

STONECUTTER™

Technical Information



Ammonium Nitrate Nitroglycerin Dynamite



Product Description

STONECUTTER is a customized, ammonium nitrate nitroglycerin dynamite. A plastic or paper coupler, attached to one end of each cartridge, allows easy assembly into a continuous length. Optional spacer cartridges allow reduction in explosives load, maximum energy distribution and simplify loading. STONECUTTER was developed for use in the production of dimension stone. Low density, velocity and energy combine for good shearing effect, reduced after blast residue and will not discolor stone

Application Recommendations

- Linear charge weight: 22 mm (7/8 in) = 0.41 kg/m (0.27 lbs/ft)
- Minimum detonator is No. 8 strength
- Minimum detonating cord is 1.5 g/m (7.5 gr/ft) coreload
- Minimum temperature is -40°C or -40°F
- **ALWAYS** trace columns with detonating cord securely attached to each cartridge when using optional spacers or when column length exceeds 2 m (6 ft) long.
- **ALWAYS** decouple the explosive charge. That is, select larger borehole diameters to reduce borehole pressure. Always stem to minimize air blast and plug the borehole above the explosive column to prevent stemming from filling the air space.

Properties

MSDS
#1019

| | |
|--|-------------------------|
| Density (g/cc) Avg | 1.02 |
| Energy^a (cal/g) | 842 |
| (cal/cc) | 859 |
| Relative Weight Strength^a | 0.96 |
| Relative Bulk Strength^{a,b} | 1.19 |
| Velocity^c (m/s) | 1,730 |
| (ft/s) | 5,675 |
| Detonation Pressure^c (Kbars) | 8 |
| Gas Volume^a (moles/kg) | 36 |
| Water Resistance | Poor |
| Fume Class | Not for use underground |

^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 @ 22 mm (7/8 in) diameter

Hazardous Shipping Description

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



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Transportation, Storage and Handling

- STONECUTTER 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.

Packaging

| Diameter x Length | | Linear Charge Weight | | Qty / Case | Case Type | Nominal Case Weight | |
|-------------------|------------|----------------------|--------|------------|-----------|---------------------|-----|
| mm | in | kg/m | lbs/ft | | | kg | lbs |
| 22 x 200 | 7/8 x 8 | 0.41 | 0.27 | 200 | DC | 20 | 45 |
| 22 x 300 | 7/8 x 12 | 0.41 | 0.27 | 150 | DG | 21 | 46 |
| 22 x 600 | 7/8 x 24 | 0.41 | 0.27 | 60 | DH | 19.5 | 43 |
| 32 x 200 | 1 1/4 x 8 | 0.81 | 0.54 | 88 | DA | 17 | 38 |
| 32 x 300 | 1 1/4 x 12 | 0.81 | 0.54 | 55 | DB | 16 | 36 |
| 44 x 400 | 1 3/4 x 16 | 1.58 | 1.06 | 20 | DB | 20 | 45 |
| 50 x 400 | 2 x 16 | 2.07 | 1.39 | 17 | DB | 15 | 34 |

- Note: All weights are approximate.
- Diameter as labeled for 22 mm (.875 in) is nominal inside diameter. Actual outside diameter is 23 mm (0.90 in).

| Product Diameter (in) | Borehole Diameter (in) | | | | |
|-----------------------|------------------------|--------|--------|--------|--------|
| | 1 7/8 | 2 1/2 | 2 3/4 | 3 | 3 1/2 |
| 7/8 | 6,189 | 2,930 | 2,287 | 1,824 | 1,221 |
| 7/8 | -- | 53,372 | 41,657 | 33,223 | 22,253 |

Stonecutter alone.

Stonecutter with detonating cord trace along its length.

Case Dimensions

| | | |
|-----------|-----------------|----------------------------|
| DA | 45 x 34 x 17 cm | 17 3/4 x 13 3/8 x 6 3/8 in |
| DB | 45 x 34 x 15 cm | 17 7/8 x 13 3/8 x 5 7/8 in |
| DC | 44 x 36 x 18 cm | 17 3/8 x 14 1/4 x 7 1/4 in |
| DD | 44 x 34 x 14 cm | 17 1/4 x 13 1/2 x 5 5/8 in |
| DG | 44 x 36 x 21 cm | 17 3/8 x 14 1/4 x 8 1/4 in |
| DH | 67 x 35 x 12 cm | 26 1/2 x 13 3/4 x 4 3/4 in |

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