**Table 2A. Zeotropic Blends (400 Series Refrigerants) and their Allowable Levels of Contaminants (continued)**

| | Reporting Units | Reference Section | **R-429A** | **R-430A** | **R-431A** | **R-434A** | **R-435A** | **R-437A** | **R-438A** | **R-439A** | **R-440A** |
|---|---|---|---|---|---|---|---|---|---|---|---|
| *CHARACTERISTICS:* | | | | | | | | | | | |
| Refrigerant Components | N/A | N/A | R-E170/ 152a/600a | R-152a/ 600a | R290/152a | R-125/ 143a/134a/ 600a | R-E170/ 152a | R-125/ 134a/600 /601 | R-32/125/ 134a/600 /601a | R-32/125/ 600a | R-290/ 134a/152a |
| Nominal Composition | % by weight | N/A | 60.0/10.0/ 30.0 | 76.0/24.0 | 71.0/29.0 | 63.2/18.0/ 16.0/2.8 | 80.0/20.0 | 19.5/78.5/ 1.4/0.6 | 8.5/45.0/ 44.2/1.7/ 0.6 | 50/47.0/ 3.0 | 0.6/1.6/97.8 |
| Allowable Composition | % by weight | N/A | 59.0-61.0/ 9.0-11.0/ 29.0-31.0 | 75.0-77.0/ 23.0-25.0 | 70.0-72.0/ 28.0-30.0 | 62.2-64.2/ 17.0-19.0/ 15.0-17.0/ 2.6-2.9 | 79.0-81.0/ 19.0-21.0 | 17.7-20.0/ 77.8-80.0/ 1.2-1.5/ 0.4-0.7 | 7.0-9.0/ 43.5-46.5/ 42.7-45.7/ 1.5-1.8/ 0.4-0.7 | 49.0-51.0/ 46.0-48.0/ 2.5-3.5 | 0.5-0.7/ 1.0-2.2/ 97.3-98.3 |
| Bubble Point[1] | °C @ 101.3 kPa | N/A | -25.5 | -27.6 | -43.2 | -45.1 | -26 | -32.9 | -43 | -52 | -25.5 |
| Dew Point[1] | °C @ 101.3 kPa | N/A | -24.9 | -27.4 | -43.2 | -42.4 | -25.8 | -29.2 | -36.4 | -51.7 | -24.3 |
| Critical Temperature[1] | °C | N/A | 123.5 | 107 | 100.3 | 75.6 | 125.2 | 95.3 | 84.2 | 72 | 112.9 |
| *VAPOR PHASE CONTAMINANTS:* | | | | | | | | | | | |
| Air and Other Non-condensables, Max. | % by volume @ 25.0 °C | 5.10 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| *LIQUID PHASE CONTAMINANTS:* | | | | | | | | | | | |
| Water, Maximum | ppm by weight | 5.4 | 10 | 10 | 20 | 20 | 10 | 10 | 20 | 10 | 10 |
| All Other Volatile Impurities, Max. | % by weight | 5.11 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| High Boiling Residue, Max. | % by volume or % by weight | 5.8 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| Particulates/Solids | Pass or Fail | 5.9 | Visually clean | Visually clean | Visually clean | Visually clean | Visually clean | Visually clean | Visually clean | Visually clean | Visually clean |
| Acidity, Max. | ppm by weight (as HC1) | 5.7 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Chloride[2] | Pass or Fail | 5.6 | No visible turbidity | No visible turbidity | No visible turbidity | No visible turbidity | No visible turbidity | No visible turbidity | No visible turbidity | No visible turbidity | No visible turbidity |