

DYNOSPLIT®

Technical Information



Nitroglycerin Dynamite



Product Description

DYNOSPLIT is a specially formulated nitroglycerin dynamite packaged in rigid 600 mm (24 in) long paper cartridges available in either 19, 22 or 25 mm ($\frac{3}{4}$, $\frac{7}{8}$ or 1 in) diameters. A plastic or paper coupler, attached to one end, allows easy assembly into a continuous length. DYNOSPLIT is designed for pre-splitting or cushion blasting in surface operations and for smooth wall, contour or trim blasting underground.

Application Recommendations

- Minimum detonating cord is 5.3 g/m (25 gr/ft).
- Minimum detonator is No. 8 strength.
- Minimum temperature is -40°C (-40°F).
- Linear charge weight:
 - D = 19 mm ($\frac{3}{4}$ in) diameter = 0.42 kg/m (0.28 lbs/ft)
 - D = 22 mm ($\frac{7}{8}$ in) diameter = 0.57 kg/m (0.38 lbs/ft)
 - D = 25 mm (1 in) diameter = 0.64 kg/m (0.42 lbs/ft)
 - D1 = 22 mm ($\frac{7}{8}$ in) diameter = 0.42 kg/m (0.28 lbs/ft)
- **ALWAYS** trace columns over 2 m (6 ft) long with detonating cord securely attached to each cartridge.
- **ALWAYS** decouple the explosive charge when presplitting; that is, select larger borehole diameters to reduce borehole pressure. In surface applications, always stem to minimize air blast and plug the borehole above the explosive column to prevent stemming from filling the air/water space. In underground drifting applications, plug the borehole after the explosive column to prevent the explosive column from being ejected out of the borehole during detonation of the drift round.

Properties

MSDS
#1019

	D	D	D	D1
Diameter (in)	$\frac{3}{4}$	$\frac{7}{8}$	1	$\frac{7}{8}$
Density (g/cc) Avg	1.40	1.40	0.95	0.82
Energy^a (cal/g)	995	995	990	930
(cal/cc)	1,440	1,440	1,230	940
Relative Weight Strength^a	1.13	1.13	1.12	1.05
Relative Bulk Strength^{a,b}	2.00	2.00	1.70	1.30
Velocity^c (m/s)	2,600 ^c	2,700 ^d	3,000	1,875
(ft/s)	8,500 ^c	8,900 ^d	9,800	6,150
Detonation Pressure^c (Kbars)	24 ^c	26 ^d	28 ^d	7 ^d
Gas Volume^a (moles/kg)	32	32	37	38
Water Resistance (@ 12 ft)	24 hrs	24 hrs	24 hrs	8 hrs

Fume Class IME1 & NRCan1^e Not for use underground

Maximum Water Depth 8 m (25 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 @ 19 mm ($\frac{3}{4}$ in) diameter
- ^d Unconfined @ 22 mm ($\frac{7}{8}$ in) diameter
- ^e Approved by Natural Resources Canada as Fume Class 1.

Hazardous Shipping Description

Explosive, Blasting, Type A, 1.1D, UN 0081 II





Transportation, Storage and Handling

- DYNOSPLIT must be transported, stored, handled and used in conformity with all applicable federal, state, provincial and local laws and regulations.
- For maximum shelf-life, dynamite must be stored in cool, dry and well-ventilated magazines. Dynamite inventory should always be rotated by using the oldest materials first. 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.

Decoupled Borehole Pressure (psi)

Product Diameter (in)	Borehole Diameter (in)				
	1 7/8	2 1/2	2 3/4	3	3 1/2
3/4 ^a	16,766	7,941	6,198	4,943	3,311
7/8 ^a	27,600	13,064	10,196	8,132	5,447
1 ^a	32,381	15,327	11,963	9,541	6,390
3/4 ^b	--	48,468	37,830	30,171	20,208
7/8 ^b	--	72,732	56,768	45,275	30,325
1 ^b	--	85,330	66,601	53,117	35,577
7/8 ^a	9,576	4,533	2,821	2,821	1,890
7/8 ^b	--	52,849	32,897	32,897	22,034

Diameter x Length		Linear Charge Weight		Qty / Case	Nominal Case Weight	
mm	in	kg/m	lbs/ft		kg	lbs
19 x 600	3/4 x 24	0.42	0.28	80	20	44
22 x 600	7/8 x 24	0.57	0.38	60	19.5	43.2
25 x 600	1 x 24	0.66	0.42	50	20	44
22 x 600	7/8 x 24	0.42	0.28	60	19.5	34.8

^a DYNOSPLIT alone.

^b DYNOSPLIT with detonating cord trace along its length.

• Diameter as labeled is nominal inside diameter. Actual outside diameter is 20mm (0.79 in) for 19 mm (3/4 in) and 23 mm (0.90) for 22 mm (7/8 in).

• Note: All weights are approximate.

D
D1

Case Dimensions

67 x 35 x 12 cm

26 1/2 x 13 3/4 x 4 3/4 in

Product Disclaimer Dyno Nobel Inc. and its subsidiaries disclaim any warranties with respect to this product, the safety or suitability thereof, or the results to be obtained, whether express or implied, INCLUDING WITHOUT LIMITATION, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE AND/OR OTHER WARRANTY. Buyers and users assume all risk, responsibility and liability whatsoever from any and all injuries (including death), losses, or damages to persons or property arising from the use of this product. Under no circumstances shall Dyno Nobel Inc. or any of its subsidiaries be liable for special, consequential or incidental damages or for anticipated loss of profits.