VIBROGEL®

Seismic Extra Gelatin Nitroglycerin Dynamite

Technical Information

SEISMIC EXPLOSIVES

Product Description

VIBROGEL is a high density, high velocity, high energy gelatin dynamite available in either a plastic or paper tube shell that has been in use in the geophysical industry for more than 80 years. VIBROGEL produces a sharp pulse of seismic energy and detonates completely at high velocity.

USE CAUTION WHEN SLEEP TIME IS ANTICIPATED

A loaded hole that is not shot immediately after the detonator tests positive with a ShotPoint Tracker™ or other testing device could fail for reasons beyond the control of the drill crew and product manufacturer. Reasons for failure could include but are not limited to geologic shifting, lightning, vandalism, farmer or animal interference.

Application Recommendations

- **NEVER** use Dyno Nobel seismic explosive products and/or components with explosive products and/or components made by other manufacturers.
- **ALWAYS** use the Dyno Nobel Electric Super Seismic high strength detonator for optimum results.
- Recommended temperature range is 40ºC to 65ºC (-40ºF to 150ºF). VIBROGEL is unaffected by extremely low temperatures but detonators produce less energy below -40ºC (-40ºF).
- VIBROGEL is not recommended for extended wet hole use / sleep time. Please contact your Dyno Nobel Representative for additional details.

Properties

MSDS #1019

Energy[a] (cal/g)	1,247
Gas Volume[a] (moles/kg)	26
Velocity[b] (m/sec)	6,100
(ft/sec)	20,000
Detonation Pressure[c] (Kbars)	133
Density (g/cc)	1.43
Water Resistance	Limited

[b] 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] Unconfined 57 mm diameter x 2 kg charge.

IMPORTANT!

Ignoring these warnings may result in injury or death!

- **ALWAYS** exercise extreme caution when approaching a shothole that has not vented. Venting gases after detonation are common. BLOWOUTS CAN INJURE OR KILL.
- **NEVER** attempt to alter the product by cutting, sawing or disassembly of the package.
- **NEVER** drop load explosive into a borehole.
- **NEVER** attempt to dislodge explosives by pushing with a drill stem.
- **ALWAYS** shunt electric detonators and/or the blast circuit after testing and keep shunted until connected to blasting machine.
- **NEVER** unshunt electric detonators prior to use except to test with blasting galvanometer.
- **ALWAYS** ask if you don't know before proceeding.

Hazardous Shipping Description

Explosive, Blasting, Type A 1.1D UN 0081 II

See Product Disclaimer on page 2

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Groundbreaking Performance™

VIBROGEL®

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- For optimum results, the seismic detonator should always be placed in the capwell and interlocked between charges or between the charge and the anchoring device. Two detonators are recommended for insurance and reliability where extreme environmental conditions are encountered.
- When using paper tube shells or whenever the plastic shells are used as single unit charges and without an anchoring device or protective loading device, it is recommended that the charge be side primed at a point about half the cartridge length. To side prime, use an approved powder punch and punch on a downward angle (not across cartridge). Care should be taken to insert the seismic detonator so that the base of the detonator comes to rest nearest the center of the charge diameter (not against the shell wall) and so that only the detonator leg wires are exposed. Always double half-hitch the leg wires to secure the detonator to the charge.

Transportation, Storage and Handling

- The user of this product (or any other explosive product) should not leave or abandon undetonated charges in the ground. The leaving or abandoning of undetonated charges constitutes misuse of the product for which Dyno Nobel and its distributors are not responsible.
- VIBROGEL must be transported, stored, handled and used in conformity with all applicable federal, state, provincial and local laws and regulations.
- For maximum shelf-life, VIBROGEL must be stored in cool, dry and well-ventilated magazines. If stored properly, VIBROGEL has a shelf life of 12 months from date of manufacture. Dynamite that is stored under warm wet and/or humid conditions can deteriorate quickly, minimizing shelf-life. 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 mm (in)	Cartridge Weight kg (lb)	Cartridge Type	Cartridges per Case	Case Weight kg (lbs)	Case Dimensions Centimeters	Case Dimensions Inches
27 mm (1.00 in)	0.125 kg (0.25 lb)	Tube Shell	160	20 kg (44 lbs)	43 x 35 x 22	17⅛ x 13⅝ x 7¼
50 mm (2.00 in)	0.25 kg (0.50 lb)	Tube Shell-T [a]	80	20 kg (44 lbs)	39 x 32 x 22	15¼ x 12½ x 8¾
50 mm (2.00 in)	0.50 kg (1.10 lb)	Tube Shell-T [a]	40	20 kg (44 lbs)	40 x 32 x 20	15¼ x 12½ x 7⅞
50 mm (2.00 in)	1.0 kg (2.20 lb)	Tube Shell-T [a]	20	20 kg (44 lbs)	39 x 32 x 22	15¼ x 12½ x 8¾
50 mm (2.00 in)	1.5 kg (3.30 lb)	Tube Shell-T [a]	12	18 kg (40 lbs)	58 x 39 x 12	23 x 15 x 4¾
50 mm (2.00 in)	2.0 kg (4.40 lb)	Tube Shell	10	20 kg (44 lbs)	43 x 35 x 18	17⅛ x 13⅝ x 7¼
60 mm (2.36 in)	1.0 kg (2.20 lb)	Plastic Shell	20	20 kg (44 lbs)	43 x 35 x 18	17⅛ x 12⅝ x 7¼
60 mm (2.36 in)	2.0 kg (4.40 lb)	Plastic Shell	10	20 kg (44 lbs)	72 x 30 x 12	28¼ x 11⅞ x 4¾
All metric sizes are non-standard		[a]Twine Shells				

Dyno Nobel Inc.
2795 East Cottonwood Parkway, Suite 500, Salt Lake City, Utah 84121 USA
Phone 800-732-7534 Fax 801-328-6452 Web www.dynonobel.com

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