

Applications

Styrenics

Atmer 163 is effective when used as an anti-static additive in styrenics. It is recommended for use in transparent applications giving relatively long-lasting anti-static benefits. It shows excellent heat stability and improved colour compared to other amines. Atmer 190 also shows long term anti-static properties in styrenics. It demonstrates excellent heat stability and is suitable for processing at higher temperatures or where broad food contact approval is needed. Atmer 190 is not recommended for transparent applications.

Polymer	Product & usage level
Clear PS	Atmer 163, 1-2%
SAN	Atmer 163, 1-3%
HIPS	Atmer 190, 2-3%
ABS	Atmer 190, 2-4%

PVC

Atmer 129, Atmer 154 and Atmer 190 are all recommended for use in PVC giving long-lasting anti-static effects. Atmer 190 is not recommended for use in transparent applications.

Fabrication process	Product & usage level
Flexible PVC	Atmer 129, 0.5-1 phr Atmer 154, 1 phr
Rigid PVC	Atmer 129, 4 phr Atmer 190, 1 phr

phr = parts per hundred resin

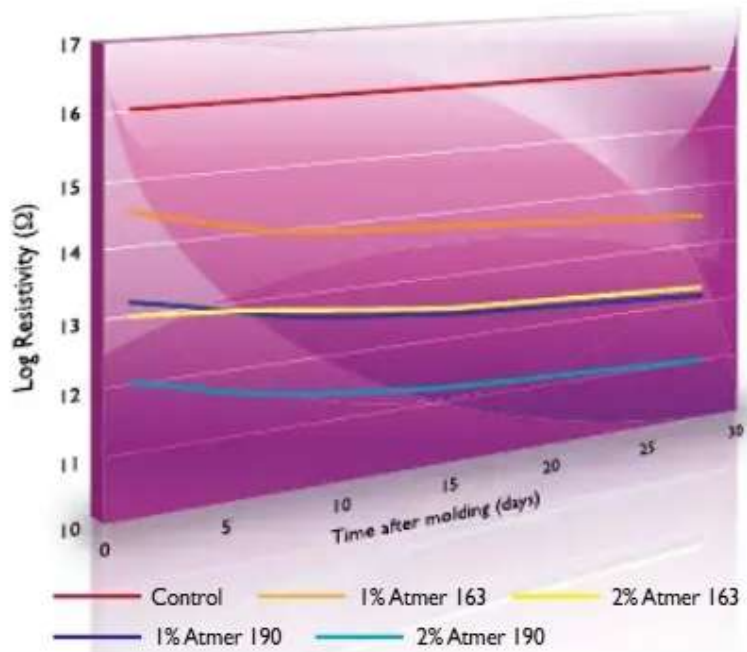
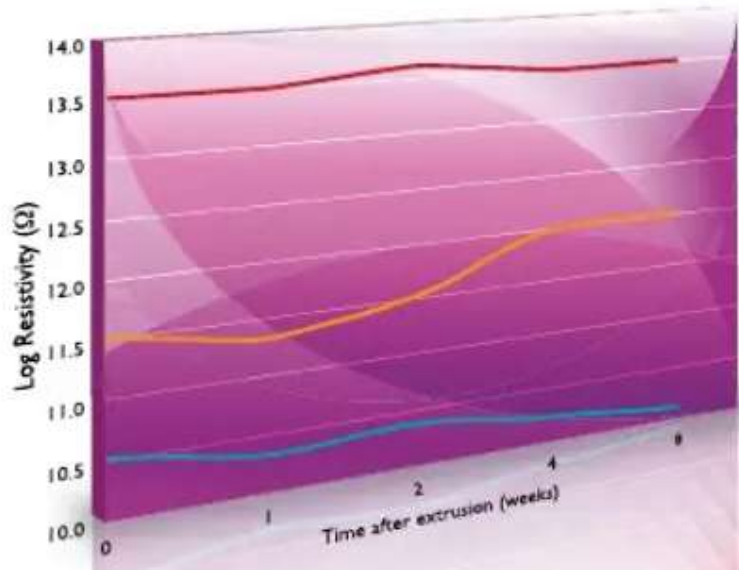


Figure 3: Anti-static effect of Atmer 163 & 190 in High Impact Polystyrene (HIPS) at 1% and 2% additive



Trade name	Description	Physical form at 25°C	Raw material origin	Primary effect	Recommended uses
Anti-static					
Atmer 122	Glycerol ester	Microbead	Vegetable	Anti-static (Internal)	Polyolefins and flexible PVC Lubrication/anti-stat balance
Atmer 125*	Glycerol ester	Microbead	Vegetable	Anti-static (Internal)	LDPE and flexible PVC Lubrication/anti-stat balance
Atmer 129 NV	Glycerol ester	Microbead	Non-vegetable	Anti-static (Internal)	Polyolefins and flexible PVC
Atmer 129	Glycerol ester	Microbead	Vegetable	Anti-static (Internal)	Polyolefins and flexible PVC
Atmer 1012	Glycerol ester	Pastille	Non-vegetable	Anti-static (Internal)	Polyolefins and flexible PVC Lubrication/anti-stat balance
Atmer 1013 NV	Glycerol ester	Pastille	Non-vegetable	Anti-static (Internal)	Polyolefins and flexible PVC
Atmer 1013	Glycerol ester	Pastille	Vegetable	Anti-static (Internal)	Polyolefins
Atmer 110	Ethoxylated sorbitan ester	Liquid	Vegetable/Synthetic	Anti-static (External)	All polymers, particularly PET
Atmer 116	Ethoxylated sorbitan ester	Liquid	Vegetable/Synthetic	Anti-static (External)	All polymers, particularly PET
Atmer 154	Alkoxylated fatty acid ester	Liquid	Vegetable/Synthetic	Anti-static (Internal)	Flexible PVC
Atmer 163	Ethoxylated amine	Liquid	Synthetic	Anti-static (External/ Internal)	Polyolefins and styrenics
Atmer 262[†]	Ethoxylated amine	Liquid	Vegetable/Synthetic	Anti-static (External/ Internal)	Polyolefins and styrenics
Atmer 190	Alkyl sulphonate	Pastille	Synthetic	Anti-static (External/ Internal)	HIPS, ABS, non-transparent rigid PVC