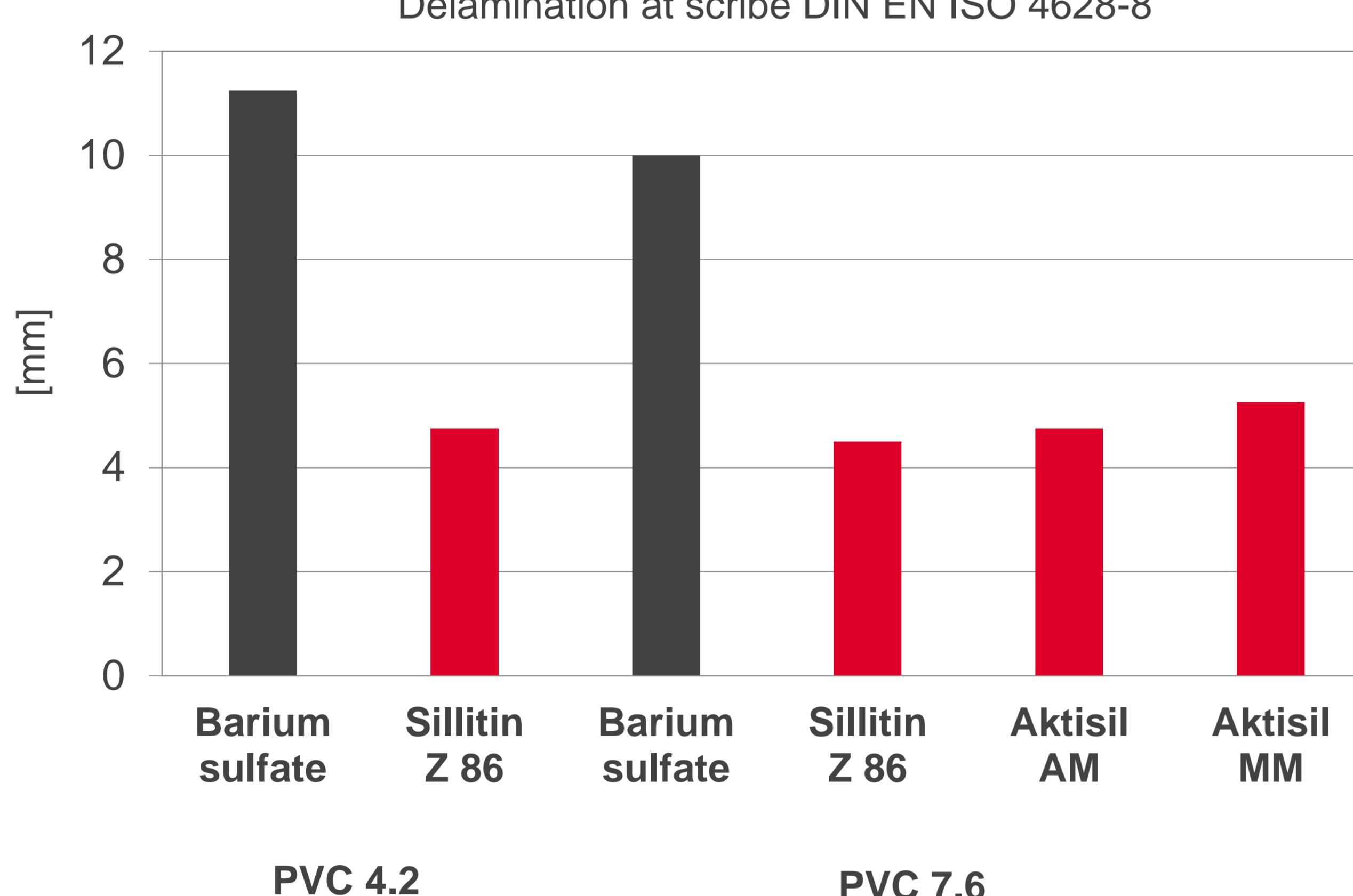


Abrasion Loss ASTM D 4060



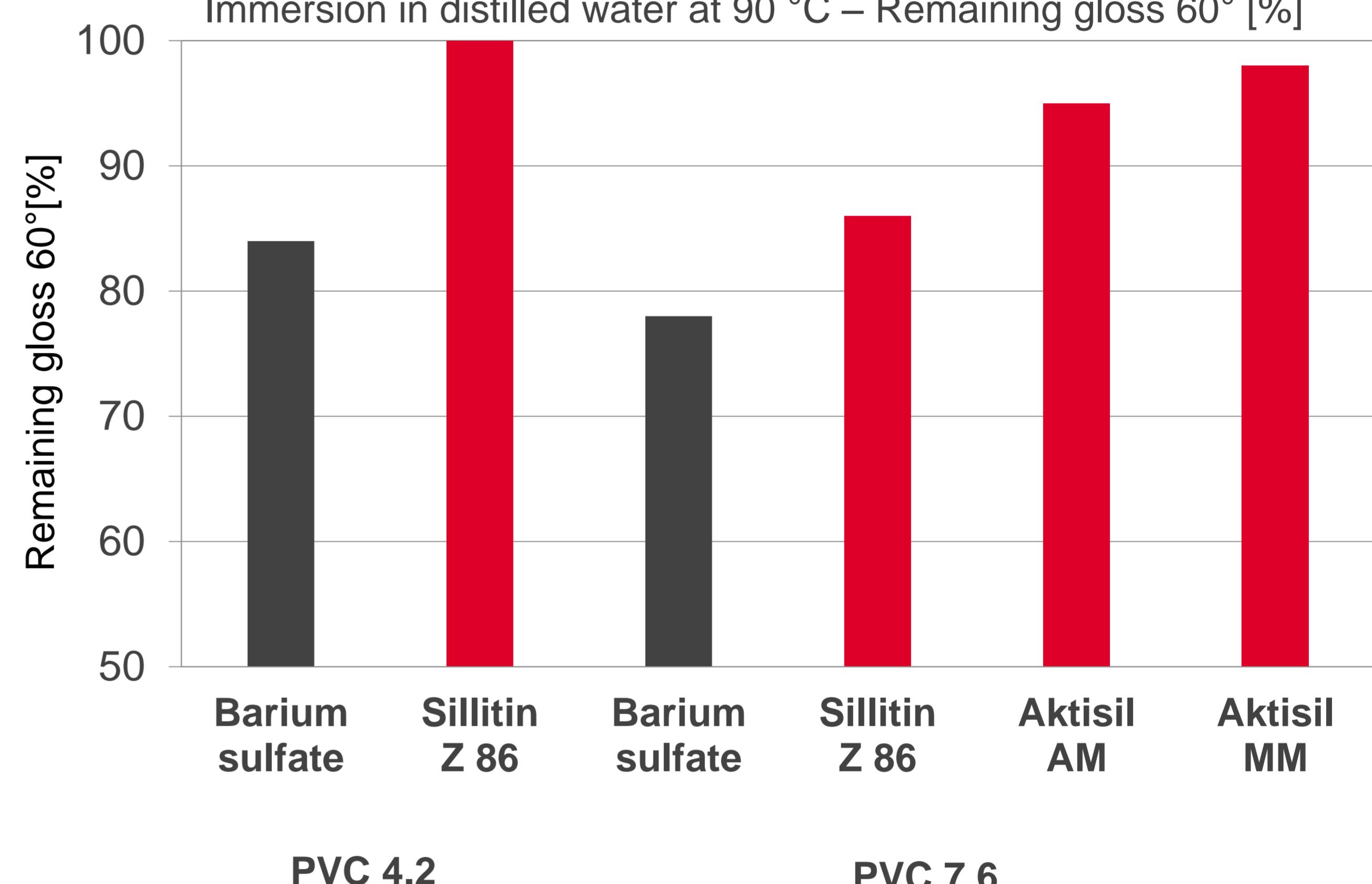
Salt Spray Test 2000 h  
DIN EN ISO 9227

Delamination at scribe DIN EN ISO 4628-8



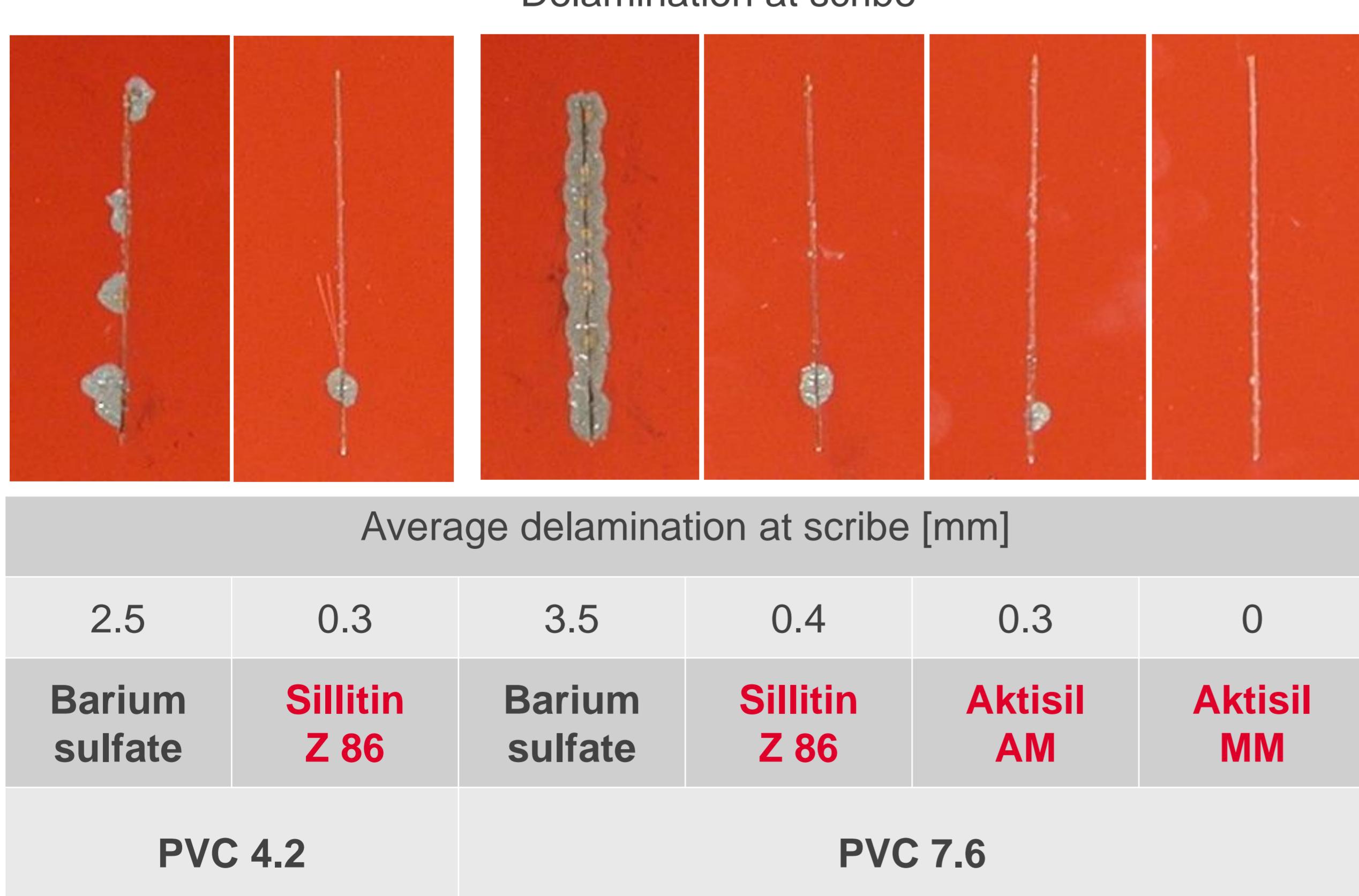
Hot Water Resistance 1700 h  
DIN EN ISO 2812-2

Immersion in distilled water at 90 °C – Remaining gloss 60° [%]



Humidity Test (CH) 4000 h  
DIN EN ISO 6270-2

Delamination at scribe



Hot Water Resistance 1700 h  
DIN EN ISO 2812-2

Immersion in distilled water at 90 °C – Color change delta E

