**Description**
Packaged Senatel™ Permitted 1000 is a detonator sensitive emulsion explosive. It is classified as a P1 “Permitted Explosive”. The emulsion is white in colour with a firm putty-like consistency. It is wrapped in plastic with steel wire end clips.

Cartridges are identified individually as P1 Permitted explosive with a Permitted logo, the maximum charge allowed per shothole, the maximum mass per cartridge, the country of manufacture and the identity of the manufacturer.

**Application**
Senatel™ Permitted 1000 is a water resistant packaged explosive for use in all applications that require the use of a P1 classified explosive.

**Recommendations for Use**

**Blasthole Depth**
Senatel™ Permitted 1000 is suitable for use in blastholes of any practical depth.

**Priming and Initiation**
The recommended initiator for Senatel™ Permitted 1000 is a low incendive Carrick II detonator. Use of detonating cord with Senatel™ Permitted 1000 is not recommended.

**Charging**
In small diameter blastholes maximum energy per metre of blasthole can be achieved by tamping the explosive with a wooden tamping rod appropriate to the hole diameter.

No metal implement should be used to tamp explosives. The primer cartridge containing a detonator must not be tamped.

**Sleep-Time Within Blastholes**
In dry blastholes, given the explosives packaging is undamaged, Senatel™ Permitted 1000 may be charged and fired several months later (provided the product remains within its recommended shelf life).

If the explosive package is damaged, the sleep-time in a blasthole is influenced by the extent of the damage to the packaging and by the nature of any water present.

Even with full length slitting of cartridges, the explosive will give good performance after two weeks immersion.

**Reactive Ground and Ground Temperature**
Reactive Ground - Senatel™ Permitted 1000 is not suitable for ground containing reactive sulphides.

Elevated Temperature - Senatel™ Permitted 1000 is suitable for use in ground temperatures of 0º up to 55ºC.

If your application requires you to operate outside this temperature range, please contact your Orica sales or technical representative for further information.

**Packaging**
Senatel™ Permitted 1000 packaging cases and film are labelled with Senatel™ Permitted 1000. Each box contains nominally 25kg of product with standard cartridge sizes and counts as follows:

<table>
<thead>
<tr>
<th>Diameter (mm)</th>
<th>Nominal Length (mm)</th>
<th>Nominal Mass (g)</th>
<th>Cartridges Per Box</th>
</tr>
</thead>
<tbody>
<tr>
<td>32</td>
<td>400</td>
<td>390</td>
<td>66</td>
</tr>
</tbody>
</table>

---

**Technical Properties**

<table>
<thead>
<tr>
<th>Nominal Density</th>
<th>1.16g/cc</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relative Effective Energy</td>
<td>1cc</td>
</tr>
<tr>
<td>Relative Weight Strength</td>
<td>90%</td>
</tr>
<tr>
<td>Relative Bulk Strength</td>
<td>130%</td>
</tr>
<tr>
<td>to ANFO @ 0.8g/cc</td>
<td>98%</td>
</tr>
<tr>
<td>to ANFO @ 0.95g/cc</td>
<td></td>
</tr>
<tr>
<td>Minimum Velocity of Detonation</td>
<td>4.5km/s</td>
</tr>
</tbody>
</table>
Schoolastic Permitted 1000
Australia

Storage and Handling
Product Classification
Authorised Name: Senatel™ Permitted 1000
Proper Shipping Name: Explosive, Blasting, Type E
UN No: 0241
Classification: 1.1D

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

Storage
Store Senatel™ Permitted 1000 in a suitably licensed magazine for Class 1.1D explosives. The cases should be stacked in the manner designated on the cases.

Senatel™ Permitted 1000 has a storage life of up to 12 months in an approved magazine; however exposure to hot or cold extremes may cause the product to deteriorate prematurely.

Disposal
Disposal of explosive materials can be hazardous. Methods of safe disposal of explosives may vary depending on the user’s situation. Please contact an Orica Technical Services Representative for information on safe practices.

Safety
The post detonation fume characteristics of Senatel™ Permitted 1000 make it 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™ Permitted 1000 can be initiated by extremes of shock, friction or mechanical impact. As with all explosives, Senatel™ Permitted 1000 should be handled and stored with care. Senatel™ Permitted 1000 does not burn easily, but it must be kept clear of flame and excessive heat.

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Emergency Telephone Numbers
Within Australia: 1800 033 111
Outside Australia: +61 3 9663 2130

Notes:
(1.) REE is the Effective Energy relative to ANFO at a density of 0.8g/cc. ANFO has an effective energy of 2.30 MJ/kg. Energies quoted are based on ideal detonation calculations with a 100MPa 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, temperature and degree of confinement. The minimum VOD quoted is based on unconfined test firing data.
(3.) Reactive ground and elevated temperature as defined in the Australian Explosives Industry Safety Group (AEISG) Code of Practice for Elevated Temperature and Reactive Ground.