

## About TdX 20 Refrigerant

Bluon TdX 20 (R-458A) is a refrigerant blend designed to replace R-22. It is EPA and ASHRAE approved for HVAC and refrigeration applications.

Physical Properties	TdX 20	R-22	R-407C
Classification	HFC	HCFC	HFC
Molar Mass (lbm/lbmol)	89.9	86.5	86.2
Boiling Point (1atm, °F)	-39.6	-41.5	-46.5
Critical Pressure (Psia)	656.1	723.7	672.9
Critical Temperature (°F)	197.6	205.1	187.1
Critical Density (lb./ft <sup>3</sup> )	29.8	32.7	30.2
Liquid Density (70 °F, lb./ft <sup>3</sup> )	73.4	75.3	72.0
Vapor Density (bp.lb./ft <sup>3</sup> )	0.296	0.294	0.289
Heat of Vaporization (-40 °F, BTU/lb.)	102.9	100.3	104.3
Specific Heat (Liquid) (70 °F, BTU/lb. °F)	0.352	0.296	0.361
Specific Heat (Vapor) (1 atm, 70 °F, BTU/lb. °F)	0.200	0.157	0.199
Ozone Depletion Potential (CFC 11 = 1.0)	0	0.05	0
Global Warming Potential (CO <sub>2</sub> = 1.0)	1650	1810	1774
ASHRAE Safety Rating	A1	A1	A1
Energy Efficient vs. R-22	✓	--	✗
Like Capacity to R-22	✓	--	✓
Compatible with MO & POE / No Oil Change	✓	✓	✗
Mobile App, Tools & Resources	✓	✗	✗
Live Technical Support	✓	✗	✗

### TdX 20 PT Chart

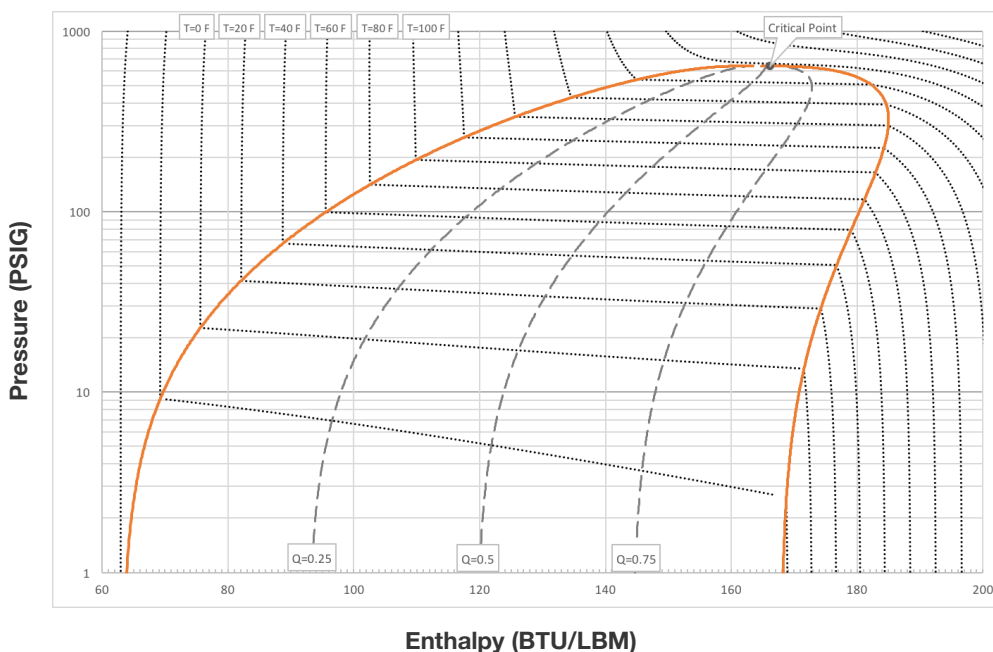
Temp (F)	Liquid (PSIG)
0	35.5
5	16.9
10	20.6
15	24.6
20	29.0
25	33.8
30	38.9
35	44.5
40	50.5
45	56.9
50	63.8
55	71.3
60	79.2
65	87.7

SUPERHEAT

Temp (F)	Liquid (PSIG)
70	118.8
75	129.6
80	141.0
85	153.0
90	165.7
95	179.1
100	193.2
105	208.1
110	223.7
115	240.1
120	257.4
125	275.5
130	294.4
135	314.3

SUBCOOL

### TdX 20 PH Chart



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Physical Properties	TdX 20	R-22	R-407C
Classification	HFC	HCFC	HFC
Molar Mass (kg/kmol)	89.9	86.5	86.1
Boiling Point (1atm, °C)	-39.8	-40.8	-43.6
Critical Pressure (kPa)	4523.8	4990	4639.4
Critical Temperature (°C)	92.0	96.1	86.1
Critical Density (kg./m <sup>3</sup> )	477.3	523.8	483.9
Liquid Density (21.1 °C, kg/m <sup>3</sup> )	1175.7	1205.7	1154.1
Vapor Density (bp. kg./m <sup>3</sup> )	4.746	4.704	4.631
Heat of Vaporization (-40 °C, kJ/kg)	239.2	233.2	242.3
Specific Heat (Liquid) (21.1 °C, kJ/kg-K)	1.472	1.240	1.511
Specific Heat (Vapor) (1 atm, 21.1 °C, kJ/kg-K)	0.838	0.658	0.832
Ozone Depletion Potential (CFC 11 = 1.0)	0	0.05	0
Global Warming Potential (CO <sub>2</sub> = 1.0)	1650	1810	1774
ASHRAE Safety Rating	A1	A1	A1
Energy Efficient vs. R-22	✓	--	✗
Like Capacity to R-22	✓	--	✓
Compatible with MO & POE / No Oil Change	✓	✓	✗
Mobile App, Tools & Resources	✓	✗	✗
Live Technical Support	✓	✗	✗

### TdX 20 PT Chart

Temp (C)	Liquid (kPag)
-20	75.5
-16	107.5
-12	143.9
-8	185.1
-4	231.4
0	283.2
4	341.1
6	372.2
8	405.4
10	440.1
12	476.6
14	514.9
16	555.2
18	597.4

SUPERHEAT

Temp (C)	Liquid (kPag)
20	790.9
22	842.6
24	896.5
26	952.6
28	1011.0
30	1071.8
32	1135.1
34	1200.8
38	1339.9
42	1489.8
46	1650.9
50	1823.6
54	2008.7
58	2206.5

SUBCOOL

