Pirex® | Inhibited Emulsion / ANFO Blends

DESCRIPTION

Pirex® is an inhibited blended blasting agent used in reactive ground conditions in underground and open pit mining as well as quarries and construction. Pirex® is manufactured by mixing ANFO with DL Series emulsion. The final product can be augured or pumped, depending on the mixture ratio.
For dry holes, 40% Emulsion / 60% ANFO blend is augured into dry or dewatered holes. Blends of 50% Emulsion and greater are chemically gassed.
For pumpable blends, ANFO is mixed with gassed DL Series in ratios from 70% Emulsion / 30% ANFO to 100% Emulsion. This range of blends can be loaded into wet holes but should be pumped from the bottom of the hole to displace any water present to prevent contamination of the blend by the water.

PIREX® TECHNICAL CHARACTERISTICS

	%Emulsion / %ANFO				
	100/0	70/30	60/40	50/50	40/60
Nominal Density (g/cc)	0.85 – 1.25	0.9 – 1.24	0.95 – 1.24	0.95 – 1.24	1.24 – 1.30
†Detonation Velocity ft/s (m/s)	15,000 - 21,500 (4,600 – 6,500)				
†Detonation Pressure (GPa)	11.9	12.8	13.2	12.4	11.8
†Energy (kJ/kg)	3,907	4,291	4,429	4,512	4,611
†Gas Volume (l/kg)	1,070	1,066	1,065	1,066	1,066
Minimum Hole Diameter	4.5”	4.5”	4.5”	4.5”	4.5”
Water Resistance	Excellent	Excellent	Good	Good	Moderate
†Relative Weight Strength	73	81	84	87	90
†Relative Bulk Strength	118	133	139	139	141
Transport and UN Numbers	UN 0241 Class 1 Division 5 1.5D				

† Theoretical values from computational modelling of formulations using EXPLO 5

PIREX® RECOMMENDED USES

Pirex® is recommended for use in ground that has high concentrations of sulfide minerals that may be reactive with ammonium nitrate. In wet conditions, the Pirex® products of 70% emulsion or greater should be pumped into the bottom of the hole to displace any water and minimize any mixing that may occur with the emulsion and ground water. Pirex® blends should not be top loaded into water.

PIREX® MANUFACTURING

Pirex® is manufactured on the truck at the blast site.

DL Series emulsion is manufactured in Rush Valley, Utah near Salt Lake City, Utah.