

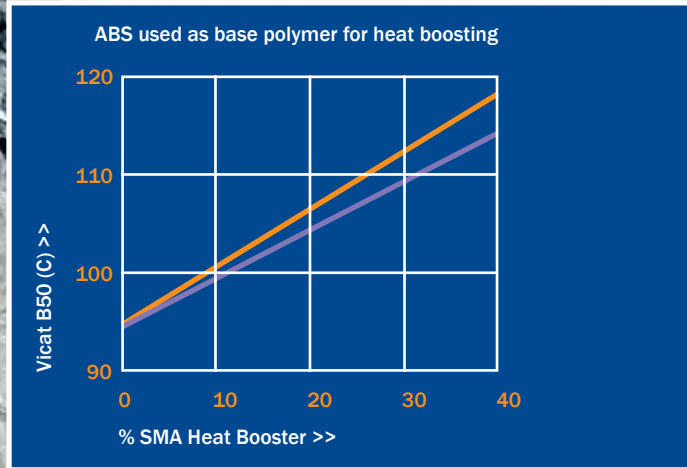


POLYSCOPE
fresh thinking, great products

PLASTIC MODIFIERS



INCREASES PERFORMANCE BY BOOSTING HEAT RESISTANCE



POLYSCOPE POLYMERS produces a wide range of SMA copolymers that are used as modifier in thermoplastic polymers.

Heat boosting, Adhesion promotion, Dispersion and Compatibilization are the effects that can be achieved in thermoplastics and blends. The product is a proven additive in for example: ABS, PC, PET, PBT, PMMA, PA, HIPS, GPS, PVC, TPE.

SMA is a unique polymer, where a-polar and polar monomers are polymerized into a copolymer chain. XIRAN SMA is available in a broad range of molecular weights and maleic anhydride (MA) contents. In a typical combination of those two properties SMA is available as a crystal clear granule that can be used in a broad range of applications. SMA can maintain transparency in combination with heat boosting effect in other transparent materials like PMMA or SAN.

XIRAN®



**XIRAN®
NEAT
RESIN**

SZ

SZ : GRANULATE - PELLETS



PLASTIC MODIFIERS



FRESH THINKING, GREAT PRODUCTS

SMA further improves the heat resistance of other polymers like ABS, PS, PVC. The specific reactivity of SMA makes it a suitable agent for compatibilizing normally incompatible polymers (e.g. ABS/PA, PC/ABS, PET/ABS blends). Another function of the SMA is to improve the adhesion with other chemicals or materials (foam, metal and paint). Typical dosing levels of SMA in polymers vary from 0,5 - 50 % and are depending on the needed application objectives.

Dimensional Stability

Dimensional stability is improved significantly over a wide temperature range. This means that savings can be obtained in large structures where metal reinforcements may become unnecessary. With the use of SMA in general also the shot to shot consistency in respect to dimensional stability will increase.

Adhesion promoter

The addition of SMA improves adhesion performance. In case an application is coated or chrome-plated, normally a primer or adhesion improver needs to be used. Some materials even need a surface treatment like flaming or corona to guarantee a good adhesion strength. With the addition of SMA this pre-treatment is no longer necessary. This can save on the number of rejected parts in production or result in better performance with respect to adhesion of the coating/chrome/glue/metal layer. Multi layer - multi material extrusion systems could benefit from SMA due to the improved adhesion strength.

XIRAN® benefits:

- Very effective heat boosting
- Low volatile content
- Multiple SMA types available
- High dimensional stability
- Keeping the excellent processing performance of ABS

- Window to new applications
- Dial in Tg
- Add less to get same heat performance

Cost Reduction

XIRAN® SMA can reduce product costs when used in combination with more expensive polymer blends. For example in PC/SMA blends, the SMA can partly replace PC to reduce costs and improve dimensional stability and adhesion performance. When combining multiple functionalities the application system costs could be reduced by the use of SMA.

Compatibilization

SMA is an effective compatibilizer when applied at typical dosing rates of 0,5 to 10%. Here the a-polar and polar functionality of the SMA polymer chain can functionalize many compounded blends. For example PA/ABS, PET/ABS, PC/ABS are known polymer blends that are more effective being compatibilized with SMA.

	Units SI	XIRAN® SZ26120	XIRAN® SZ23110
Vicat B50	°C	155	145
Acid value	mgKOH/g	300	265
MFI 240° C, 10 kg	Dg/min	21	60