

# NEUBURG SILICEOUS EARTH IN POWDER COATINGS, POLYESTER/PRIMID FOR OUTDOOR COATINGS (RAL 7016)

## OBJECTIVE

Optimizing and improving the optical and mechanical properties, especially the demanded resistances of the powder coating

## FORMULATION

Base Formulation	[%]
Crylcoat 2618-3 (Polyester resin)	75.0
Primid XL 552 (Hydroxyalkylamide, crosslinker)	3.6
Ceraflour 991 (Polyethylene wax, micronized)	0.3
Pigments for RAL 7016 (TiO <sub>2</sub> , red, blue, yellow and black)	6.94
BYK 3900P (Anti-crater and leveling additive)	1.0
Benzoin (leveling agent)	0.4
<b>Filler</b>	<b>12.76</b>
<b>Total</b>	<b>100</b>

## Formulation Variations

### High gloss (60°: ~ 90 GU):

- Blanc fixe (Reference)
- **Aktifit PF 115 (calcined product for high gloss)**
- **Silfit Z 91 (calcined product with outstanding mechanical properties)**

### Medium gloss / standard in facade sector (60°: ~ 75 GU)

- Aluminum hydroxide/ATH (Reference)
- **Sillitin V 88 (standard product for matting)**

Substrates: aluminum chromated (Al 48) and steel (R 48)

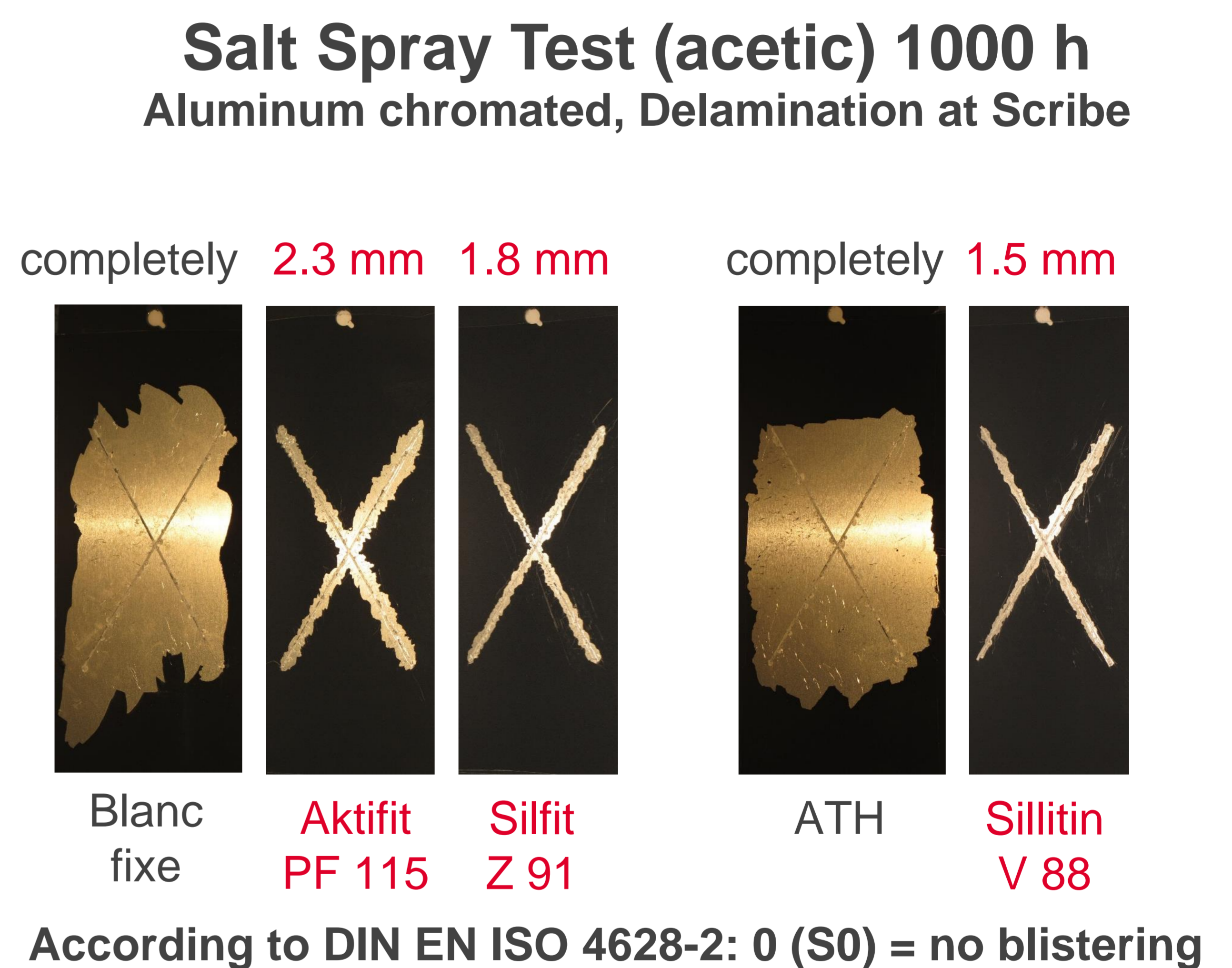
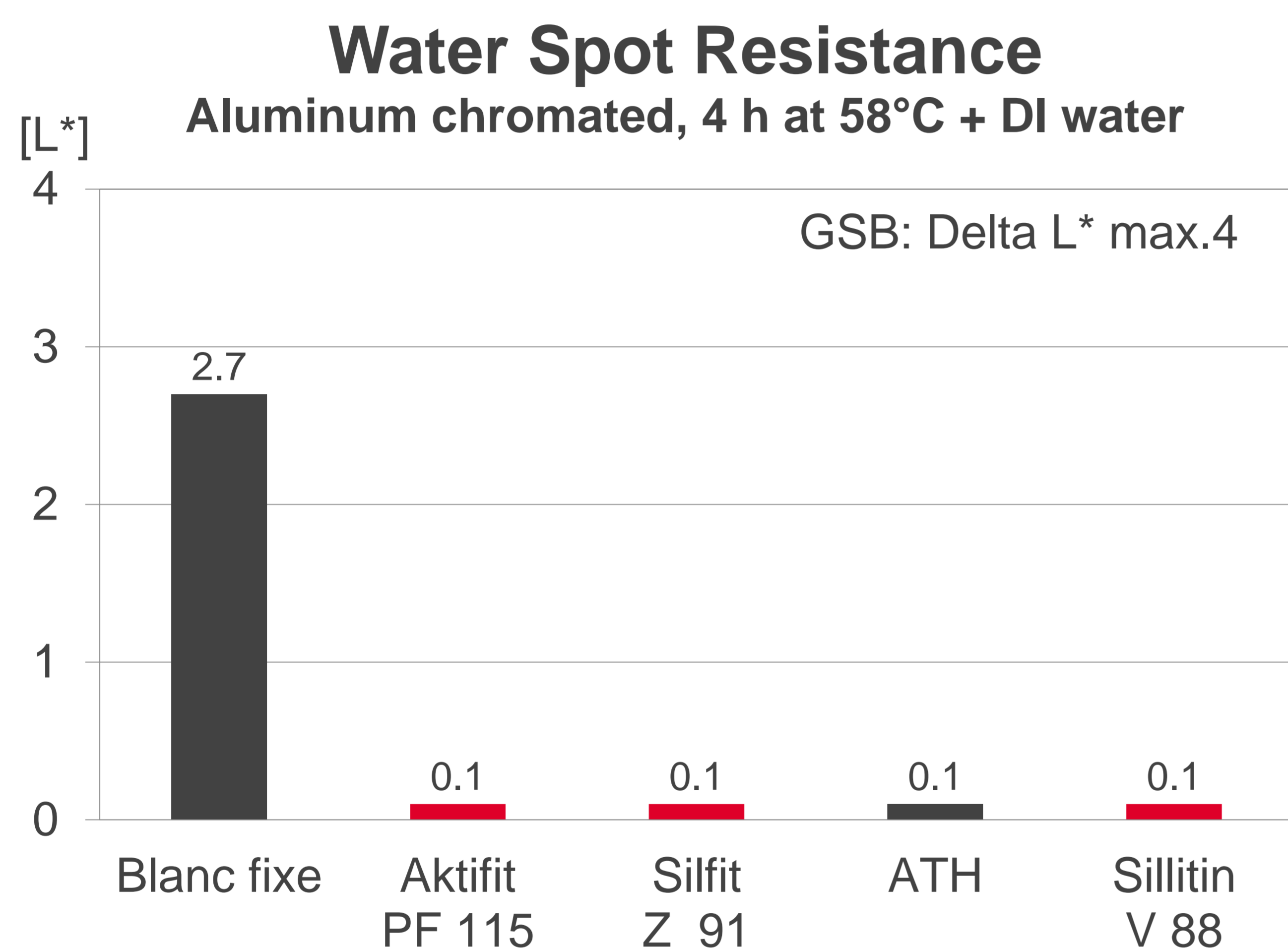
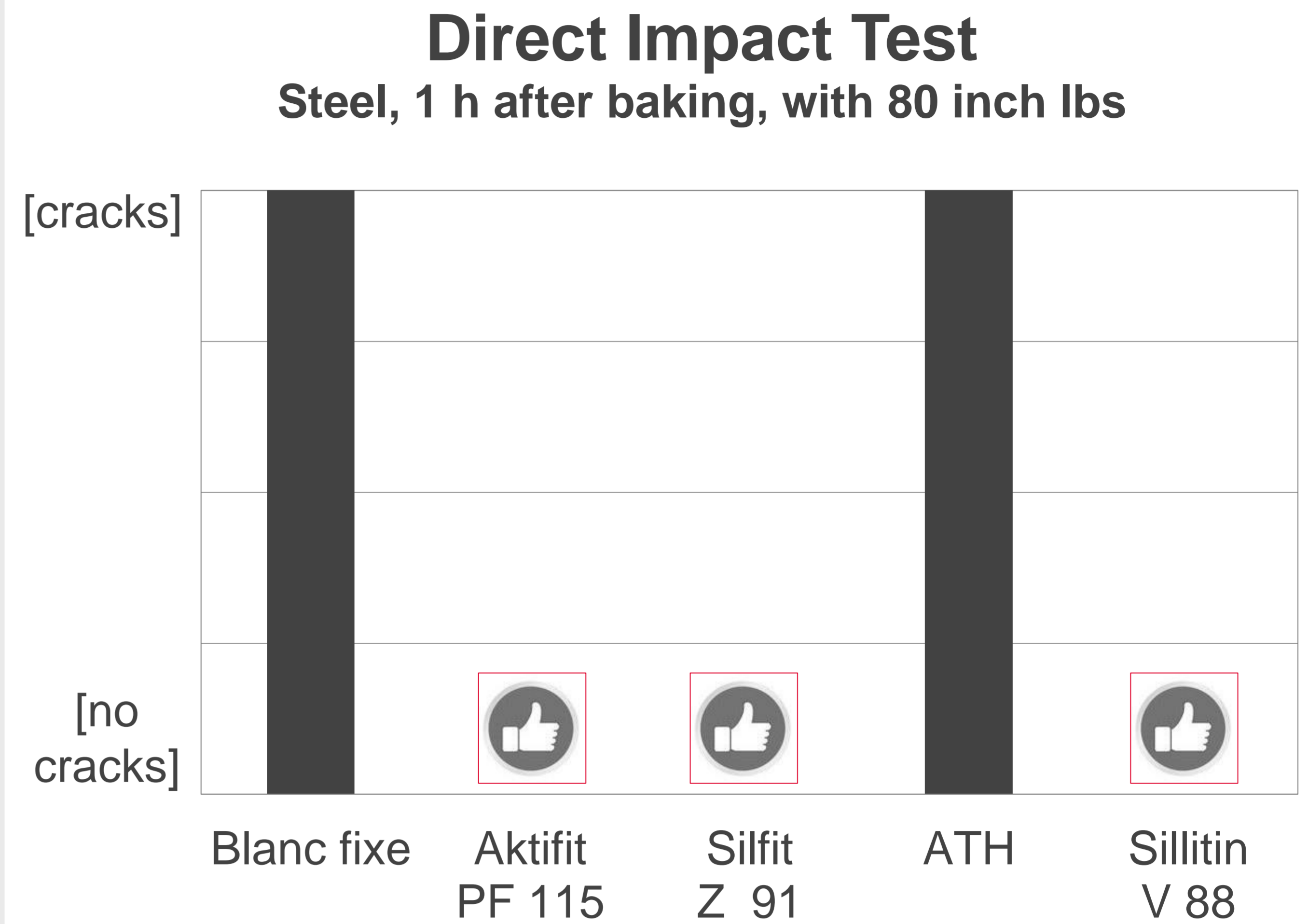
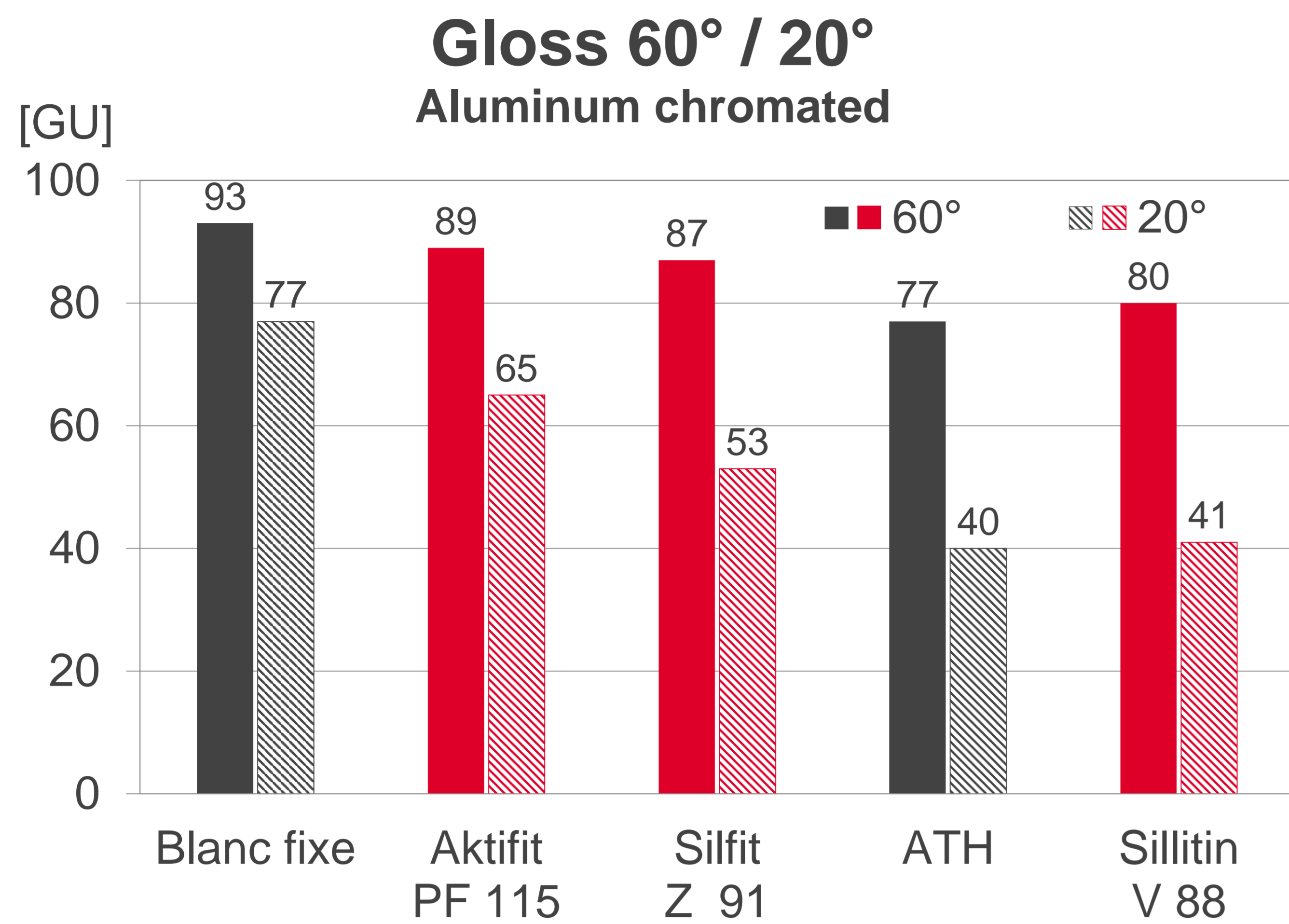
**Curing: 10 min PMT 180°C for all formulations**

Dry film thickness: 70 - 80 µm



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## RESULTS



## SUMMARY

### High gloss (60°: ~ 90 GU):

The utilization of **Aktifit PF 115** or **Silfit Z 91** instead of Blanc fixe results in the following effects:

- Glossy appearance with low haze is largely retained by using **Aktifit PF 115**
- + The surface appearance / texture is notably improved with the **Aktifit PF 115**
- + The flexibility of the coating is distinctly improved
- + The anthracite gray color after water spot testing is fully retained, blushing is eliminated
- + The delamination after the acetic salt spray test is significantly reduced
- + The weatherability is slightly improved

### Medium gloss (60°: ~ 75 GU):

The utilization of **Sillitin V 88** instead of ATH results in the following effects:

- The water spot resistance remains comparable
- The desired matting efficiency can be maintained in combination with excellent film appearance and optimum surface appearance / texture
- + The flexibility of the coating is improved
- + The delamination after the acetic salt spray test is significantly reduced
- + The weatherability is slightly improved