

Table 1 • Typical Properties of DOW Ethanolamines

	<i>Monoethanolamine</i>	<i>Diethanolamine</i>	<i>Triethanolamine</i>
Formula	$\text{H}_2\text{NCH}_2\text{CH}_2\text{OH}$	$\text{HN}(\text{CH}_2\text{CH}_2\text{OH})_2$	$\text{N}(\text{CH}_2\text{CH}_2\text{OH})_3$
Molecular Weight	61.08	105.14	149.19
Apparent Sp. Gr. at 20/20°C	1.017	1.092 ^(a)	1.126 ^(f)
ΔSp. Gr./Δt at 10 to 80°C	0.00080	0.00065 ^(b)	0.00059
Boiling Point at 760 mm Hg, °C	170.4	268 ^(c)	335 ^(c)
at 50mm Hg, °C	101	182	245 ^(c)
at 10mm Hg, °C	71	150	205
Vapor Pressure at 20°C, mm Hg	<1	<0.01	<0.001
Freezing Point, °C(°F)	10.5 (50.9)	28.0 (82.4)	21.6 (70.9) ^(e)
Absolute Viscosity at 20°C, cP	24.1	—	921 ^(f)
at 30°C, cP	16.2	380	404
Solubility at 20°C, % by wt			
In Water	Complete	Complete ^(f)	Complete ^(f)
Water In	Complete	—	Complete ^(f)
Solubility in Organic Liquids at 25°C, % by wt			
Acetone	Complete	Complete ^(f)	Complete
Benzene	0.6	0.03	2
Carbon Tetrachloride	0.1	0.01	Complete
Ethyl Ether	0.7	0.5	2
Heptane	0.1	0.03	<0.03
Methanol	Complete	Complete ^(f)	Complete
Surface Tension, dynes/cm	48.3 ^(d)	48.5 ^(g)	48.9 ^(d)
Refractive Index, n_D^{20}	1.4539	1.4747 ^(g)	1.4852 ^(f)
ΔN _D /Δt at 20 to 40°C per °C	0.00034	0.00027 ^(b)	0.00020
Flash Point, °C (°F)	96 (205) ^(h)	191 (375) ^(h)	208 (407) ^(h)

(a) At 30/20°C

(b) At 35 to 65°C

(c) Extrapolated (decomposes)

(d) At 25°C

(e) Supercools easily

(f) Supercooled liquid

(g) At 30°C

(h) Determined by ASTM Method D 93,