

Colombes, March 18, 2015

Arkema launches Orevac® 18341 coupling agent for HFFR compounds requiring high water ageing performance

Arkema has developed Orevac® 18341, a new maleated polyethylene for the production of halogen-free flame retardant (HFFR) compounds used in cable applications. Orevac® 18341 is especially useful in improving water ageing resistance.

HFFR formulations are polyolefin alternatives to PVC compounds used in the jacketing of low voltage cables. They have the advantage of generating low smoke density in a fire situation as well as good fire retardancy. However, they require improved mechanical properties and better water ageing resistance. Water ageing resistance is key to maintain cable properties even in a humid environment. The new Orevac® grade is a polyethylene with a high grafting level of maleic anhydride (MAH). The high content of grafted MAH makes it an excellent coupling agent between polyolefin and mineral fillers such as aluminium trihydrate (ATH), magnesium dihydrate (MDH), brucite, etc. It helps to achieve superior mechanical properties and better water ageing resistance.



HFFR recipe with Orevac 18341 (23% Evatane, 9% LLDPE, 63% ATH, 5% Orevac)		
Mechanical properties	Results before water resistance test	Results after water resistance test (7 days at 70°, 100% humidity)
Tensile strength	15 MPa	>10 MPa
Elongation @ break	190%	>150%
Melt Flow Index (150°C -21.6kg)	>5.5 g/10 min	
Limiting oxygen index	38%	

