

TECHNICAL INFORMATION

Nelson Brothers, LLC

PowerNel[®] 1500 Specification

PowerNel 1500 is an ammonium nitrate / hydrocarbon emulsion blasting agent in the form of a water-in-oil emulsion explosive. PowerNel 1500 can be used in packaged or bulk form, and it is often used in combination with low cost ANFO in various proportions to meet individual blasting needs. PowerNel 1500 is sensitized to insure effective performance when used under demanding conditions.

PowerNel[®] 1500 is manufactured to the following specifications:

PowerNel [®] 1500	
Parameter	Specification
Density <i>g/cc</i>	1.25 maximum ¹
<i>lb/gal</i>	10.43 maximum ¹
Absolute Weight Strength <i>cal/g</i>	645 ²
Absolute Bulk Strength <i>cal/cc</i>	806
Relative Bulk Strength (% ANFO).....	109
Velocity of Detonation ³ <i>ft/sec</i>	19,000 – 20,000
Shelf Life (minimum, matrix only)	1 year

PowerNel 1500 may be mixed with ammonium nitrate / fuel oil mixtures (ANFO) in any proportion. Blends of PowerNel 1500 with ANFO have been tested to perform according to the following data:

Blend	ANFO	25/75	40/60	50/50	70/30
Density ⁴ <i>g/cc</i>	0.85	1.12	1.34	1.33	1.29
Absolute Strength Value <i>cal/g</i>	886	827	798	773	705
Absolute Bulk Strength <i>cal/cc</i>	753	935	1061	1020	910
Relative Bulk Strength (%ANFO)	100	124	141	135	117
Velocity of Detonation ⁵ <i>ft/sec</i>	12,900	14,000	15,200	16,100	18,700
Water Resistance	None	None	Good	Excellent	Excellent

¹ At normal ambient temperature (approx 75 F)

² From TIGERWIN Program Code, version 4

³ Measured velocities in 6.75 inch diameter borehole, 100% emulsion

⁴ Typical values, may vary with ANFO density

⁵ Typical, averaged values in 6.75 inch borehole

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