

XIRAN[®] as heat booster for plastics

Targeting at improved high temperature performance?

→ XIRAN[®] offers challenging opportunities

XIRAN[®] is a styrene maleic anhydride (SMA) copolymer which has already been proven to act as heat booster for various plastics. Its heat boosting functionality is mainly based on:

- high glass transition temperature ($T_g = 145-175$ °C)
- excellent compatibility with wide range of plastics due to its adjustable polarity

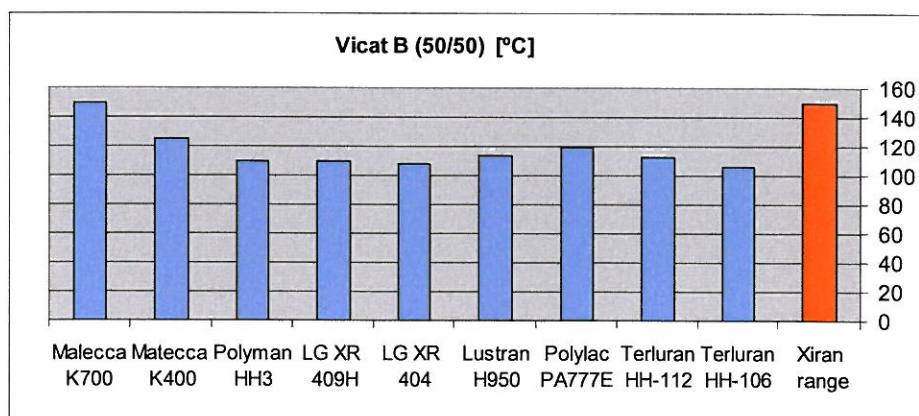
XIRAN[®] increases the HDT, Vicat and improves thermal dimensional stability. XIRAN[®] is available in several grades with varying maleic anhydride content and molecular weight, offering customised solutions. Examples of XIRAN[®] heat boosting functionality:

Heat boosting ABS

- Proven performance (reference Stapron S)
- Thermal performance adjustable by SMA content and choice of SMA grade
- The table shows indicative range of achievable properties with SMA with a standard ABS grade based on a SMA content range of 10 to 75 wt%

	method	ABS	indicative SMA/ABS property window
HDT/A (1,80 MPa) [°C]	ISO 75	80	> 85
Vicat B [°C]	ISO 307	95	>100
CTE [m/m/°C]	ISO 11359	80-110	< 70

- The figure shows the Vicat B performance of several available ABS high heat grades, including the Vicat B range of Xiran[®] in ABS



Heat boosting PMMA

- Proven performance to increase HDT of PMMA, without compromising on transparent performance
- Thermal performance adjustable by SMA content and choice of SMA grade
- The table shows indicative range of achievable properties with SMA with standard PMMA based on a SMA content range of 10 to 75 wt%

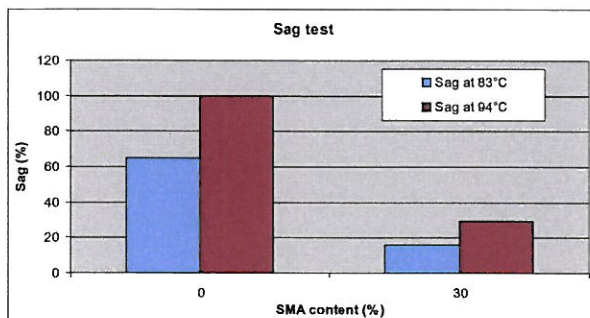
	method	PMMA	indicative SMA/PMMA property window
Tg [°C]	DSC	90	> 95
Tg [°C]	DSC	110	> 115
transparency [%]	ASTM D1003	92	92
haze	ASTM D1003	0,70	0,70

Heat boosting PVC

- Proven performance to increase Vicat B and to improve anti-sagging behaviour
- Thermal performance adjustable by SMA content and choice of SMA grade
- The table shows indicative range of achievable properties with SMA with a standard PVC grade based on a SMA content range of 10 to 75 wt%

	method	PVC	indicative SMA/PVC property window
Vicat B [°C]	ISO 307	80	> 80

- The figure shows the improvement of anti sagging behaviour at 30 wt% SMA in PVC



Other plastics, more information

Please contact us for more information on the opportunities of XIRAN[®] as heat booster in plastics, at pflipppo@polyscope.eu

We are open to investigate with you the challenging opportunities of XIRAN[®] in your applications!