

Senatel™ Powerex™ Plus

Description

Senatel™ Powerex™ Plus packaged emulsion explosive is a robust, detonator sensitive explosive. The explosive is off-white in color with a firm putty-like consistency.

Application

Senatel™ Powerex™ Plus is a paper wrapped packaged explosive designed for pipeline, trenching and site preparation projects where holes are ragged and tough to load. The high detonation velocity and the robust nature of Senatel™ Powerex™ Plus make it an ideal primer or column charge.

Key Benefits

- Senatel™ Powerex™ Plus is a high-energy emulsion formulation with high pre-compression resistance. This gives adequate blast results in the toughest ground even with tight drilling patterns.
- Senatel™ Powerex™ Plus delivers excellent fragmentation with improved digability.
- The rigid paper cartridge of Senatel™ Powerex™ Plus enables easy charging in ragged holes, improving loading time and increasing control of powder factors.
- Senatel™ Powerex™ Plus reduces post-blast fumes and improves turnaround time.
- Senatel™ Powerex™ Plus is highly water resistant, which minimizes leaching and reduces environmental impact.
- OH&S issues around the handling and storage of nitroglycerin are eliminated.

Technical Properties

Senatel™ Powerex™ Plus 50 x 400 mm (2 x 16 in.)		
Cartridge Density		1.15 g/cc
Typical Velocity of Detonation ¹		5,000 m/s 16,400 ft/s
Water Resistance		Excellent
Fume Class		2
Relative Effective Energy (REE) ²	Relative Weight Strength (RWS)	103
	Relative Bulk Strength (RBS)	145

Packaging

Senatel™ Powerex™ Plus is packaged in spiral wound paper shells. Cartridges are packed in 25 kg (55 lb) fiberboard cartons. Standard cartridge sizes are as follows:

Size (mm)	Size (in.)	Nominal Count per Case	Paper Type
45 x 400	1¾ x 16	37	Spiral Wound
50 x 200	2 x 8	57	Spiral Wound
50 x 400	2 x 16	28	Spiral Wound
65 x 400	2½ x 16	18	Spiral Wound
75 x 400	3 x 16	12	Spiral Wound

Recommendations for Use

Blasthole Depth

Senatel™ Powerex™ Plus is suitable for use in holes of any practical depth providing contained water does not exceed 30 m (98 ft.) depth.

Priming and Initiation

An Orca high strength electric, electronic, or non-electric detonator can reliably initiate Senatel™ Powerex™ Plus at temperatures higher than -15°C (5°F). At temperatures below -15°C (5°F), an appropriately sized Pentex™ Booster is recommended. Use of detonating cord with Senatel™ Powerex™ Plus is not recommended. Detonating cord will adversely affect the performance of Senatel™ Powerex™ Plus and could result in misfires. Consult an Orca representative before attempting to use with detonating cord.

Sleep Time Within Blastholes

The sleep-time in a blasthole is influenced by the extent of damage to the packaging and by the nature of any water present.

Storage And Handling

Product Classification

Authorized Name: Senatel™ Powerex™ Plus
 Proper Shipping Name: Explosive, blasting, type E
 Classification: 1.1D
 UN No: 0241
 Packing Group: II
 EX Number: 1994120117

Senatel™ Powerex™ Plus

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

Storage

Store *Senatel™ Powerex™ Plus* in a suitably licensed magazine for Class 1.1D explosives. The cases should be stacked in the manner designated on the case.

Senatel™ Powerex™ Plus is best stored at temperatures above -15°C (5°F). This is especially important in cold weather "load and shoot" worksites where there is insufficient inhole warm-up time. The **Shelf life** of *Senatel™ Powerex™ Plus* is 12 months from date of manufacture when stored in a well-ventilated approved magazine.

For recommended good practices in transporting, storing, handling, and using this product, refer to the "Always and Never" booklet packed inside each case.

Transport

Senatel™ Powerex™ Plus should be transported between -40°C (-40°F) and +40°C (104°F).

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™ Powerex™ Plus* make the product suitable for both underground and surface blasting applications. Users should ensure that adequate ventilation is provided prior to re-entry into the blast area.

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

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Emergency Contact Telephone Numbers

For chemical emergencies (24 hour) involving transportation, spill, leak, release, fire or accidents:

Canada: Orica Canada emergency response **1-877-561-3636**

USA: Chemtrec **1-800-424-9300**



Senatel™ Powerex™ Plus

For lost, stolen or misplaced explosives:

USA: BATFE **1-800-800-3855**. Form ATF F5400.0 must be completed and local authorities (state / municipal police, etc) must be advised.

Notes

1. Unconfined at 5°C (41°F). 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.
2. The Relative Effective Energy (REE) of an explosive is the energy calculated to be available to do effective blasting work. All energy values are calculated using the *IDeX™* computer code owned by Orica for the exclusive use of its companies. Energy values are based on standard ANFO with a density of 0.84 g/cc and a cut-off pressure of 100Mpa. Other computer codes may give different values.

