**Technical Data Sheet**

**Impact™ 100**

**Australia**

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**Description**

Impact™ 100 is a mixture of fuel oil, ammonium nitrate prill and a creamy emulsion, which gives the explosive sticky, cohesive properties. It is formulated to be oxygen balanced and primer sensitive, for use in dry blastholes.

The explosive has a granular appearance and is colour coded red for identification.

**Application**

Impact™ 100 is specially formulated to promote retention of the explosive in upholes.

Impact™ 100 can be pneumatically loaded from pressure vessel type loading equipment; however the explosive is not suitable for use with non-pressurised types of pneumatic loading equipment.

Impact™ 100 is specifically tailored for use in mining applications in reactive ground.\(^4\)

**Key Benefits**

- Impact™ 100’s ‘sticky’ consistency greatly assists retention of the explosive in upholes.
- Impact™ 100 packaged blasting agent has reduced post-blast fumes that result in reduced turnaround times.
- Impact™ 100 is factory blended; the ingredients do not segregate.

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**Technical Properties**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blow Loaded Density(^1)</td>
<td>0.95 g/cc</td>
</tr>
<tr>
<td>Relative Weight Strength</td>
<td>109%</td>
</tr>
<tr>
<td>Relative Effective Energy(^2)</td>
<td></td>
</tr>
<tr>
<td>Relative Bulk Strength</td>
<td></td>
</tr>
<tr>
<td>- to ANFO @ 0.8 g/cc</td>
<td>129%</td>
</tr>
<tr>
<td>- to ANFO @ 0.95 g/cc</td>
<td>97%</td>
</tr>
<tr>
<td>Velocity of Detonation Range(^3)</td>
<td>2.5 – 5.4 km/s</td>
</tr>
</tbody>
</table>

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**Recommendations for Use**

**Blasthole Diameter**

The minimum recommended blasthole diameter for pneumatically loaded Impact™ 100 is 45mm. Contact your Orica Technical Representative for recommendations on loading large (89mm or greater) diameter upholes.

Fresh Impact™ 100, less than 2 weeks old, offers the best retention in upholes.

**Blasthole Depth**

Impact™ 100 can be used in holes of any practical depth.

**Priming and Initiation**

Impact™ 100 can be reliably initiated by a Senatel™ packaged explosive cartridge, or a Pentex™ booster, in conjunction with an eDev™ detonator, uni tronic™ detonator, i-kon™ system detonator or electric No.8* or Exel™ detonator.

Use of detonating cord with Impact™ 100 is not recommended.

**Charging**

The recommended pressure for pneumatic loading of Impact™ 100 is 350-400kPa.

**Static Electricity**

During pneumatic (blow) loading a build-up of static electricity can occur. Precautions such as the use of a semi-
conductive loading hose (Lo-Stat) must be taken. The pneumatic loader must also be properly earthed. Pneumatic loading over bare detonators is not recommended.

Sleep-Time Within Blastholes
Maximum sleep time in reactive ground
The maximum sleep time will need to be determined based on testing of the reactive ground (4).
Maximum sleep time in unreactive ground
In dry blastholes the maximum sleep time in unreactive ground is 30 days. However, sleep time is dependent on factors such as hole diameter, density, ground water conditions and initiation system.

An Orica Technical Representative should be consulted if special conditions exist.

Reactive Ground and Ground Temperature
Reactive Ground (4). Impact™ 100 has been specifically designed for use in reactive ground. Impact™ 100 incorporates ingredients to inhibit exothermic sulphide reactions, which have been known to occur between explosives and ground containing sulphides or other reactive material.

The degree of reactivity is determined by Orica standard temperature and reactive ore tests. Hazardous conditions are associated with explosives in reactive ground.

Elevated Temperature (4). Impact™ 100 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 an Orica Technical Representative for further information.

Packaging
Impact™ 100 is available in 20kg bags.

Product Quality
Impact™ 100 is manufactured using an ISO9001 accredited quality process. Impact™ 100 has been developed by Orica Australia specifically for the mining industry using ISO9001 accredited research and engineering processes.

Storage and Handling

Product Classification
Authorised Name: Impact™ 100
Proper Shipping Name: Explosive, Blasting, Type B
UN No: 0082
Classification: 1.1D

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

Storage
Store Impact™ 100 in a magazine suitably licensed for Class 1.1D explosives. Impact™ 100 has a storage life of 2 months in stable, temperate conditions. However exposure to hot or cold extremes may cause the product to deteriorate prematurely.

Impact™ 100’s detonation behaviour remains constant, even after long storage, but it progressively dries out and will be less suited to uphole loading.

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 Representative for information on safe practices.

Safety
The post detonation fume characteristics of Impact™ 100 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.

Impact™ 100 can be initiated by extremes of shock, friction or mechanical impact. As with all explosives, Impact™ 100 should be handled and stored with care. Impact™ 100 does not burn easily, but it must be kept clear of flame and excessive heat. Impact™ 100 is readily desensitised by water.

Impact™ 100 incorporates additives which inhibit exothermic reactions, which may occur between the explosive and the rock when blasting in reactive ground. The suitability of Impact™ 100 for any particular application must be laboratory tested before use.
More detailed product safety information can be found in the product Safety Data Sheet.

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

Notes:
(1.) Nominal Density Only.
(2.) 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 100MPa cut-off pressure.
(3.) The actual VOD depends on the conditions of use including the diameter of the hole and the degree of confinement. The range quoted refers to unconfined minimum diameter up to calculated ideal VOD.
(4.) Reactive ground and elevated temperature as defined in the Australian Explosives Industry Safety Group (AEISG) Code of Practice for Elevated Temperature and Reactive Ground.