

Booster Sensitive Explosive



Product Description

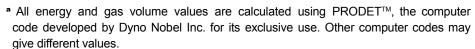
IEmiX-12 is a prilled ammonium nitrate/fuel oil explosive mixture suitable for use in dry borehole conditions when primed with either nitroglycerin dynamite or a cast booster. It is available packaged in a variety of sizes and types of bags or delivered in bulk. For bulk delivery, it can be premixed and delivered to overhead storage bins, mixed on-site with stationary equipment and loaded into blast hole delivery trucks or mixed as it is loaded down-the-hole with specialized mobile equipment. IEmiX-12 is used for quarry, surface mining, construction and underground blasting operations.

Application Recommendations

IEmiX-12 is not recommended for wet borehole conditions. Consult your Independent Explosives representative regarding applications involving borehole dewatering and plastic borehole liners.

Hazardous Shipping Description

Explosive, Blasting, Type B, 1.5D, UN 0331, II OR Ammonium Nitrate, Fuel Oil Mixture, 1.5D, NA 0331, II

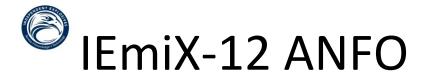


- **b**ANFO = 1.00 @ 0.82 g/cc
- *Confined @ 150 mm (6 in) diameter.

Properties

Density (g/cc) Avg	0.82
Energy ^a cal/g (cal/cc)	880 (720)
Relative Weight Strength ^b	1.00
Relative Bulk Strength ^b	1.00
Velocity ^c m/sec (ft/sec)	3,900 (12,800)
Detonation Pressure ^c (Kbars)	31
Gas Volume ^a (moles/kg)	43
Water Resistance	None
Fume Class	IME1

TYPICAL LOADING DENSITIES AND RATES OF DETONATION							
Borehole Diameter		Typical Weight Per Foot Of Borehole		Typical Detonation Velocity (confined)			
mm	in	kg lbs		mps	fps		
32	11/4	0.22	0.5	2,900	9,500		
50	2	0.55	1.2	3,300	10,700		
75	3	1.1	2.5	3,300	10,900		
100	4	2.0	4.5	3,600	11,800		
125	5	3.2	7.0	3,800	12,400		
150	6	4.7	10.4	3,900	12,800		
187	7%	7.1	15.7	4,000	13,100		
230	9	10.6	23.4	4,100	13,400		
270	105⁄8	15.2	33.4	4,100	13,600		
311	121/4	20.2	44.4	4,200	13,700		
350	13¾	25.4	55.9	4,200	13,700		
380	15	30.2	66.5	4,200	13,800		
445	17½	41.1	90.5	4,200	13,800		



Application Recommendations (continued)

- The loading density of IEmiX-12 is subject to change (i.e., density poured from a bag differs from pneumatically placed or mobile equipment delivered densities). Typical application loading densities are: 0. 82 to 0.83 g/cc (poured 21/4 in to 5 in); 0.90 to 0.95 g/cc (pneumatic 1 in to 2 in) and 0.85 to 0.87 g/cc (bulk truck delivered 21/2 in to 171/2 in).
- IEmiX-12 has a shelf life of 3 months from date of manufacture when stored at temperatures between -17° C and 32° C (0° F and 90° F).
- ALWAYS use an adequately sized, high-impulse, high detonation velocity, nitroglycerin explosive or cast booster to prime IEmiX-12. Recommendations for priming are on the following chart.
- When two primers are necessary, place one near the bottom and one near the top of the main charge in the borehole. Additional primers should be used whenever the blaster feels that separations or blockages may have occurred as the borehole is being loaded. It is imperative that all primers in the borehole be either threaded onto a detonating cord downline or upline or be individually primed with a detonator connected to the blast circuit at the surface.

 Use of detonating cord in boreholes with IEmiX-12 can cause loss of energy, especially where high coreload detonating cords are used in smaller diameter holes. High coreload detonating cords may initiate IEmiX-12 at low order. Where detonating cord is used to initiate Nonel SL detonators, use lowest recommended coreload detonating cord.

Transportation, Storage and Handling

- IEmiX-12 contains a high percentage of industrial-grade ammonium nitrate prills
 which are susceptible to breakage from temperature cycling, humidity and mechanical
 handling. Temperature cycling and humidity may cause packaged product to harden
 and material stored in bulk bins to increase in fines, cake and lump. Inventory should
 ALWAYS be rotated by using the oldest product first. Bulk bins should be emptied
 and cleaned routinely to prevent build up on walls.
- For recommended good practices in transporting, storing, handling and using this product, see the Safety Library Publications of the Institute of Makers of Explosives.
- Explosives must be transported, stored, handled and used in conformity with all applicable federal, state, provincial and local laws and regulations.

Borehole Diameter Dyno Nobel Cast Booster		Nitroglycerin Dynamite Primers (diameter x length)			Use at least two primers per borehole when DYNOMIX column exceeds the following heights		
mm	in		Product	mm	in	Meters	Feet
50 – 65	2 – 2½	D-15 or Trojan® Spartan® 150	Dynomax [®] Pro, Unigel [®] or Unimax [®]	38 x 200	1½ x 8	3.0	10
65 – 75	$2\frac{1}{2} - 3$	D-25 or Trojan® Spartan® 200	Dynomax Pro, Unigel or Unimax	50 x 200 50 x 400	2 x 8 2 x 16	4.6 4.6	15 15
75 – 100	3 – 4	D-35 or Trojan® Spartan® 350	Dynomax Pro, Unigel or Unimax	65 x 400 70 x 400	2½ x16 2¾ x16	6.0	20
100 – 165	4 – 6½	D-45 or Trojan® Spartan® 450	Secondary Primer Only	75 x 200 75 x 400	3 x 8 3 x 16	6.0	20
165 & Up	6½ & Up	D-90 or Trojan [®] Spartan [®] 900	Secondary Primer Only	75 x 400	3 x 16	6.0	20

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