



Product Data Sheet

Apex Plus

Booster Sensitive Emulsion

Formulation: 60/40; 70/30 Emulsion/ANFO Blend Mix

Benefits:

- *improved energy
 - develops high detonation pressure for initial crack development
 - generates good gas volume for heave and displacement
- *develops high borehole pressure
- *increased heat of reaction
- *increased bulk strength
- *increased density for better water displacement in boreholes
- *excellent performance under high static pressure resistant to dynamic precompression
- *good borehole sealing characteristics, 98% borehole coupling when cut

Uses:

- *construction projects
- *surface coal mines
- *open pit mines and quarries

Storage, Handling & Transportation:

- *Product Classification
 - Authorized Name: Apex Plus (60%)/(70%)
 - Proper Shipping Names: Explosive, blasting, type E
 - Classification: 1.5D
 - UN Number: 0332
 - EX Number: 1999030153, 1999030154

**Relative to ANFO 100%: 895 cal/gm (absolute weight strength) x .83 gm/cc (density) = 733 cal/cc (absolute bulk strength)

Density (g/cc)	1.26-1.30
Velocity of Detonation 4" – 6" (ft/s)	13,800
Water Resistance	Excellent
Fume Class	2
Relative Weight Strength (RWS)**	110
Relative Bulk Strength (RBS)**	178
Primer	½ lb. Cast Booster
Shelf Life	1 Year

Independent Explosives, Inc.
88 Gold Ledge Avenue
Auburn, NH 03032
855-439-7726 TOLL FREE
860-243-0137

Facilities
Adams Center, NY 315-583-5432
Argyle, NY 518-824-3300
Auburn, NH 603-232-8559
Middlefield, CT 860-349-9900
Tremont, PA 570-695-2783
Ulster Park, NY 845-443-8990



BACKGROUND

While generating excellent gas volumes and good handling characteristics the two major shortcomings of ANFO, low bulk strength and lack of water resistance, have been overcome with the introduction of emulsion products. These products are water resistant and give higher bulk strengths. Although higher bulk strengths are attained, the addition of water, typically 13%, to the composition acts as a diluent in these products and results in a decreased in weight strength. The principal disadvantage of these products has been their higher cost, handling characteristics, and specialized delivery systems.

Heavy ANFO was developed to take advantage of the low cost of ANFO and the water resistance associated with emulsions. Heavy ANFO products consist of various percentages of ANFO contained within a matrix of emulsion and can be tailored to meet a wide range of bulk strength and water resistance requirements. Because the mixture contains both low-cost ANFO and higher-cost emulsion, the costs associated with it fall between these two extremes. However, the potential bulk strength of the packaged or bulk emulsion/ANFO blends is still reduced by the addition of water. Water content may vary from 5 to 10 percent.

Inventory ID	Packaging
HIL*21373142506	2.5" x 8 lbs.
HIL*21373142756	2.75" x 8 lbs.
HIL*21373143010	3" x 10 lbs.

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