

BLASTGEL® 1070

Technical Information



Large Diameter Packaged Booster Sensitive Emulsion



Product Description

BLASTGEL 1070 is a large diameter, booster sensitive, water resistant, perchlorate-free packaged explosive specifically formulated to provide cost effective, general blasting performance in open pit, quarry and construction blasting applications. BLASTGEL 1070 is packaged in either Valeron or tough, easy-to-handle shot bags that consist of a rugged polyethylene liner surrounded by a woven polypropylene outer package in various diameters.

BLASTGEL 1070 is an excellent choice as the complete explosive load in wet holes with a loading density which is ideal for sinking in wet holes. It can also be used as a partial explosive load after which bulk ANFO can be loaded to complete the explosive charge.

Application Recommendations

- **ALWAYS** use a 340 g (12 oz) or larger cast booster at internal product temperatures higher than -18°C (0°F).
- **ALWAYS** use a 454 g (16 oz) or larger cast booster at internal product temperatures below -18°C (0°F). At internal product temperatures below -18°C (0°F), adequate product warm-up time must be allowed after loading into boreholes and before initiation.
- **NEVER** use or store product below -25°C (-13°F)
- **ALWAYS** ensure continuous column loading with all shot bags in contact with either a primer or one another. For column lengths in excess of 9 m (30 ft) or whenever column separation is suspected, multiple priming is recommended.
- **ALWAYS** use a cast primer in contact with each 76 mm and 83 mm diameter bag or ensure internal product temperature is higher than 5°C (41°F) to overcome potential

Properties

SDS
#1163

	1070 (US) ^d	1070 (Can) ^d
Density (g/cc) Avg	1.23 - 1.25	1.20 - 1.24
Energy^a (cal/g)	730	730
(cal/cc)	935	915
Relative Weight Strength^{a,b}	0.83	0.83
Relative Bulk Strength^{a,b}	1.30	1.27
Velocity^c (m/s)	5,500	5,500
(ft/s)	18,000	18,000
Detonation Pressure^c (Kbars)	97	95
Water Resistance	Excellent	Excellent
Gas Volume^a (moles/kg)	44	44
Fume Class	No underground use	
Shelf Life Maximum	1 year (from date of production)	
Maximum Water Depth	30 m (100 ft)	30 m (100 ft)

^a All Dyno Nobel Inc. energy and gas volume values are calculated using PRODET™ the computer code developed by Dyno Nobel Inc. for its exclusive use. Other computer codes may give different values.

^b ANFO = 1.00 @ 0.82 g/cc

^c Unconfined @ 125 mm (5 in) diameter

^d Product is manufactured at a slightly different density to respond to U.S. and Canadian market needs.

Hazardous Shipping Description

Explosive, Blasting, Type E, 1.5D, UN 0332 II



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lack of adequate charge coupling and ensure reliable bag-to-bag propagation in small diameters. Alternate methods to ensure reliable bag-to-bag coupling may be acceptable. Please consult your Dyno Nobel representative for details.

- Use with detonating cord is not recommended.
- In wet holes where BLASTGEL 1070 is used to build the explosive column above and out of water, once the column is above the water level, **ALWAYS** load one additional cartridge before loading bulk ANFO. Slit the package with a knife near its top before loading to minimize ANFO contact with water.
- Emulsion explosives are susceptible to “dynamic shock” and may detonate at low order or fail completely when applied in very wet conditions, where explosive charges or decks are closely spaced and/or where geological conditions promote this effect. Consult your Dyno Nobel representative for alternate product recommendations when these conditions exist.

Transportation, Storage and Handling

- BLASTGEL 1070 must be transported, stored, handled and used in conformity with all applicable federal, state, provincial and local laws and regulations.
- BLASTGEL 1070 has a shelf life of one (1) year when stored at temperatures between -18°C and 38°C (0°F and 100°F). Extended storage below -18C can adversely effect performance and reliability of BLASTGEL 1070. Consult your Dyno Nobel representative for more information on extreme cold temperature storage.
- BLASTGEL 1070 emulsion explosives inventory should be rotated. Avoid using new materials before the old. For recommended good practices in transporting, storing, handling and using this product, see the booklet “Prevention of Accidents in the Use of Explosive Materials” packed inside each case and the Safety Library Publications of the Institute of Makers of Explosives.

Packaging:

Only Produced in US				Only Produced in Canada		
SAP Part #	English	VALERON	Shot Bag	SAP Mat. #	Metric	Shot Bag
				QD33025007	65 mm X 3.1 kg	X
QD43030010	3 in X 10 lb	X				
				QD330300008	76 mm X 4 kg	X
				QD33033010	83 mm 4.5 kg	X
QD43035015	3.5 in X 15 lb	X				
				QD33037013	95 mm X 6 kg	X
QD43040020	4 in X 20 lb		X			
				QD33045020	115 mm X 9.2 kg	X
QD43045025	4.5 in X 25 lb		X			
				QD33050025	125 mm X 11.3 kg	X
QD43050030	5 in X 30 lb		X			
				QD33055030	138 mm X 13.6 kg	X
QD43055035	5.5 in X 35 lb		X			
QD43060040	6 in X 40 lb		X			

Other sizes may be available upon request.

Note: all weights are approximate

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