TABLE 54B, Generalized Products, Correction of volume to 15°C against density at 15°C

DEN15	Density at 15°C
DEGC	Observed Temperature, °C
ALPHA	Coefficient of thermal expansion
VCF	Volume Correction Factor

VCF = e ^ (-ALPHA * dT * (1 + 0.8 * ALPHA * dT))

Where,

e = 2.71828

dT = DEGC - 15°C

ALPHA = (K0 + K1 * DEN15) / DEN15 ^ 2
ALPHA (In Transition Zone) = A + B / DEN15 ^ 2

DEN15 <= 770
- K0 = 346.42278
- K1 = 0.43884

DEN15 > 770 and < 778 (Transition Zone)
- A = -0.0033612
- B = 2680.32

DEN15 >= 778 and < 839
- K0 = 594.5418
- K1 = 0

DEN15 >= 839
- K0 = 186.9696
- K1 = 0.48618

EXAMPLE 1

DEN15: 839
DEGC: 32.5
VCF: 0.98515

EXAMPLE 2

DEN15: 889
DEGC: 115.55
VCF: 0.91966

EXAMPLE 3

DEN15: 903.5
DEGC: 30.50
ALPHA: 0.0007672
VCF: 0.988067

EXAMPLE 4

DEN15: 819
DEGC: 26.75
ALPHA: 0.0008864
VCF: 0.989552

EXAMPLE 5

DEN15: 777.5 (Transition zone)
DEGC: 9
ALPHA: 0.0010708
VCF: 1.006412

EXAMPLE 6

DEN15: 749
DEGC: 32
ALPHA: 0.0012033
VCF: 0.979423