Claims

What is claimed is:

1. A fluoropropene composition comprising Z-1,3,3,3-tetrafluoropropene, E-1,3,3,3,- tetrafluoropropene, 1,1,3,3,3-pentafluoropropene, and 2,3,3,3-tetrafluoropropene, wherein 2,3,3,3-tetrafluoropropene and 1,1,3,3,3-pentafluoropropene both being present and wherein the total amount of 1,1,3,3,3-pentafluoropropene and 2,3,3,3-tetrafluoropropene is less than 1.0 mol%,

2. The composition of claim 1, wherein the 2,3,3,3-tetrafluoropropene is present in an amount of 0.1 to 0.9 mol%.

3. The composition of claim 1, wherein the 2,3,3,3-tetrafluoropropene is present in an amount of 0.2 to 0.4 mol%.

4. The composition of claim 1, wherein the 2,3,3,3-tetrafluoropropene is present in an amount of 0.3 to 0.4 mol%.

5. The composition of claim 1, wherein the fluoropropene composition additionally comprises one or more of R-143a, R-152a, TFP, R-1233xf, R-1233zd(E), R-1233zd(Z) 1224yd, 1224zc, 1326mxz, 113, 32, 23, trifluoro propyne, 356mff, 1326mxz, HFC-245fa, HFC-245cb 1234zc, 1234yc, 1234ye, 134a, 1225ye (Z and E), 114, 124, and 236fa.

6. The composition of claim 5, wherein the sum total of the amounts of R-143a, R-152a, TFP, R-1233xf, R-1233zd(E), R-1233zd(Z), 1224yd, 1224zc, 1326mxz, 113, 32, 23, trifluoro propyne, 356mff, 1326mxz, HFC-245fa and HFC-245cb is between 0.001 mole percent and 2 mole percent, based on the total fluoropropene composition.

7. The composition of claim 1, wherein the fluoropropene composition includes R-1233zd(E) in an amount of 0.7 mole percent to 1.15 mole percent, based on the total fluoropropene composition.

8. The composition of claim 1, wherein the fluoropropene composition includes R-1233zd(Z) in an amount of 0.05 mole percent to 0.25 mole percent, based on the total fluoropropene composition.

9. The composition of claim 1, wherein the fluoropropene composition includes R-143a in an amount of 0.05 mole percent to 0.25 mole percent, based on the total fluoropropene composition.

10. The composition of claim 1 wherein the composition is near azeotropic.

11. The composition of claim 10 further comprising at least one member selected from the group consisting of HFC-1234ye, HFC-1243zf, HFC-32, HFC-125, HFC-134, HFC-134a, HFC-143a, HFC-152a, HFC-161, HFC-227ea, HFC-236ea, HFC-236fa, HFC-245fa, HFC-365mfc, R1336mmz(E), propane, n-butane, isobutane, 2-methylbutane, n-pentane, cyclopentane, dimethylether, CF_3SCF_3, CO_2, and CF_3I

12. A refrigerant composition comprising Z-1,3,3,3-tetrafluoropropene, E-1,3,3,3,- tetrafluoropropene, 1,1,3,3,3-pentafluoropropene, and 2,3,3,3-tetrafluoropropene and at least one member selected from the following groups:

    (a) comprising one or more of R-143a, R-152a, TFP, R-1233xf, R-1233zd(E), R-1233zd(Z) 1224yd, 1224zc, 1326mxz, 113, 32, 23, trifluoropropyne, 356mff, 1326mxz, HFC-245fa, HFC-245cb 1234zc, 1234yc, 1234ye, 134a, 1225ye (Z and E), 114, 124, and 236fa,

    (b) comprising one or more of R-143a, R-152a, TFP, R-1233xf, R-1233zd(E), R-1233zd(Z), 1224yd, 1224zc, 1326mxz, 113, 32, 23, trifluoropropyne, 356mff, 1326mxz, HFC-245fa and HFC-245cb,

    (c) comprising one or more of HFC-1234ye, HFC-1243zf, HFC-32, HFC-125, HFC-134, HFC-134a, HFC-143a, HFC-152a, HFC-161, HFC-227ea, HFC-236ea, HFC-236fa, HFC-245fa, HFC-365mfc, R1336mzz(E), propane, n-butane, isobutane, 2-methylbutane, n-pentane, cyclopentane, dimethylether, CF_3SCF_3, CO_2, and CF_3I; and,

    (d) combinations thereof.

13. A process for transferring heat, comprising:

    providing an article;

    contacting the article with a heat transfer media;

wherein the heat transfer media comprises the fluoropropene composition of claim 1 or 12.

14. A refrigeration system, comprising:

an evaporator; a condenser;

a compressor;

an expansion device; and a heat transfer media;

wherein the heat transfer media comprises the fluoropropene composition of claim 1 or 12.