



1966 Emulsion Blend Technical Data Sheet

1966 Emulsion Blend is based on the Nelson Brothers PowerNel®1500 or similar Sensitized Bulk Emulsion. For purposes of this document the PowerNel®1500 was used to develop the information below:

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 g/cc	1.25 maximum ¹
lb/gal	10.43 maximum ¹
Absolute Weight Strength cal/g	645 ²
Absolute Bulk Strength cal/cc	806
Relative Bulk Strength (% ANFO).....	109
Velocity of Detonation ³ ft/sec	19,000 – 20,000
Shelf Life (minimum, matrix only)	1 year

The Sensitized Bulk Emulsion is blended to an approximate 80% Emulsion / 20% Ammonium Nitrate ratio for delivery to the job site. Additional ratios may be blended on site by “Quad” blend trucks and include 70/30 and 50/50 ratios.

<i>BLEND</i>	<i>Sensitized Emulsion</i>	<i>80/20</i>	<i>70/30*</i>	<i>50/50*</i>
DENSITY ⁴ g/cc	1.25	1.27	1.29	1.34
Relative Bulk Strength	109	117	123	135
Velocity of Detonation ft/sec	19,000-20,000 ³	19,000 ⁵	18,700 ⁵	16,100 ⁵
Water Resistance	Excellent	Excellent	Excellent	Excellent
Minimum Diameter**	3"	3 ½"	5"	6"
Minimum Booster***	¾ lb	¾ lb	1 lb	2 lb

*These blends (70/30 & 50/50) are produced on site from a “Quad” truck.

** Recommended minimum diameters

***Recommended minimum priming requirements

All data provided by Nelson Bros. laboratory:

¹At normal ambient temperature (approx 75 F)

²From TIGERWIN Program Code, version 4

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

⁴Typical values, may vary with ANFO density

⁵Typical, averaged values in 6.75 inch borehole