

What is claimed is:

1. A bimodal linear low density polyethylene copolymer comprising:
a density from 0.8900 to 0.9300 gram per cubic centimeter (g/cm^3) measured according to ASTM D792-13, Method B;
a melt index (I_2) from 0.1 grams per 10 minutes (g/10 min.) to 5 g/10 min. , measured according to the Melt Index Test Method at 190 °C and 2.16 kilograms according to ASTM D1238-13;
a M_z from 600,000 to 1,900,000 grams per mole (g/mol), measured according to a Gel Permeation Chromatography (GPC) Test Method; and
a shear thinning index (SHI) from 5.35 to 75 $\eta^*(1.0)/\eta^*(100)$ measured according to SHI Test Method.
2. The bimodal linear low density polyethylene copolymer of claim 1 having a first melt flow ratio (I_{21}/I_2) from 32 to 140, measured according to the Melt Index Test Method at 190 °C and 21.6 and 2.16 kilograms, respectively, according to ASTM D1238-13.
3. The bimodal linear low density polyethylene copolymer of any one of claims 1-2 having a first molecular weight ratio (M_z/M_w) from 4 to 11, measured according to the GPC Test Method, wherein M_z is z-average molecular weight and M_w is weight-average molecular weight.
4. The bimodal linear low density polyethylene copolymer of claim 1,
wherein the I_2 is from 0.80 g/10 min. to 1.2 g/10 min. , measured according to the Melt Index Test Method at 190 °C and 2.16 kilograms according to ASTM D1238-13; and
the M_z is from 630,000 to less than 1,700,000 g/mol , measured according to the GPC Test Method.
5. The bimodal linear low density polyethylene copolymer of claim 4,
wherein the density is from 0.916 to 0.926 g/cm^3 measured according to ASTM D792-13, Method B.

6. The bimodal linear low density polyethylene copolymer of any one of claims 4-5 having a tan delta ($\tan \delta$) from 2 to 6, measured at 190 °C and a frequency of 0.1000 radians per second (rad/s) according to Tan Delta Test Method.
7. The bimodal linear low density polyethylene copolymer of claim 6, wherein the $\tan \delta$ is from 5.6 to 6, measured at 190 °C and a frequency of 0.1000 radians per second (rad/s) according to Tan Delta Test Method;
the density is from 0.916 to 0.918 g/cm³ measured according to ASTM D792-13, Method; and
the M_z/M_w is 5 to 5.6, measured according to the GPC Test Method.
8. The bimodal linear low density polyethylene copolymer of any one of claims 4-7 having a low elution fraction of 1.7 percent to 10 percent as measured by iCCD technique from above 25 °C to below 35 °C.
9. The bimodal linear low density polyethylene copolymer of any one of claims 4-8 having a high density fraction of 0.9 percent to 4.1 percent as measured by iCCD technique from above 95 °C to below 115 °C.
10. The bimodal linear low density polyethylene copolymer of claim 1, wherein the density from 0.915 to 0.920 g/cm³ measured according to ASTM D792-13, Method B;
the I_2 is from 3.2 g/10 min. to 3.6 g/10 min., measured according to the Melt Index Test Method at 190 °C and 2.16 kilograms according to ASTM D1238-13;
the M_z is from 800,000 to 1,200,000 g/mol, measured according to the GPC Test Method; and
the SHI from 10 to 12 $\eta^*(1.0)/\eta^*(100)$ measured according to SHI Test Method.
11. The bimodal linear low density polyethylene copolymer of claim 10 having a tan delta ($\tan \delta$) from 3 to 4, measured at 190 °C and a frequency of 0.1000 radians per second (rad/s) according to Tan Delta Test Method.

12. The bimodal linear low density polyethylene copolymer of claim 1, wherein the density from 0.9160 to 0.9200 g/cm³ measured according to ASTM D792-13, Method B; the I_2 is from 0.1 g/10 min. to 0.8 g/10 min., measured according to the Melt Index Test Method at 190 °C and 2.16 kilograms according to ASTM D1238-13; the M_z is from 650,000 to 1,900,000 g/mol, measured according to the GPC Test Method; and the SHI from 6 to 32 $\eta^*(1.0)/\eta^*(100)$ measured according to SHI Test Method.
13. The bimodal linear low density polyethylene copolymer of claim 12, having a tan delta (tan δ) from 1.6 to 3.1, measured at 190 °C and a frequency of 0.1000 radians per second (rad/s) according to Tan Delta Test Method.
14. The bimodal linear low density polyethylene copolymer of any one of claims 12-13 having a low elution fraction of 3.8 percent to 4.6 percent as measured by iCCD technique from above 25 °C to below 35 °C.
15. The bimodal linear low density polyethylene copolymer of any one of claims 12-14 having a high density fraction of 6 percent to 10 percent as measured by iCCD technique from above 95 °C to below 115 °C.
16. The bimodal linear low density polyethylene copolymer of any one of claims 12-15, wherein the I_2 is from 0.3 g/10 min. to 0.4 g/10 min., measured according to the Melt Index Test Method at 190 °C and 2.16 kilograms according to ASTM D1238-13.
17. The bimodal linear low density polyethylene copolymer of any one of claims 1-16 wherein a comonomer used in forming the bimodal linear low density polyethylene copolymer is selected from 1-hexene, 1-butene or a combination thereof.
18. The bimodal linear low density polyethylene copolymer of any one of claims 1-17, wherein a number of short chain branches per 1000 carbon atoms measured according to the GCP Test Method is greater at M_w than at M_n .

19. A manufactured article comprising a shaped form of the bimodal linear low density polyethylene copolymer of any one of claims 1-18.
20. A method of making the bimodal linear low density polyethylene copolymer of any one of claims 1-16, the method comprising contacting ethylene ("C₂") and a comonomer ("C_X") selected from 1-butene (C_X = C₄), 1-hexene (C_X = C₆), or both (C_X = C₄ and C₆) at a comonomer-to-ethylene (C_X/C₂) molar ratio of 0.005 to 0.30 with a bimodal catalyst system comprising bis[(2-pentamethylphenylamido)ethyl]amine zirconium dibenzyl in the presence of molecular hydrogen gas (H₂) at a hydrogen-to-ethylene (H₂/C₂) molar ratio from 0.001 to less than 0.012, all in a single gas phase polymerization reactor containing a fluidized resin bed at a temperature from 70 °C to 90 °C, thereby making the bimodal linear low density polyethylene copolymer.
21. The method of claim 20, wherein the H₂/C₂ molar ratio is from 0.001 to 0.003.
22. The method of any one of claims 20-21, wherein the bimodal catalyst system comprises a metallocene other than (tetramethylcyclopentadienyl)(n-propylcyclopentadienyl)zirconium-X₂ (X = chloride, methyl).