Claims

1. A carpet backing layer composition comprising:
   - between at least 10% by weight and 50% by weight or less, preferably 40% by weight or less, more preferably 30% by weight or less, most preferably 20% by weight or less of a semi-crystalline polyolefin or of a blend of two or more semi-crystalline polyolefin(s) said polyolefin or blend of polyolefins being characterized in that the weight percentage of (co)polymerized C2 olefin is less than 50 and that the weight percentage of (co)polymerized C3 – C8 alfa olefins is 50 or more and
   - between up to 90% by weight and 50% by weight or more, preferably 60% by weight or more, more preferably 70% by weight or more, most preferably 80% by weight or more of one or more inorganic filler(s) characterized by a volume median particle diameter (D50) comprised between up to 1000 µm and at least 10 µm, preferably more than 20 µm, more preferably more than 50 µm and most preferably more than 100 µm, or even more than 200 µm as obtained from laser light scattering measurements according to ISO 13320;

   the backing layer composition having a heat of fusion within the temperature range of from 10 to 40°C ($\Delta H^{10\rightarrow 40^{\circ}C}$) is less than 12.5%, preferably less than 10%, more preferably less than 5% of the heat of fusion of the the backing layer composition within the temperature range of from 10 to 170°C ($\Delta H^{10\rightarrow 170^{\circ}C}$), the heat of fusion being measured by Differential Scanning Calorimetry.

2. The carpet backing layer composition according to claim 1, wherein the polyolefin or blend of polyolefins has a Shore A hardness, according to ASTM D 2240 of at least 65, preferably of at least 70, more preferably of at least 75, most preferably of at least 80.

3. The carpet backing layer composition according to claim 1 or 2, wherein the C3 – C8 alpha-olefin of the one or more polyolefin(s) is propene, 1-butene, 1-octene or a combination thereof.

4. The carpet backing layer composition according to any of the preceding claims, wherein the polyolefin is selected from the group consisting of polypropylene, poly-1-butene, propene-ethene copolymer, propene-1-butene copolymer, 1-butene-ethene copolymer propene-1-butene-ethene copolymer and 1-octene-ethene copolymer.

5. The carpet backing layer composition according to any of the preceding claims, wherein the inorganic filler is selected from the group consisting of talc, mica, calcium carbonate, magnesium carbonate, dolomite, barite (barium sulfate), bauxite, magnesium hydroxide, aluminium hydroxide, kaolin, silica, glass, and any combination thereof.

6. The carpet backing layer composition according to any of the preceding claims, comprising one or more processing additives selected from the group consisting of waxes, oils and tackifiers.

7. The carpet backing layer composition according to any of the preceding claims, wherein the processing additives substitute 80% by weight or less, preferably 75% by weight or less, more preferably 65% by weight or less, most preferably 55% by weight or less of the polyolefin part or of the blend of polyolefins part..

8. The carpet backing layer composition according to any of claims 1 to 6, wherein the processing additives substitute 45% by weight or less, preferably 35% by weight or less, more preferably 20% by weight or less, of the polyolefin part or of the blend of polyolefins part.

9. The carpet backing layer composition according to any of the preceding claims, characterized by a melt viscosity at 160°C in a rotational viscometer, according to ISO 11443, of from 10 Pas to 5000 Pas, preferably from 20 Pas to 2500 Pas, more preferably from 50 to 500 Pas.

10. Carpet comprising a carpet backing layer comprising the carpet backing layer composition of any of claims 1 to 9.

11. The carpet according to claim 10, wherein the carpet backing layer has a surface density comprised between 1600 and 4000 g/m^2, preferably between 1700 and 3500 g/m^2, more preferably between 1800 and 3000 g/m^2, most preferably between 1900 and 2500 g/m^2 and a layer thickness comprised between 0.4 and

4.0 mm, preferably between 0.5 and 3.5 mm, more preferably between 0.7 and 2.5 mm, most preferably between 0.8 and 2.0 mm.

12. A method of making a carpet according to claim 10 or 11, comprising:
    a) extrusion coating the carpet backing layer composition, according to any of claims 1 to 9, on the back side of a primary backing material, said primary backing material having a face and a back side, a plurality of fibers attached to the primary backing material and extending from the face side and exposed at the back side and
    b) cooling down the carpet layer composition and forming the carpet backing layer.

13. The method according to claim 12, wherein the extrusion coating is performed at a temperature comprised between 130 and 170°C, preferably between 140 and 160°C.

14. The method according to claim 12 or 13, comprising the additional step of subjecting the extrusion coated carpet backing layer composition of step a) to a subsequent heat treatment at a temperature comprised between 130 and 170°C, preferably between 140 and 160°C for a time period comprised between 1 and 60 s, preferably between 5 and 30 s, more preferably between 10 and 20 s, before cooling down in step b).