CLAIMS

1. A composition comprising HFO-1234yf, HFO-1234ze, HFO-1225zc, and HFC-245fa wherein the total amount of HFO-1225zc and HFC-245fa is greater than zero but less than 0.5 weight percent.

2. A mobile heat transfer system refrigerant comprising HFO-1234yf, HFO-1234ze, HFC-245fa, HFO-1225zc, HFC-245eb and at least one lubricant wherein the total amount of HFC-245fa, HFO-1225zc and HFC-245eb is greater than zero but less than 0.5 weight percent.

3. The composition of Claim 1 wherein the composition is acid free.

4. A stationary heat transfer system refrigerant comprising HFO-1234yf, HFO-1234ze, HFC-245fa, HFC-245eb HFO-1225zc and at least one lubricant wherein the total amount of HFC-245fa, HFC-245eb and HFO-1225zc is greater than zero but less than 0.5 weight percent.

5. The composition of Claim 1 further comprising at least one additional compound comprising at least one member selected from the group consisting of HCO-1250xf, HCC-260da, HCC-240aa, HCO-1230xa, HCFO-1233xf, HCFO-1233zd, HCFC-244bb, HCFC-244db, HFC-245cb, HFO-1243zf, HCFO-1223za, HCFO-1224zb, HCFC-241db, HCFC-242dc, HCFO-1232xf, HCFO-1231xf, and HCFO-1233yf.

6. The refrigerant of Claim 2 further comprising at least one additional compound comprising at least one member selected from the group consisting of HCO-1250xf, HCC-260da, HCC-240aa, HCO-1230xa, HCFO-1233xf, HCFO-1233zd, HCFC-244bb, HCFC-244db, HFC-245cb, HFO-1243zf, HCFO-1223za, HCFO-1224zb, HCFC-241db, HCFC-242dc, HCFO-1232xf, HCFO-1231xf, and HCFO-1233yf.

7. The refrigerant of Claim 4 further comprising at least one additional compound comprising at least one member selected from the group consisting of HCO-1250xf, HCC-260da, HCC-240aa, HCO-1230xa, HCFO-1233xf, HCFO-1233zd, HCFC-244bb, HCFC-244db, HFC-245cb, HFO-1243zf, HCFO-1223za, HCFO-1224zb, HCFC-241db, HCFC-242dc, HCFO-1232xf, HCFO-1231xf, and HCFO-1233yf.

8. The composition of Claim 5 wherein the amount of the additional compound is less than 1 wt.%

9. The refrigerant of Claim 6 wherein the amount of the additional compound is less than 1 wt.%.

10. The refrigerant of Claim 7 wherein the amount of the additional compound is less than 1 wt.%.

11. The composition of Claim 5 wherein the additional compound comprises at least one of HCFC-244bb and HCFO-1233xf.

12. The refrigerant of Claim 6 wherein the additional compound comprises at least one of HCFC-244bb and HCFO-1233xf.

13. The refrigerant of Claim 7 wherein the additional compound comprises at least one of HCFC-244bb and HCFO-1233xf.

14. The composition of Claim 1 wherein the HFO-1234ze comprises E-isomer of HFO-1234ze.

15. The composition of Claim 1 wherein the HFO-1234ze comprises Z-isomer of HFO-1234ze.

16. The mobile heat transfer system refrigerant of Claim 2 wherein the system comprises at least one of mobile refrigerators, mobile air conditioning units and heat pumps.

17. The stationary heat transfer system refrigerant of Claim 4 wherein the system comprises at least one of air conditioners, freezers, refrigerators, heat pumps, water chillers, flooded evaporator chillers, direct expansion chillers and walk-in coolers.

18. The composition of claim 5 wherein the additional compound comprises HFC-245cb.

19. The refrigerant of claim 6 wherein the additional compound comprises HFC-245cb.

20. The refrigerant of claim 7 wherein the additional compound comprises HFC-245cb.

21. A composition comprising HFO-1234yf, E isomer of HFO-1234ze, Z isomer of HFO-1234ze, HFO-1225zc and HFC-245fa wherein the total amount of HFO-1225zc and HFC-245fa is greater than zero and less than 1 weight percent.

22. The composition of claim 21 further comprising HFC-245eb.

23. The composition of claim 21 further comprising HFC-245cb.

24. The composition of claim 23 wherein the total amount of HFC-245cb is greater than zero and less than 1 weight percent.

25. The composition of claim 23 wherein the total amount of HFO-1225zc, HFC-245fa and HFC-245cb is greater than zero and less than 0.5 weight percent.

26. The composition of claim 25 wherein the amount of HFC-245cb ranges from 1 to 1000 ppm.

27. The composition of claim 26 wherein the amount of HFC-245cb ranges from 1 to 500pm.

28. The composition of claim 27 wherein the amount of HFC-245cb ranges from 10 to 300ppm.

29. The composition of claim 23 wherein the total amount of Z-isomer of HFO-1234ze, HFO-1225zc, HFC-245fa and HFC-245cb is greater than zero and less than 1 weight percent.

30 The composition of claim 29 wherein the total amount of Z-isomer of HFO-1234ze, HFO-1225zc, HFC-245fa and HFC-245cb is greater than zero and less than 0.5 weight percent.