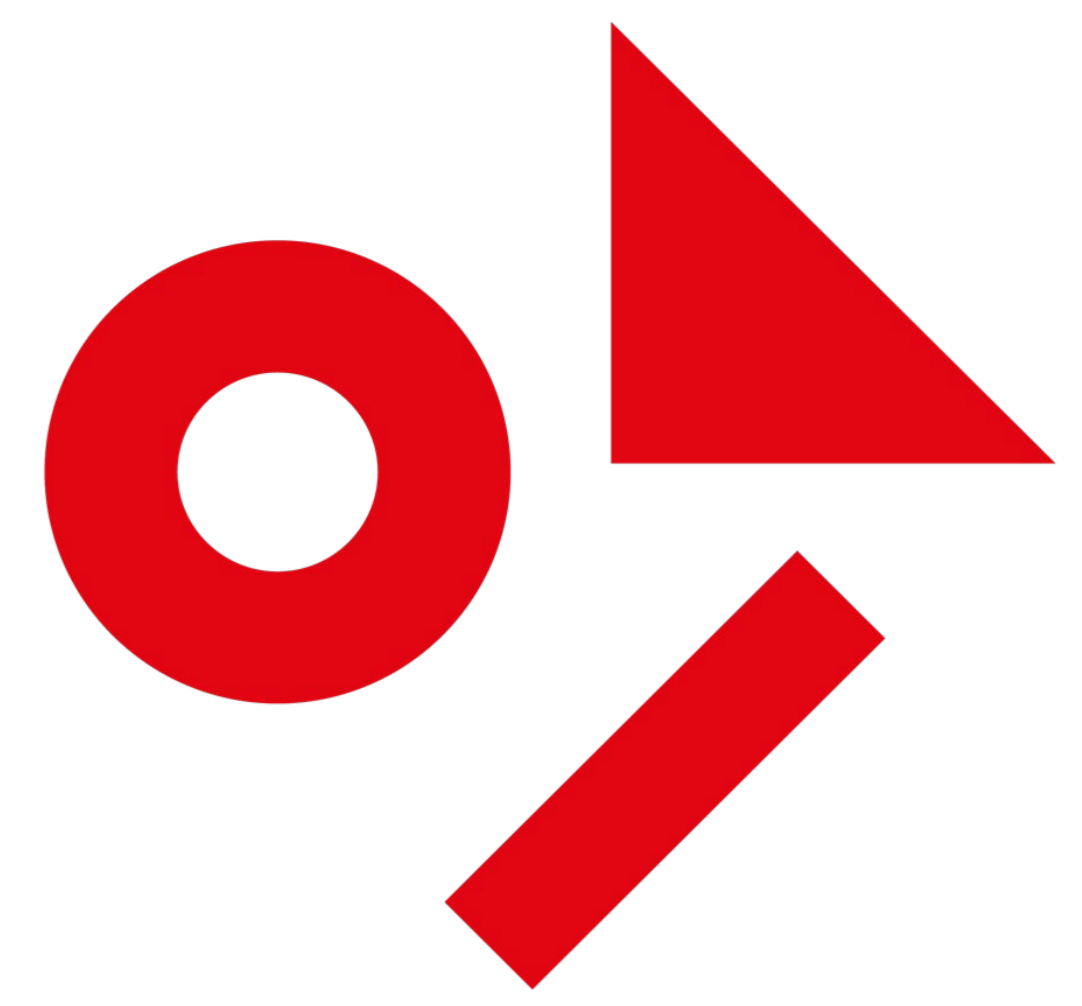


Tailored Filler Solutions

Struktosil 45 MAM – small effort, big impact

EPDM, peroxide cured



Introduction



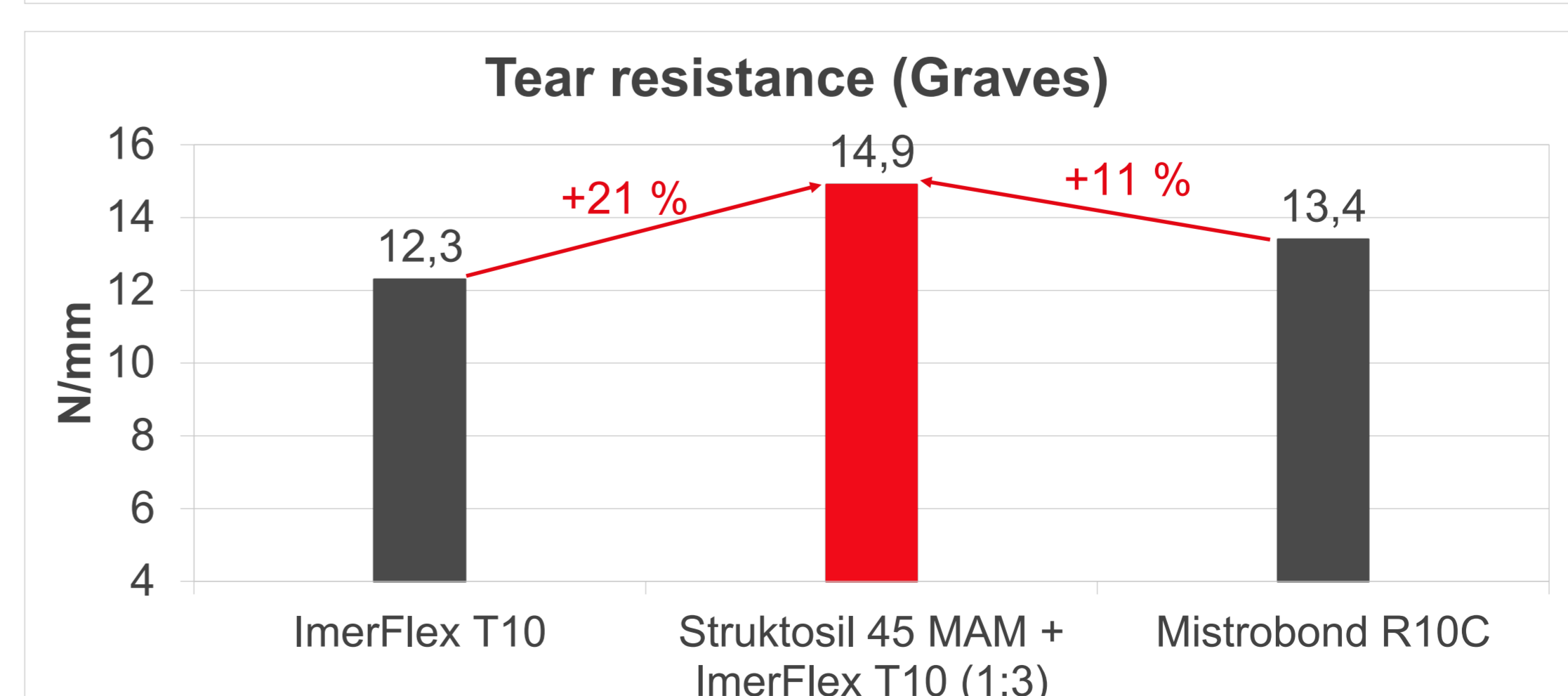
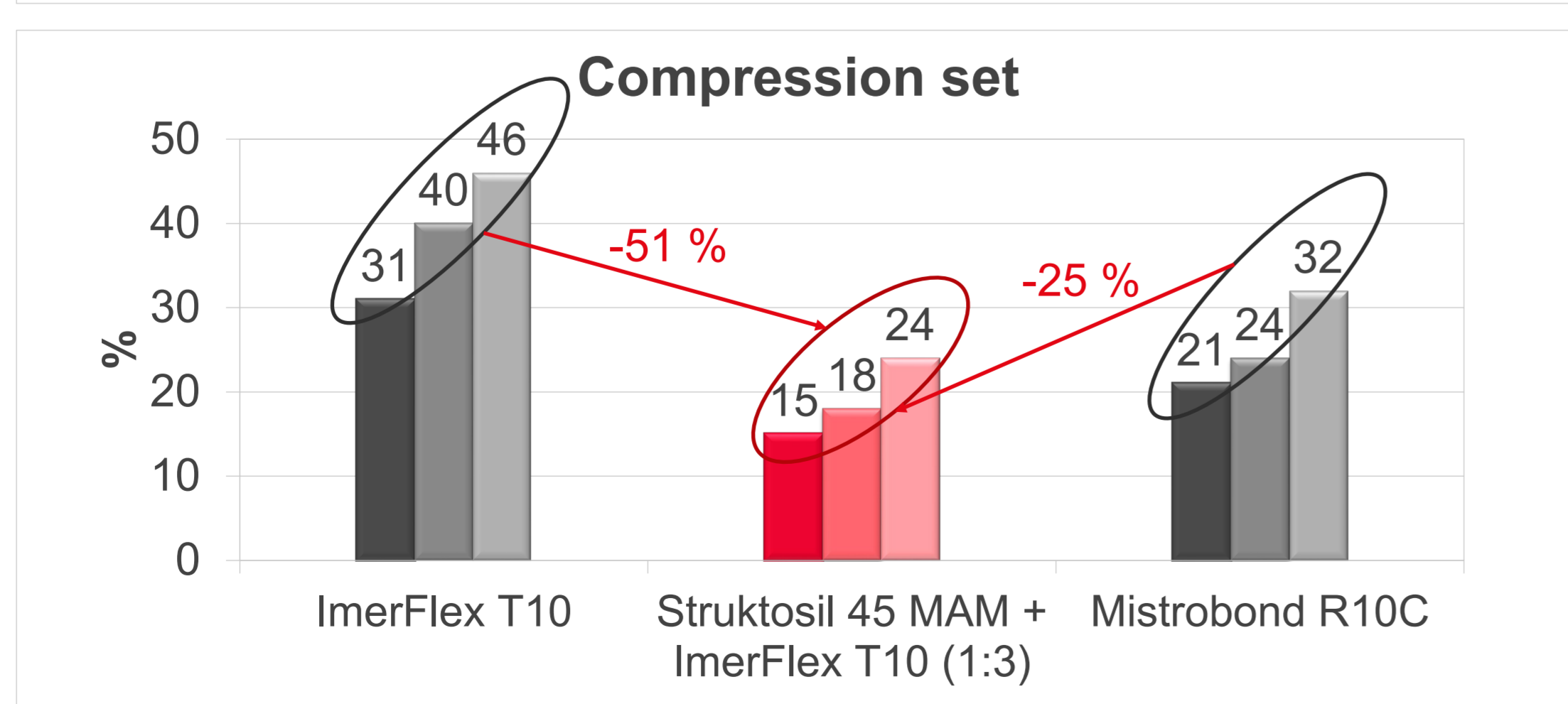
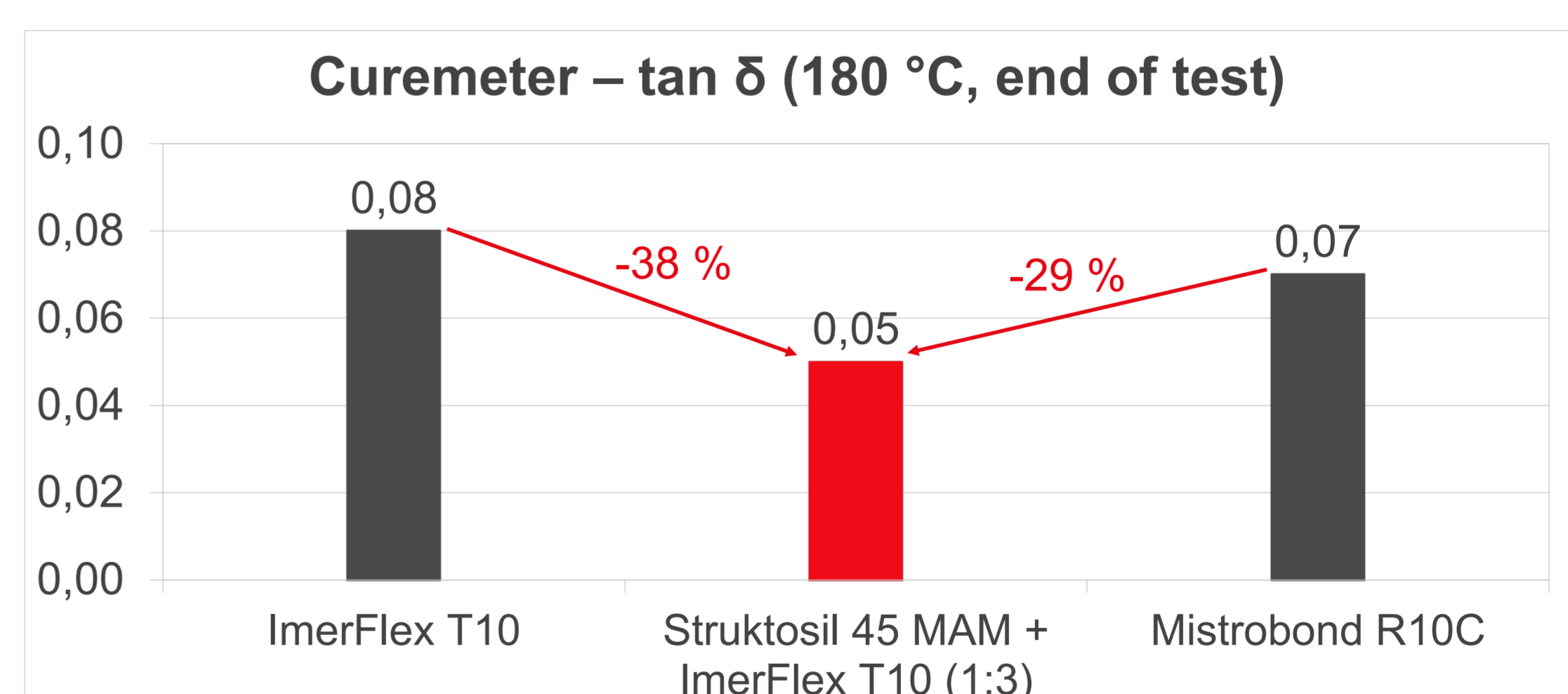
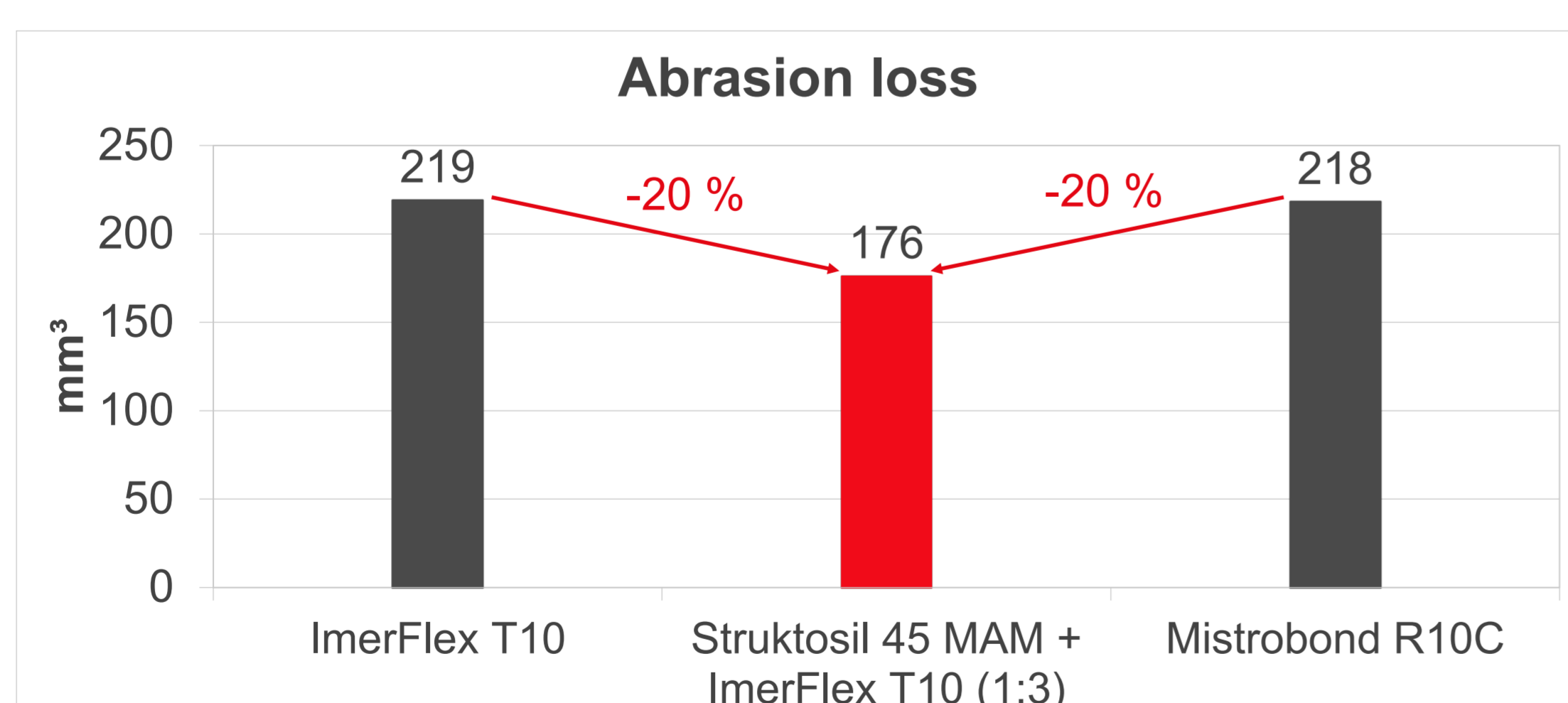
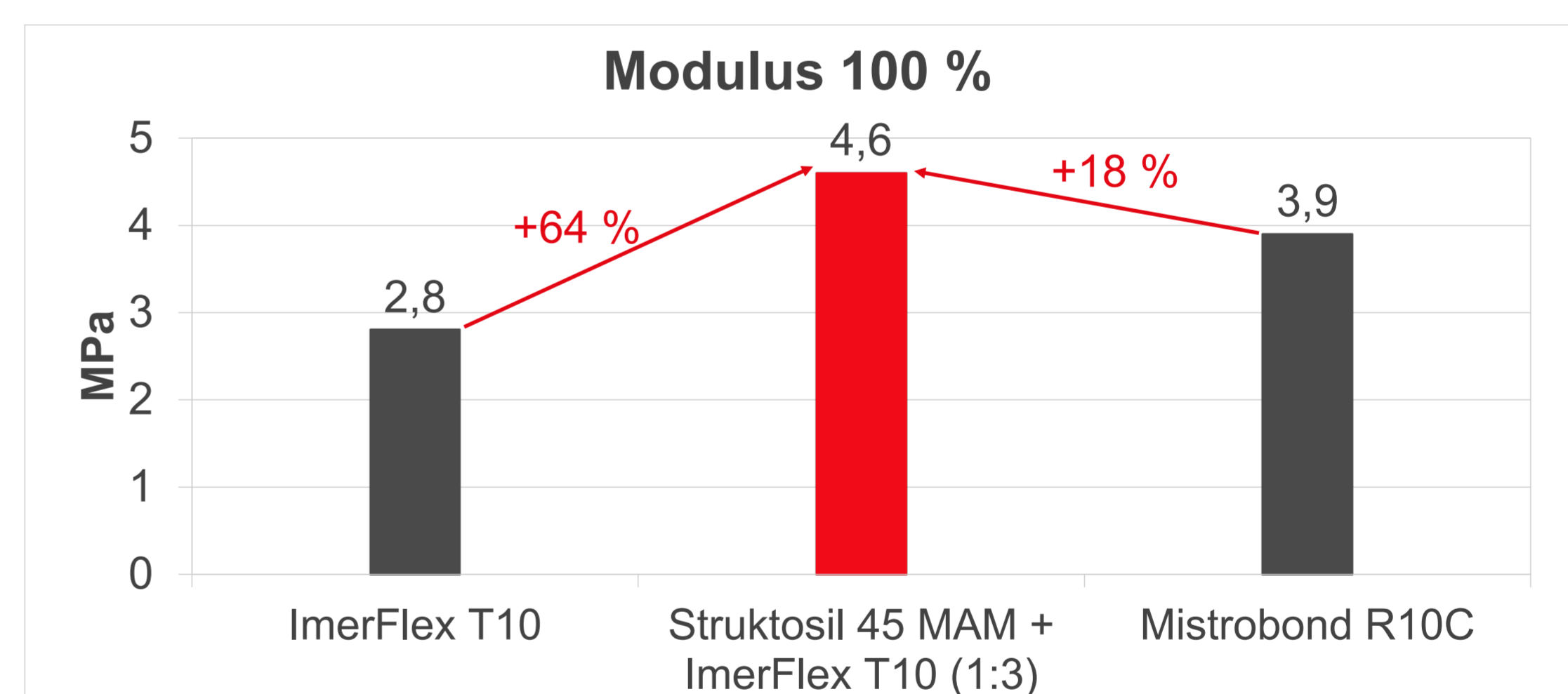
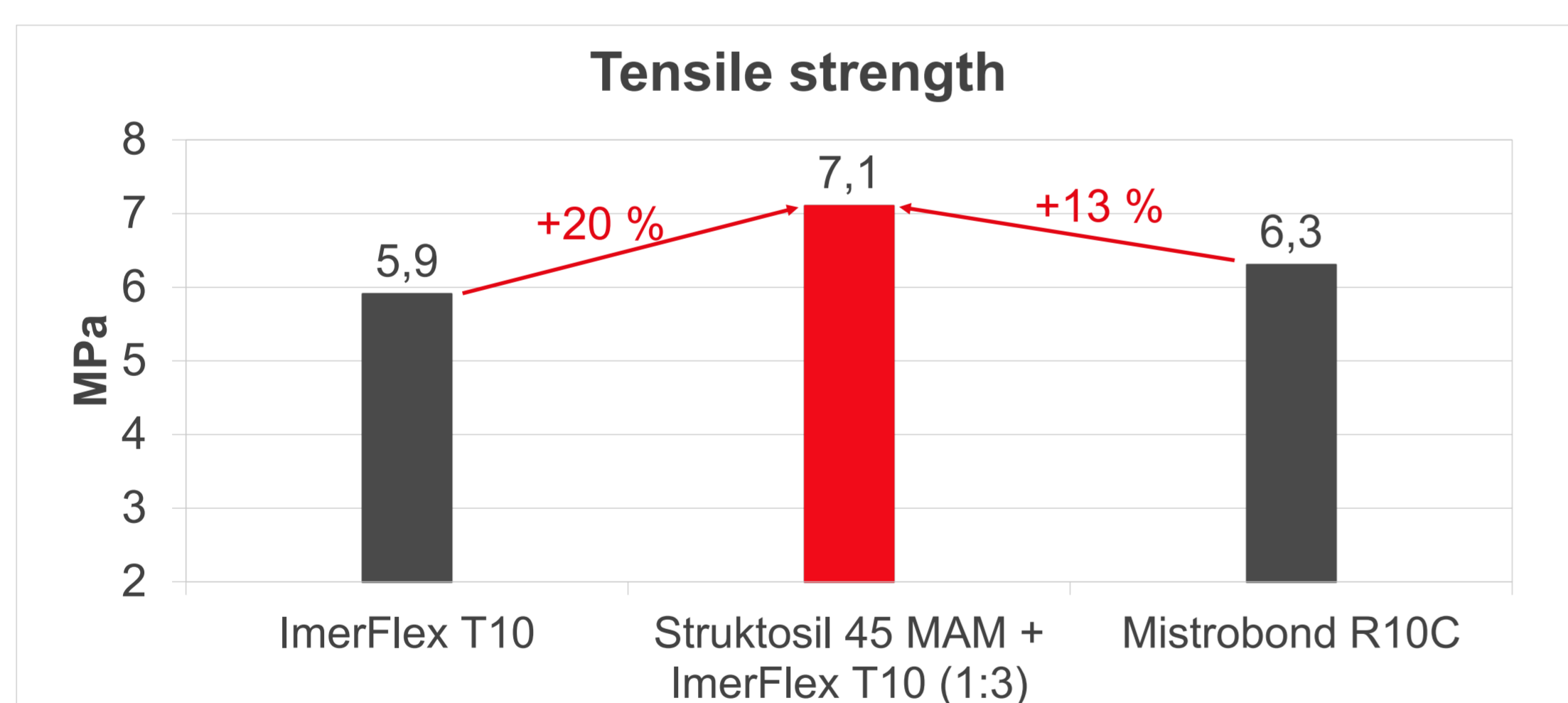
We think in extremes. And in extremely small minerals.

We will use our know-how of Neuburg Siliceous Earth and transfer it to new base materials, combined with innovative modifications for further improvement.

Formulation

Material	Description	phr		
Keltan 2650	Ethylene propylene diene rubber, amorphous, ML 1+4 (125 °C): 25 MU	100		
Zinkoxyd aktiv	Zinc oxide	3		
Edenor C18 98-100 GW	Stearic acid	0.5		
ImerFlex T10	Talc, non-treated	120	90	
Struktosil 45 MAM	Talc, surface treated		30	
Mistrobond R10C	Talc, surface treated			120
Process Oil P460	Paraffinic mineral oil, plasticizer	5		
Vulkanox HS/LG	Antioxidant, TMQ	0.7		
Vulkanox ZMB2/C-5	Antioxidant, ZMMBI	0.7		
PEG 4000	Polyethylene glycol	1		
TAC GR 70	Triallylcyanurate, 70 %, coagent	0.4		
Perkadox 14-40B-pd-s	Di(tert-butylperoxyisopropyl)benzene, 40 %, peroxide	3.5		
Total		234.8		

Results



■ 100 °C ■ 125 °C ■ 150 °C

Tailored Filler Solutions

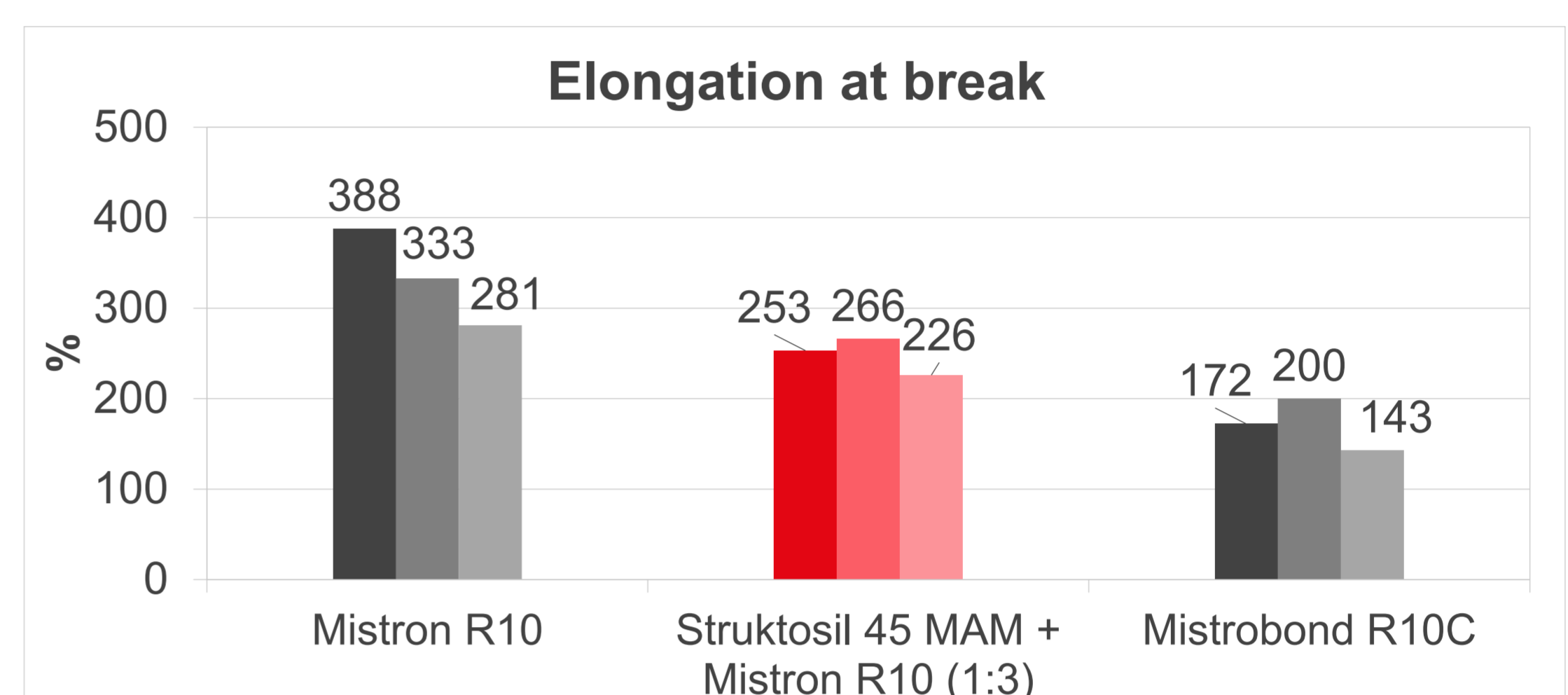
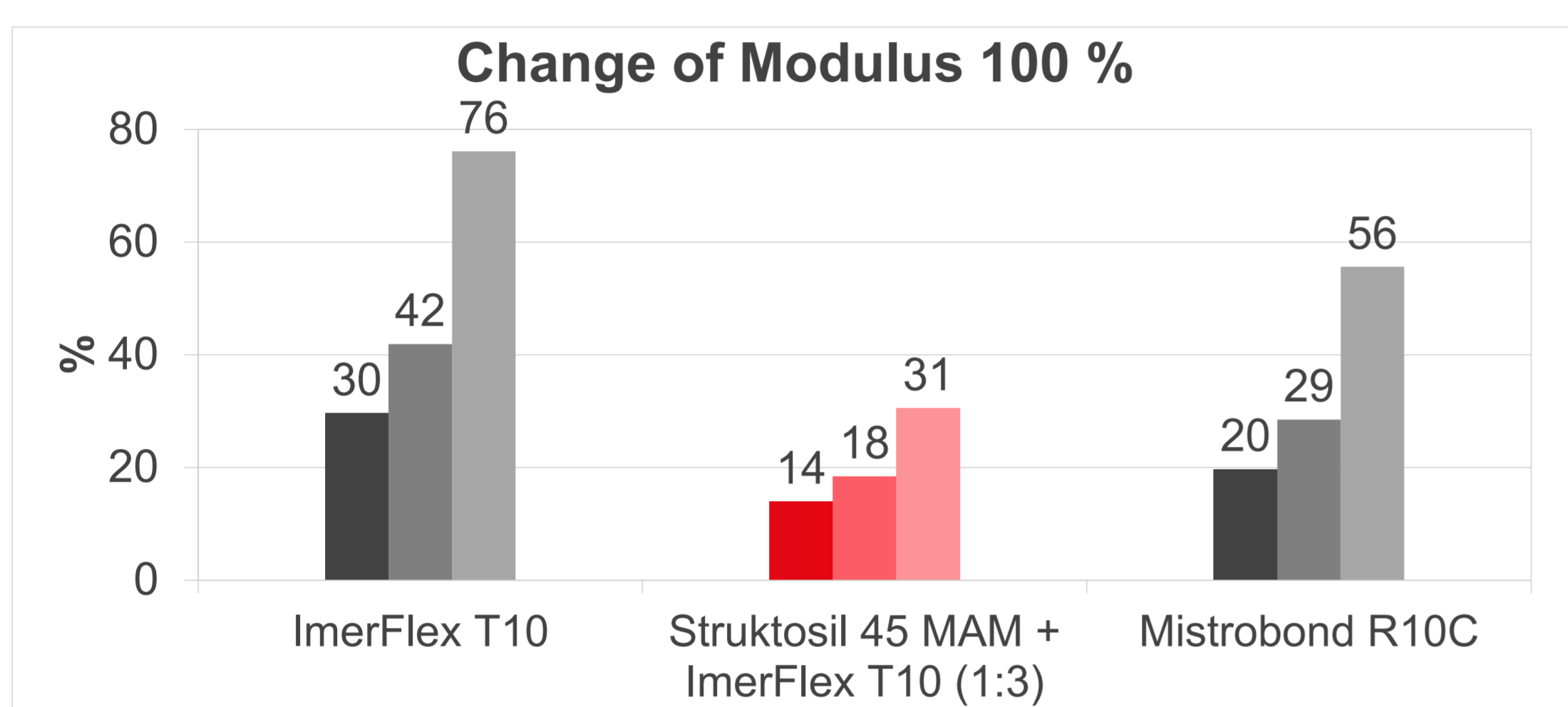
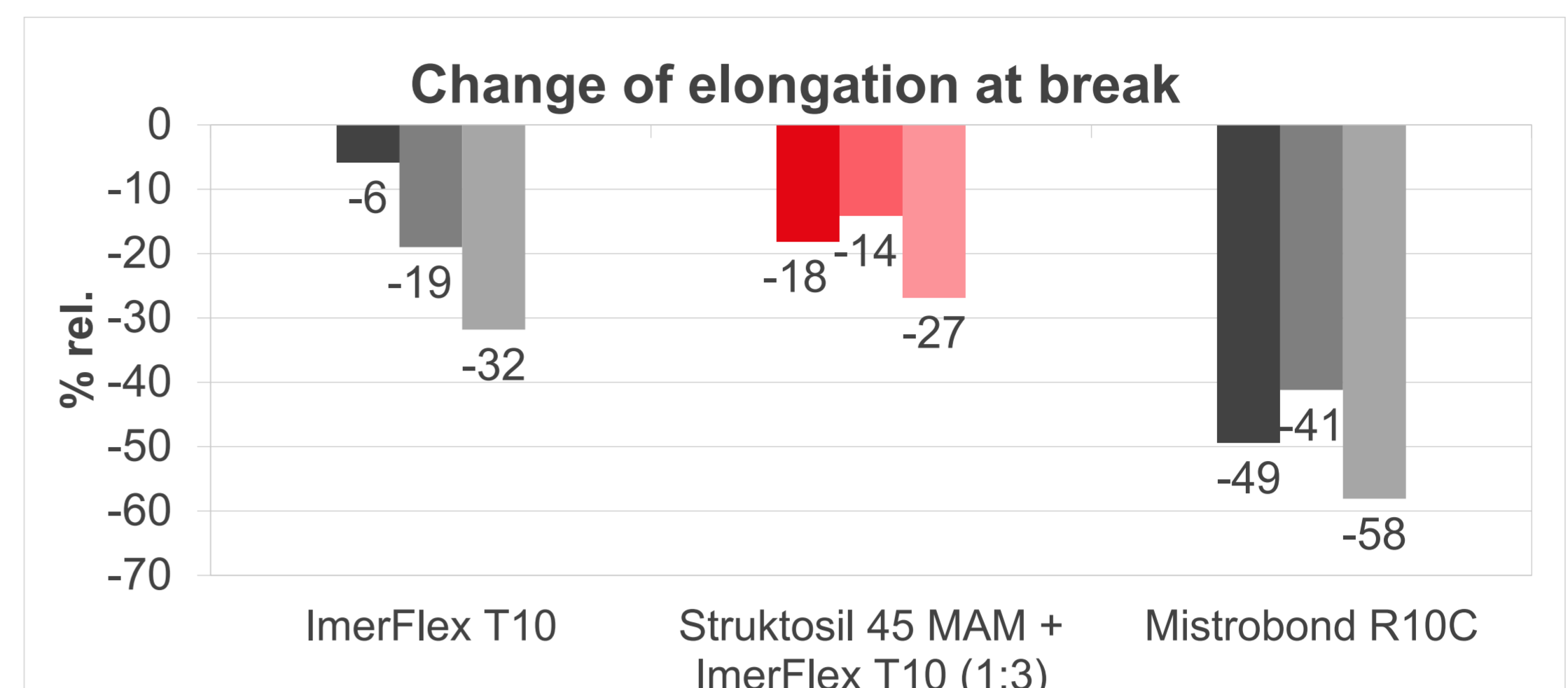
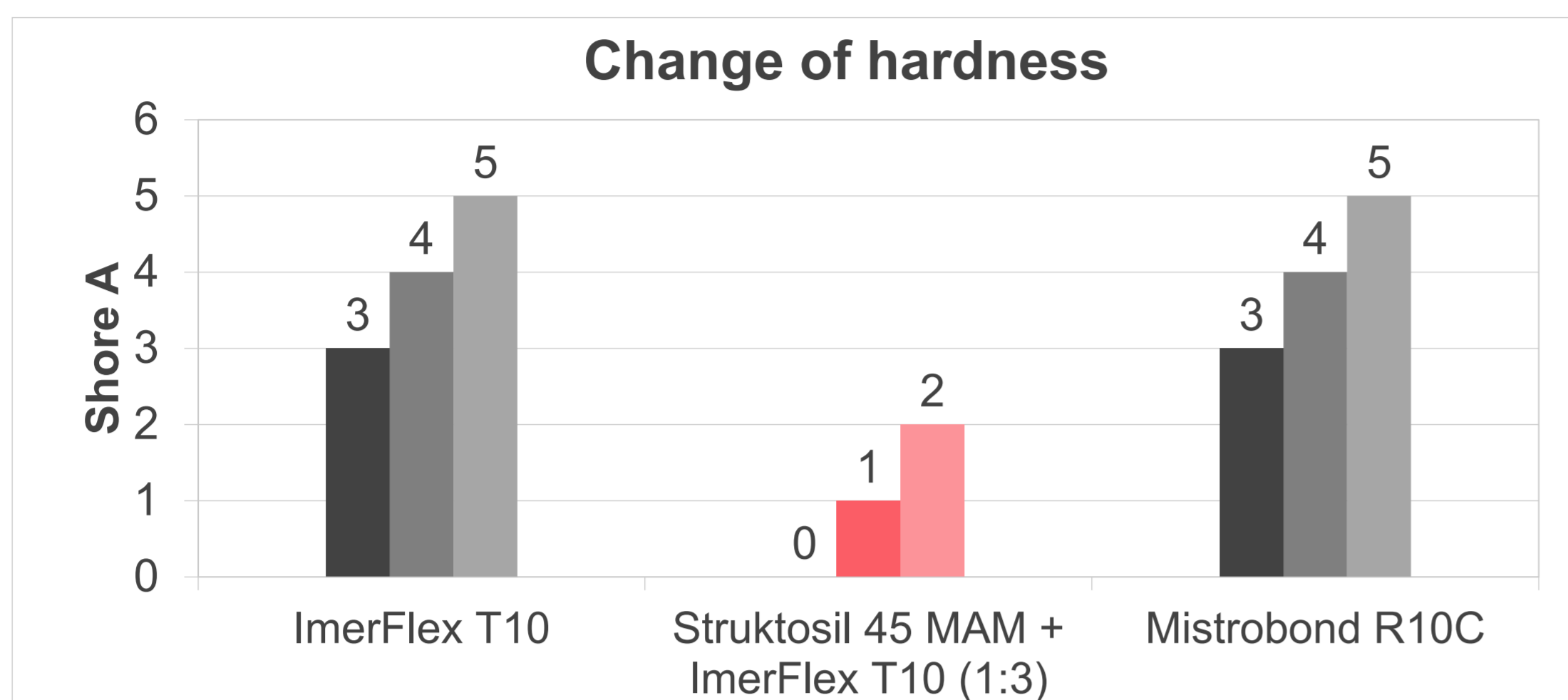
Struktosil 45 MAM – small effort, big impact

EPDM, peroxide cured



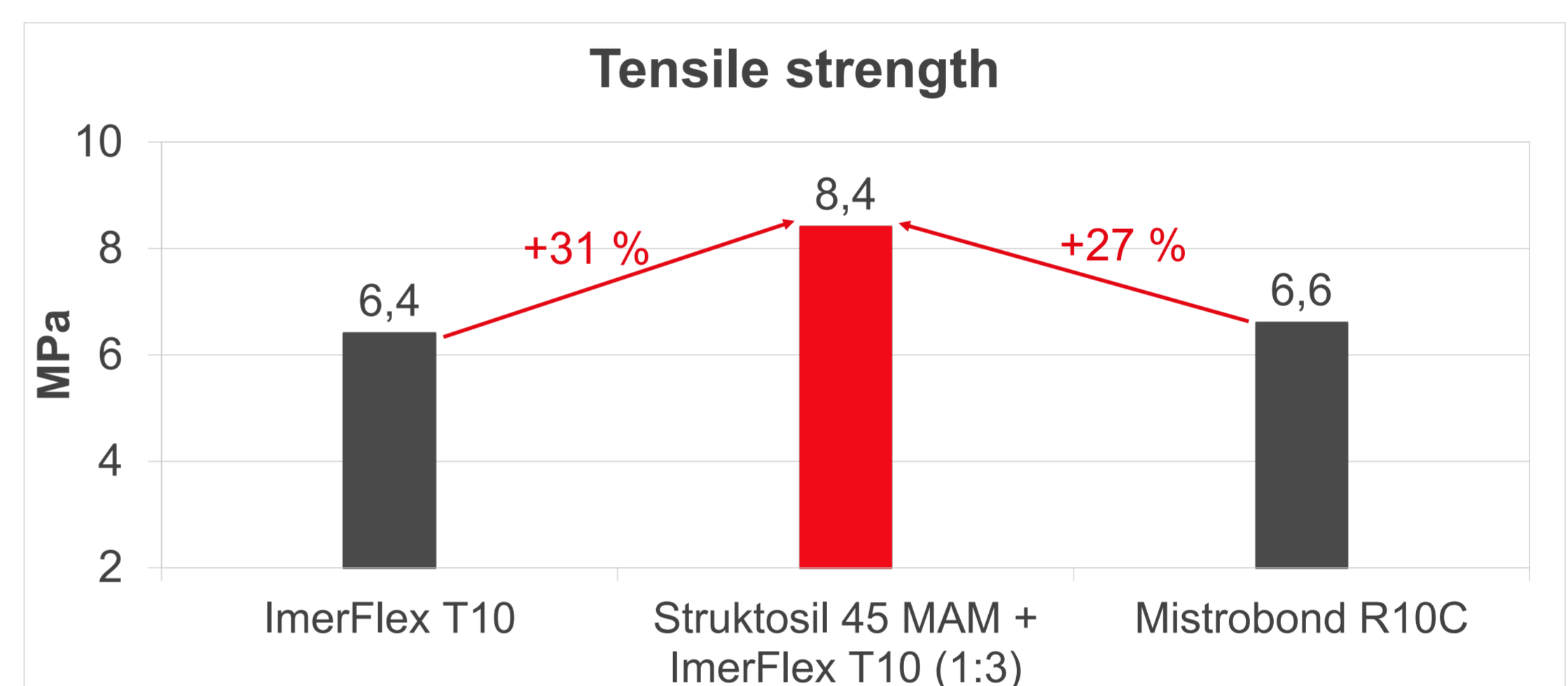
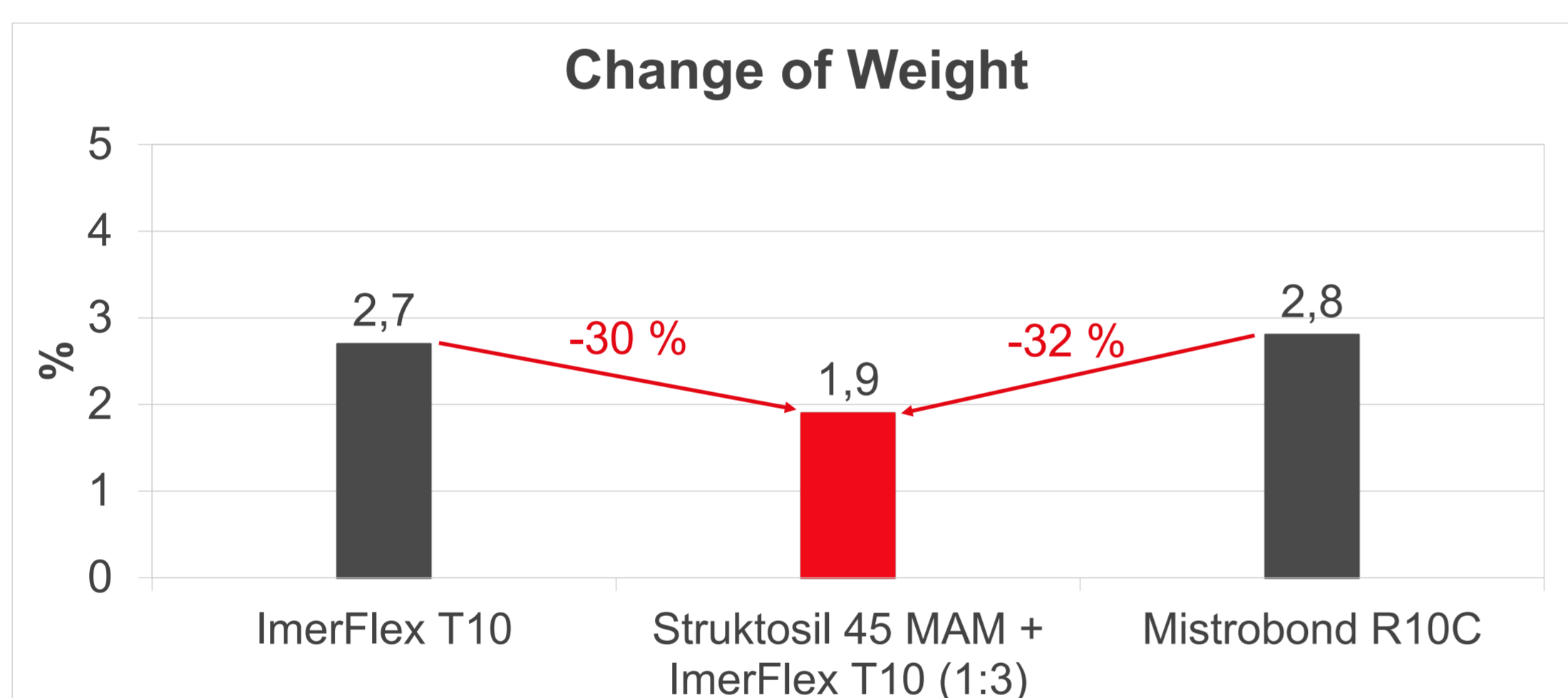
Results

Aging in hot air (168 h)



■ 100 °C ■ 125 °C ■ 150 °C

Storage in deionised water (168 h / 95 °C)



Summary

Advantages of 25 % **Struktosil 45 MAM** in blend with 75 % ImerFlex T10 compared to ImerFlex T10:

- ▶ Lower tangent delta at the end of vulcanization
- ▶ Strongly increased moduli
- ▶ Higher tensile strength
- ▶ Strongly reduced compression set
- ▶ Slightly increased tear resistance (Graves)
- ▶ Improved abrasion resistance
- ▶ Better hot air resistance
- ▶ Better hot water resistance

Advantages of 25 % **Struktosil 45 MAM** in blend with 75 % ImerFlex T10 compared to Mistrobond R10C:

- ▶ Lower tangent delta at the end of vulcanization
- ▶ Higher moduli
- ▶ Slightly higher tensile strength
- ▶ Significantly lower compression set
- ▶ Slightly higher tear resistance (Graves)
- ▶ Improved abrasion resistance
- ▶ Better hot air resistance
- ▶ Better hot water resistance