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 ^oC 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 ^oC and 21.6 and 2.16 kilograms, respectively, according to ASTM D1238-13; or

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.

~~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~~3. 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 ^oC 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~~4. The bimodal linear low density polyethylene copolymer of claim ~~4~~3,

wherein the density is from 0.916 to 0.926 g/cm^3 measured according to ASTM D792-13, Method B; or

having a tan delta (tan δ) from 2 to 6, measured at 190 ^{o}C and a frequency of 0.1000 radians per second (rad/s) according to Tan Delta Test Method; or

wherein the tan δ is from 5.6 to 6, measured at 190 ^{o}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/cm^3 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; or

having a low elution fraction of 1.7 percent to 10 percent as measured by iCCD technique from above 25 ^{o}C to below 35 ^{o}C; or

having a high density fraction of 0.9 percent to 4.1 percent as measured by iCCD technique from above 95 ^{o}C to below 115 ^{o}C.

~~6. The bimodal linear low density polyethylene copolymer of any one of claims 4-5 having a tan delta (tan δ) from 2 to 6, measured at 190 ^{o}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 δ is from 5.6 to 6, measured at 190 ^{o}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/cm^3 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 ^{o}C to below 35 ^{o}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 ^{o}C to below 115 ^{o}C.~~

~~10~~5. The bimodal linear low density polyethylene copolymer of claim 1, wherein the density from 0.915 to 0.920 g/cm^3 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 ^oC 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; or

having a tan delta (tan δ) from 3 to 4, measured at 190 ^oC and a frequency of 0.1000 radians per second (rad/s) according to Tan Delta Test Method.

~~11. The bimodal linear low density polyethylene copolymer of claim 10 having a tan delta (tan δ) from 3 to 4, measured at 190 ^oC and a frequency of 0.1000 radians per second (rad/s) according to Tan Delta Test Method.~~

~~12~~6. The bimodal linear low density polyethylene copolymer of claim 1, wherein the density from 0.9160 to 0.9200 g/cm^3 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 ^oC 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; or

having a tan delta (tan δ) from 1.6 to 3.1, measured at 190 ^oC and a frequency of 0.1000 radians per second (rad/s) according to Tan Delta Test Method; or

having a low elution fraction of 3.8 percent to 4.6 percent as measured by iCCD technique from above 25 ^oC to below 35 ^oC; or

having a high density fraction of 6 percent to 10 percent as measured by iCCD technique from above 95 ^oC to below 115 ^oC; or

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 ^oC and 2.16 kilograms according to ASTM D1238-13.

~~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~~7. The bimodal linear low density polyethylene copolymer of any one of claims ~~1-16~~1-6 wherein a comonomer used in forming the bimodal linear low density polyethylene copolymer is selected from 1-hexene, 1-butene or a combination thereof; or

wherein a number of short chain branches per 1000 carbon atoms measured according to the GCP Test Method is greater at Mw than at Mn.

~~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 Mw than at Mn.~~

~~19~~8. A manufactured article comprising a shaped form of the bimodal linear low density polyethylene copolymer of any one of claims ~~1-18~~1-7.

~~20~~9. A method of making the bimodal linear low density polyethylene copolymer of any one of claims 1-16, the method comprising contacting ethylene ("C_2") and a comonomer ("C_X") selected from 1-butene ($C_X = C_4$), 1-hexene ($C_X = C_6$), or both ($C_X = C_4$ and C_6) at a

comonomer-to-ethylene (C_x/C_2) 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 (H_2) at a hydrogen-to-ethylene (H_2/C_2) 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~~10. The method of claim ~~20~~9, wherein the H_2/C_2 molar ratio is from 0.001 to 0.003; or wherein the bimodal catalyst system comprises a metallocene other than (tetramethylcyclopentadienyl)(n-propylcyclopentadienyl)zirconium-X_2 (X = chloride, methyl).

~~22. The method of any one of claims 20-21, wherein the bimodal catalyst system comprises a metallocene other than (tetramethylcyclopentadienyl)(n-propylcyclopentadienyl)zirconium-X_2 (X = chloride, methyl).~~