

SMA® 2021

Provides Superior Heat Resistance Without Compromising Water Resistance



Benefits

- High heat and water resistance
- Balanced higher styrene content and aqueous base solubility
- Broad miscibility in solvents/resins
- Applicable under select FDA regulations

Target Markets

- Leather re-tanning
- Graphic arts
- Overprint varnishes
- Polymer modification

Description

SMA® 1000 has a glass transition temperature (T_g) of 155 °C and has historically been used to improve heat resistance of waterborne coatings, inks, and overprint varnishes. However, the high maleic anhydride content of SMA 1000 can compromise water resistance. SMA 2000 has better water resistance due to the higher styrene content, but the T_g is only 135 °C. Therefore, SMA 2000 does not give the same improvement in heat resistance as SMA 1000. SMA 2021 offers the best of both products: a higher styrene content for excellent water resistance and a high T_g (155 °C) for superior heat resistance. The table below summarizes these findings.

SMA Product Comparison

Product	S:MA Ratio	Water Resistance	Glass Transition Temperature, °C	Heat Resistance
SMA 1000	1:1	0	155	++
SMA 2000	2:1	++	135	+
SMA 2021	2:1	++	155	++

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