

How to Treat Wool with a Flame Retardant

Wool, by its nature, is generally somewhat flame retardant and does not require a lot of external add-on of flame retardant chemical. Especially in the case of non-durable treatment, the use of 8-10% of **Orco Flame Retardant XF-100™** (halogen salt mixture) will suffice. The biggest challenge develops when wool is blended with either cellulose and/or other synthetics such as nylon, acrylic, or polyester; a higher level of **Orco Flame Retardant XF-100™** add-on in the range of 10-12 % owb might be necessary. Not only do these fibers tend to burn at a higher rate but they also have a tendency to melt and drip ignited melted fiber. Durable flame retardant treatments are available for these blends but generally are most expensive and require cure/heat conditions.

Orco Flame Retardant XF-100™ is a semi-durable flame-retardant after-treatment based on ammonium salts and having the unique characteristic of being less harsh than most salt based products. It is applicable to most synthetics, cellulose, wool, and blends thereof. Since retardancy demand will vary dependent on the material being finished, laboratory tests should be conducted to determine the optimum level required in most cases.

A general starting formulation would be 10-25% owb **Orco Flame Retardant XF-100™** at 80% pick-up level.