

TECHNICAL DATA SHEET



DYNO GOLD® C

Unsensitized Bulk Emulsion Matrix

Properties

SDS
#1052

	50	35	30	25
Percent Emulsion				
Density (g/cc) avg	1.32	1.23	1.15	1.10
Energy^a (cal/g)	770	800	810	825
(cal/cc)	1,015	985	930	910
Relative Weight Strength^{a,b}	0.88	0.91	0.93	0.94
Relative Bulk Strength^{a,b}	1.42	1.37	1.30	1.26
Velocity^c (m/sec)	5,000	4,800	4,700	4,600
(ft/sec)	16,400	15,800	15,300	15,000
Detonation Pressure^c (Kbars)	83	71	64	58
Gas Volume^a (moles/kg)	42.5	42.6	42.7	42.8
Water Resistance	Good	Fair	Poor	Poor
Minimum Diameter (mm)	200	150	125	100
(inches)	8	6	5	4
Loading Method	Auger	Auger	Auger	Auger

^a All Dyno Nobel Inc. energy and gas volume values are calculated using PRODET™, a 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 Confined in 150 mm (6 in) diameter at average density.

Hazardous Shipping Description

- Oxidizing Liquid, n.o.s. (Ammonium Nitrate) 5.1 UN 3139 II



PRODUCT DESCRIPTION

DYNO GOLD C is an unsensitized, repumpable bulk emulsion matrix specifically formulated for augered mixing with bulk ANFO to manufacture DYNO GOLD C Heavy ANFO blends. DYNO GOLD C Heavy ANFO blends containing 50% or less emulsion are booster sensitive and provide excellent blasting performance in surface blasting applications where boreholes are dry or dewatered before loading. The percentage of DYNO GOLD C in DYNO GOLD C Heavy ANFO blends can vary from 5% to 50% to best match specific blasting requirements. Refer to the data table at right for the physical properties of typical DYNO GOLD C Heavy ANFO explosive blends.



APPLICATION RECOMMENDATIONS

- DYNO GOLD C emulsion matrix is not detonable as shipped and must be blended with 50% or more ANFO for use.
- Only ANFO manufactured with emulsion compatible AN prills is recommended for use in DYNO GOLD C Heavy ANFO blends.
- The minimum cast booster weight recommended for use as a primer for DYNO GOLD C Heavy ANFO blends containing 50% or more ANFO is 454 g (16 oz).
- **ALWAYS** double prime when bulk explosive columns exceed 6 m (20 ft). One primer should be positioned near the bottom of the hole and the second nearer the top of the explosive column.
- Do not use detonating cord as downlines with DYNO GOLD C Heavy ANFO blends in borehole diameters less than 200 mm (8 in).

Product Disclaimer: Please see reverse side.

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TRANSPORTATION, STORAGE AND HANDLING

- DYNO GOLD C can be stored for 3 months at temperatures between -18° C and 32° C (0° F and 90° F). Older product should be used first and all storage tanks should be kept clean of residual product.
- Use only pumps which have been approved by Dyno Nobel for 5.1 emulsion matrix transfer. Pump type, pump speed, worn pump parts, repeated repumping and pumping against high hose pressures can increase DYNO GOLD C viscosity and decrease shelf life.
- **ALWAYS** monitor emulsion pump performance and check pumps periodically for excessively worn parts. Design storage facilities to minimize repeated pumping.
- Transport, store, handle and use DYNO GOLD C in compliance with federal, state, provincial and local laws governing bulk oxidizing liquids.

APPLICATION RECOMMENDATIONS - continued

- Do not use detonating cord as downlines with DYNO GOLD C Heavy ANFO blends in borehole diameters less than 200 mm (8 in).
- **NEVER** load DYNO GOLD C Heavy ANFO blends into boreholes where standing water is present! Only use DYNO GOLD C Heavy ANFO blends with at least 50% ANFO in dry or dewatered boreholes. To produce consistently good results, wet boreholes must be dewatered. After dewatering, check the borehole to ensure there is no re-entering or residual water. As soon as the borehole is confirmed dry, immediately prime and load.
- Before loading DYNO GOLD C Heavy ANFO blend when standing water remains in a borehole, prime the hole and load a water-resistant packaged explosive until its column rises out of the water. Then, and only then, should DYNO GOLD C Heavy ANFO blend be loaded. At least one additional primer should be located in the DYNO GOLD C Heavy ANFO blend column in these situations.
- Borehole sleep time for DYNO GOLD C Heavy ANFO blends is two (2) weeks. Where geology is wet and extended sleep times are anticipated, **ALWAYS** limit ANFO to 50% in DYNO GOLD C Heavy ANFO blend. When product will sleep overnight and less water resistant blends are being considered, consult your Dyno Nobel representative for loading recommendations.
- **NEVER** store blended DYNO GOLD C Heavy ANFO in bulk delivery equipment, tanks or bins. DYNO GOLD C and ANFO should be blended and loaded directly into the borehole.
- **ALWAYS** use only equipment specially designed to blend and load Heavy ANFO. Bulk delivery equipment should be calibrated periodically to ensure blend quality and explosive performance. Routinely monitor the DYNO GOLD C Heavy ANFO blend density to ensure that equipment remains in calibration during loading.

ADDITIONAL INFORMATION – Visit dynonobel.com for Brochures and Case Studies related to this product.

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