CLAIMS

1. A polyethylene composition comprising a base resin, wherein the base resin comprises

   (A) 30 to 47 wt.% of a first ethylene-1-butene copolymer fraction (A) having a 1-butene content of from 0.5 wt% to 7.5 wt%, based on the total weight amount of monomer units in the first ethylene-1-butene copolymer fraction (A), and a melt flow rate MFR_2 in the range of from 1.0 to less than 50.0 g/10 min, determined according to ISO 1133 at a temperature of 190°C and a load of 2.16 kg; and

   (B) 43 to 65 wt.% of a second ethylene-1-butene copolymer fraction (B) having a higher 1-butene content than the first ethylene-1-butene copolymer fraction;

   wherein the base resin is polymerized in the presence of a single site catalyst system and has a density of from 913.0 to 920.0 kg/m³ and a 1-butene content of from 8.0 to 13.0 wt%, based on the total weight amount of monomer units in the base resin, wherein the base resin further comprises up to 15 wt% of a low density polyethylene (LDPE).

2. The polyethylene composition according to claim 1 having a melt flow rate MFR_2 of 0.7 to 4.0 g/10 min, determined according to ISO 1133 at a temperature of 190°C and a load of 2.16 kg.

3. The polyethylene composition according to claims 1 or 2 having a melt flow rate MFR_{21} of 15 to 50 g/10 min, determined according to ISO 1133 at a temperature of 190°C and a load of 21.6 kg and/or a flow rate ratio $FRR_{21/2}$, being the ratio of the melt flow rates MFR_{21}/MFR_2, of from 10 to 30.

4. The polyethylene composition according to any one of the preceding claims having a polydispersity index PDI, being the ratio of weight average molecular weight Mw to number average molecular weight Mn, Mw/Mn, of from 3 to 8.

5. The polyethylene composition according to any one of the preceding claims, wherein the weight ratio of the first ethylene-1-butene copolymer (A) to the second ethylene-1-butene copolymer (B) in the base resin is from 35:65 to 47:53.

6. A process for preparing the polyethylene composition according to any one of the preceding claims comprising the steps of

a) polymerizing ethylene and 1-butene monomers in the presence of a single site catalyst system in a first polymerization reactor to form a first polymerization mixture comprising a first ethylene-1-butene copolymer fraction (A) having a 1-butene content of from 0.5 wt% to 7.5 wt%, based on the total weight amount of monomer units in the first ethylene-1-butene copolymer fraction (A) and a melt flow rate MFR_2 in the range of from 1.0 to less than 50.0 g/10 min, determined according to ISO 1133 at a temperature of 190°C and a load of 2.16 kg, and said single site catalyst;

b) transferring the first polymerization mixture from the first polymerization reactor to a second polymerization reactor;

c) polymerizing ethylene and 1-butene monomers in the presence of a single site catalyst in said second polymerization reactor to form a second polymerization mixture comprising said first ethylene-1-butene copolymer fraction (A) and a second ethylene-1-butene copolymer fraction (B);

d) recovering said second polymerization mixture from said second reactor;

e) forming a base resin having a density of from 913.0 to 920.0 kg/m³ and a 1-butene content of from 8.0 to 13.0 wt%, based on the total weight amount of monomer units in the base resin, and

f) preparing the polyethylene composition.

7. An article comprising the polyethylene composition according to any one of the preceding claims.

8. The article according to claim 7 being a film, a blow moulded article or a rotomoulded article.

9. The article according to claims 7 or 8 being a film, which has a tear strength in machine direction TS-MD (N) of at least 0.6 N and/or a tear strength in transverse direction TS-TD (N) of at least 5.0 N, determined according ISO 6383-2:1983 on a 40 µm thick blown film.

10. The article according to any one of claims 7 to 9 being a film, which has a seal initiation temperature SIT of from 90 to 100°C, determined on a 40 µm thick blown film.

11. The article according to any one of claims 7 to 10 being a film, which has a hot tack temperature of from 88 to 97°C, determined according to BICM90720 on a 40 µm thick blown film.

12. The article according to any one of claims 7 to 11 being a film, which has a haze of not more than 14.0%, determined according to ASTM D1003 on a 40 µm thick blown film.

13. The article according to any one of claims 7 to 12 being a film, which has a gloss of at least 92.0%, determined according to ISO2813 on the inside surface of a 40 µm thick blown film.

14. The use of a polyethylene composition according to any one of claims 1 to 6 for the production of an article.