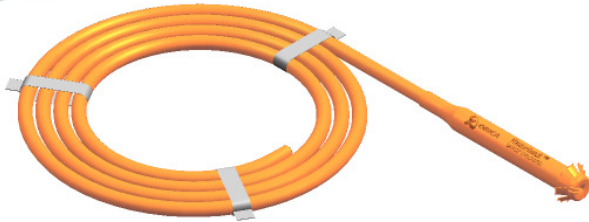


Senatel™ Razorback™



Description

Senatel™ Razorback™ detonator sensitive emulsion explosive, is white in colour and is packaged in 18 mm diameter, semi-rigid, translucent orange, plastic tubing. The product is available in various lengths up to 4.0 m and is arranged in a flat coil in the carton. The tubes are sealed with a cap at one end and the other end is enlarged to form a primer containing a detonator capwell. A retention spring is fitted adjacent to the primer end to ensure that the cartridge is securely retained in the blasthole.

Application

Senatel™ Razorback™ is designed for use in perimeter blastholes in development and tunnel headings. The small diameter, high velocity of detonation, and low decoupled energy minimises blast damage to the walls and backs leaving behind a smooth profile with minimal overbreak.

Key Benefits

- *Senatel™ Razorback™* is designed to be deployed rapidly ensuring that charge crews can achieve optimum charging speed.
- *Senatel™ Razorback™* is water resistant and can be used in wet and dry blastholes.
- Specially formulated for underground use *Senatel™ Razorback™* reduces post blast fumes and improves turnaround time
- *Senatel™ Razorback™* is manufactured in a range of lengths to match standard jumbo drill hole depths, ensuring that product failure due to explosive discontinuity is eliminated.
- The fluid composition allows for easy doubling back of the charge if drill depth variation results in short collars, reducing the likelihood that a cutoff will leave a part cartridge in the muck pile.
- The absence of impact sensitive detonating cord means that hazardous unplanned explosions during ore handling are highly unlikely when using *Senatel™ Razorback™*

Technical Properties

Density	1.10 – 1.20g/cc	
Relative Effective Energy ¹	Coupled	Decoupled ⁴
Relative Weight Strength	105 %	14 %
Relative Bulk Strength ▪ to ANFO @ 0.8g/cc	151%	20 %
Velocity of Detonation Range ²	4.1 to 5.9 km/s	
CO ₂ ³	183 kg/tne	

Packaging

Each case of *Senatel™ Razorback™* contains 10 units. Each tube comes preassembled complete with primer and retention spring. The product is available in different lengths, 2.2, 2.5, 2.8, 3.2, 3.6 and 4.0 m (and others may be available on request), to suit different drill depths. Each length is arranged in a flat coil and secured using paper tape.

Recommendations for Use

Priming and Initiation

Senatel™ Razorback™ is designed with an integrated primer. No other priming charge is required. An electric No.8* or an *Exel™* detonator can directly initiate *Senatel™ Razorback™*.

Detonating cords are not recommended for use with *Senatel™ Razorback™*.

Sleep Time Within Blastholes

In dry blastholes, given the explosives packaging is undamaged, *Senatel™ Razorback™* may be charged and fired up to several months later. If the explosives package is damaged, the sleep-time in a blasthole is influenced by the extent of damage to the packaging and by the nature of any water present.

Burden and Spacing

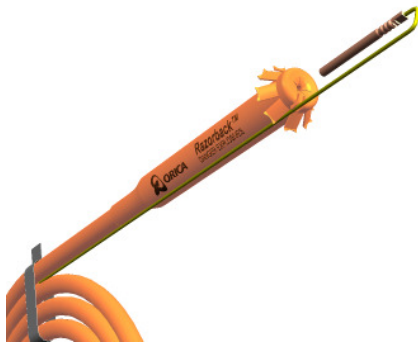
Optimum burden and spacing depends on the competency of the ground. For further information please contact your Orica Technical Services Engineer.



Senatel™ Razorback™

Charging

Charging with *Senatel™ Razorback™* is quick and easy provided these steps are followed:



- Open the carton and remove one coil of *Senatel™ Razorback™*.
- The detonator should be inserted into the capwell of the enlarged primer end and the signal tube engaged into its protective slot.
- Remove the paper tape securing the coil of product.
- Insert *Senatel™ Razorback™* into the blasthole with the enlarged primer end first.
- Do not pull on the signal tube.

To avoid face cratering dislocating the tubes, depending upon ground competency, the last 500mm to 900mm should be left uncharged.

Storage and Handling

Product Classification

Authorised Name: *Senatel™ Razorback™*
 Shipping Name: Explosive, Blasting, Type E
 UN No: 0241
 Class Code: 1.1D

All regulations pertaining to the handling and use of such explosives apply.

Storage

Store *Senatel™ Razorback™* cases in a suitably licensed magazine for Class 1.1D explosives. *Senatel™ Razorback™* has a storage life of at least 12 months in an approved magazine, even in hot and humid extremes.

Disposal

Disposal of explosives materials can be hazardous. Methods for safe disposal of explosives may vary depending on the user's situation. Please contact a local Orica representative for information on safe practices.

Safety

The post detonation fume characteristics of *Senatel™ Razorback™* make it suitable for underground blasting applications. Users should ensure that adequate ventilation is provided prior to re-entry to the blast site.

Senatel™ Razorback™ can be initiated by extremes of shock, friction or mechanical impact. As with all explosives, *Senatel™ Razorback™* should be handled and stored with care and must be kept clear of flame and excessive heat.

Trademarks

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Disclaimer

Explosives based on Ammonium Nitrate such as *Senatel™ Razorback™* may react with pyritic materials in the ground and create potentially hazardous situations. Orica accepts no responsibility for any loss or liability arising from use of the product in ground containing pyritic or other reactive material. All information contained in this data sheet is accurate and up-to-date as at the issue date specified below. Since Orica cannot anticipate or control the conditions under which this information and its products may be used, each user should review the information in the specific context of the intended application. To the maximum extent permitted by law, Orica will not be responsible for damages of any nature resulting from the use of or reliance upon the information in this data sheet. No express or implied warranties are given, other than those implied mandatory by law.

Senatel™ Razorback™

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Notes:

1. REE is the Effective Energy relative to ANFO at a density of 0.8 g/cm³. ANFO has an effective energy of 2.30 MJ/kg. Energies quoted are based on ideal detonation calculations with a 100 MPa cut off pressure. Non-ideal detonation energies are also available on request. These take account of blasthole diameter, rock type and explosive reaction behaviour.
2. VOD will depend on application including explosive density blasthole diameter and degree of confinement. The VOD range is based on minimum unconfined and calculated ideal.
3. Carbon Dioxide is the main greenhouse gas produced. The output is calculated assuming ideal detonation.
4. Decoupled energies assume a standard Jumbo heading blasthole of 45 mm diameter.