

# Powermite® Pro

## Cartridged Product

Technical  
Information



### Description

POWERMITE Pro is a detonator sensitive emulsion explosive, packaged in a plastic film cartridge.

### Application

POWERMITE Pro is formulated as a high energy explosive for use in hard blasting conditions. This product has also demonstrated excellent performance in “lifter holes” in underground mining operations. It may be used as a primer of ANFO, Heavy ANFO and ANFO PS in small diameter blastholes.

### Features and Benefits

The relatively high Velocity of Detonation (VoD) makes this product particularly suitable for use in hard rock blasting conditions. However, the product still has sufficient gas energy to provide optimal diggability. Being an emulsion based product, it has inherent resistance to water, both static as well as dynamic, and is suitable for use in wet conditions.

## Properties

Nominal Density (g/cm <sup>3</sup> ) <sup>1</sup>	1.16 – 1.23
Energy (MJ/kg) <sup>2</sup>	2.78
Typical VoD (m/s) <sup>3</sup>	3400
Relative Weight Strength % <sup>4</sup>	75
Relative Bulk Strength % <sup>5</sup>	109
Water Resistance	Excellent

### NOTES:

1. Values are indicative average densities only, determined under laboratory conditions by Dyno Nobel technical personnel at Dyno Nobel's Mt Thorley Technical Centre. Observed densities may differ or vary under field conditions. Nominal in hole density only.
2. All Dyno Nobel energy values are calculated using a proprietary Dyno Nobel thermodynamic code – Prodet. Other programs may give different values.
3. These results represent a range of VODs collected from numerous Dyno Nobel blast sites throughout the Asia Pacific region over a period of time. The velocity of detonation actually recorded in use is dependent upon many factors, including: the initiation system used, the product density, blast hole diameter and ground confinement. The values stated are typical of those recorded for the product in various hole diameters, densities and ground types, and may not be achievable under all circumstances.
4. Relative Weight Strength (RWS) and Relative Bulk Strength (RBS) are determined using a density of 0.82g/cm<sup>3</sup> and an energy of 3.7MJ/kg for ANFO.
5. RBS depends on the final density of the product at the time of loading.

### Hazardous Shipping Description

Explosive, Blasting, Type E 1.1D UN 0241



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### Recommendations

**Priming requirements** - POWERMITE Pro is formulated to be sensitive to a No. 8 strength detonator. The preferred method of initiation is via the NONEL® system. When inserting the detonator into cartridge, always use a wooden skewer, not the detonator, to pierce the plastic film.

**Sleep time** - The sleep time of POWERMITE Pro will be limited to the recommended sleep time of the explosive it is priming or that of the initiation system.

**Water Resistance** – POWERMITE Pro provides high water resistance, minimising product loss to the environment in wet conditions.

**Reactive Ground Conditions** - POWERMITE Pro can also be formulated for use in reactive and high temperature ground conditions. Prior to such applications, it is essential that the reactivity potential of the material be tested for suitability. The maximum sleep time will be dependent on the ground temperature and the level of ground reactivity.

**Ground Temperature** - Suitable for use in ground with a temperature range of 0°C to 50°C. For applications in ground temperatures outside this range, consult your Dyno Nobel representative.

**Shelf life** - POWERMITE Pro products have a recommended shelf life of one (1) year when transported and stored under ideal conditions.

### Packaging

POWERMITE Pro	Cart weight (kg)	Nominal cartridges per case
32mm x 200mm	25kg	135
32mm x 700mm	25kg	38
55mm x 400mm	25kg	23
65mm x 400mm	25kg	17
80mm x 400mm	25kg	11

### Safe handling, transportation and storage

**First Aid** – You can find detailed first aid information on the relevant Dyno Nobel Safety Data Sheet. Refer to [www.dynonobel.com](http://www.dynonobel.com) for more information if required.

**Safety** - All explosives are classified as dangerous goods and can cause personal injury and damage to property if used incorrectly.

**Transportation and Storage** - All explosives must be handled, transported and stored in accordance with all relevant regulations. Stock should be rotated such that older product is used first.

**Product Disclaimer** The explosive products discussed in this document should only be handled by persons with the appropriate technical skills, training and licences. While Dyno Nobel has made every effort to ensure the information in this document is correct, every user is responsible for understanding the safe and correct use of the products. If you need specific technical advice or have any questions, you should contact your Dyno Nobel representative. This information is provided without any warranty, express or implied, regarding its correctness or accuracy and, to the maximum extent permitted by law, Dyno Nobel expressly disclaims any and all liability arising from the use of this document or the information contained herein. It is solely the responsibility of the user to make enquiries, obtain advice and determine the safe conditions for use of the products referred to herein and the user assumes liability for any loss, damage, expense or cost resulting from such use. © DYNO, GROUNDBREAKING PERFORMANCE, POWERMITE, NONEL and the Packaged Explosives and Explosion device are registered trademarks of the Dyno Nobel / Incitec Pivot Group. © Dyno Nobel Asia Pacific Pty Limited 2018 Reproduction without permission strictly prohibited.