EN 11925-2 (small burner test) according to Euroclass B or BS 7837. EN 13823 (single burning item test) is required to be passed in a classification of B-S1-dO.

Flexible, coated fabrics for applications demanding fire resistance at the level of Euroclass B are commonly made from polymers with intrinsic fire resistance like polyvinylchloride, polyurethanes, fluoroelastomers or silicones.

At the same time, compounds for such applications have to show processability in extrusion coating, and good fabric penetration and adhesion. In the final application, they usually have to fulfill various properties like flexibility (a common target is a flexibility modulus below < 30 MPa), weldability, abrasion resistance, mechanical strength, printability, weathering- and UV-resistance, and fire resistance. To fulfill these demanding combinations of requirements, polyvinylchloride, fluoropolymers, or even silicones, are in common use today. TPOs were not used as they could not comply with the demanding property requirements. In particular, they lack flexibility in combination with sufficient fire resistance.

WO 2005/090427 describes a multi-block copolymer comprising in polymerized form ethylene and one or more copolymerizable comonomers, said copolymer containing therein two or more segments or blocks differing in comonomer content, crystallinity, density, melting point or glass transition temperature.

WO 2006/101924 describes blends of at least two polyolefins with ethylene/α-olefin (multi-block) interpolymers with improved compatibility.

WO 2006/101932 describes compositions comprising ethylene/α-olefin (multi-block) interpolymers and fillers.

WO/2011/008336 describes a multilayer structure comprising a top skin layer comprising a propylene/alpha-olefin copolymer blended with at least one other component; a middle foam layer comprising a propylene/alpha-olefin copolymer; and a bottom fabric layer comprising a nonwoven, polymeric, spunbond material.

SUMMARY

In a first aspect of the present disclosure, there is provided a formulation comprising: i) an olefin block copolymer; ii) a propylene/α-olefin copolymer; and iii) a halogen-free flame-retardant.

In a second aspect of the present disclosure, there is provided a multi-layer structure comprising a layer comprising a disclosed formulation.

The ~~invention~~ present disclosure provides a formulation comprising (A) olefin block copolymer, (B) propylene-α-olefin interpolymer, and (C) halogen-free flame retardant. In addition, the ~~invention~~ present disclsoure provides a layer of and a multi-layer structure, the layer made from a composition comprising (A) olefin block copolymer, (B) propylene-α-olefin interpolymer, and (C) halogen-free flame retardant.