

BLASTGEL® 1000

Technical Information



Large Diameter Packaged Booster Sensitive Emulsion



Product Description

BLASTGEL 1000 is a large diameter, booster sensitive, water resistant, perchlorate-free packaged emulsion specifically formulated to provide cost effective, general blasting performance in open pit, quarry and construction blasting applications. BLASTGEL 1000 is packaged in tough, easy-to-handle shot bags that consist of a rugged polyethylene liner surrounded by a woven polypropylene outer package in various diameters.

BLASTGEL 1000 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

	1000 (US only)
Density (g/cc) Avg	1.19 - 1.21
Energy^a (cal/g)	635
(cal/cc)	760
Relative Weight Strength^{a,b}	0.72
Relative Bulk Strength^{a,b}	1.06
Velocity^c (m/s)	5,600
(ft/s)	18,375
Detonation Pressure^c (Kbars)	94
Water Resistance	Excellent
Gas Volume^a (moles/kg)	44
Fume Class	Not for underground use
Shelf Life Maximum	3 months from date of production
Maximum Water Depth	45 m (150 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 1000 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 1000 must be transported, stored, handled and used in conformity with all applicable federal, state, provincial and local laws and regulations.
- BLASTGEL 1000 has a shelf life of three (3) months minimum 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 1000. Consult your Dyno Nobel representative for more information on extreme cold temperature storage.
- BLASTGEL 1000 emulsion explosives with a manufactured date exceeding three (3) months should be inspected prior to use. Consult your local Dyno Nobel representative for guidance. Explosive 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:

SAP Mat. #	US Only Formulation	Size	
		English	Metric
QD30030010	BLASTGEL 1000	3 in x 10 lb	75 mm x 4.5 kg
QD30035015	BLASTGEL 1000	3.5 in x 15 lb	90 mm x 6.8 kg
QD30040020	BLASTGEL 1000	4 in x 20 lb	100 mm x 9 kg
QD30045025	BLASTGEL 1000	4.5 in x 25 lb	114 mm x 11.3 kg
QD30050030	BLASTGEL 1000	5 in x 30 lb	127 mm x 13.6 kg
QD30055035	BLASTGEL 1000	5.5 in x 35 lb	140 mm x 15.9 kg
QD30060040	BLASTGEL 1000	6 in x 40 lb	152 mm x 18 kg
QD30065045	BLASTGEL 1000	6.5 in x 45 lb	165 mm x 20.4 kg
QD30070050	BLASTGEL 1000	7 in x 50 lb	177 mm x 22.7 kg

Note: All weights are approximate

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