

Powermite Plus®

Technical Information



Description

Dyno Nobel's Powermite Plus®, suitable for secondary blasting, is a high strength, detonator sensitive inhibited emulsion explosive, packaged in plastic film chubs. It has a mouldable consistency, suitable for conforming to irregular surfaces. Powermite Plus is robust and designed to be manipulated in the packaging without loss of product sensitivity.

Application

Powermite Plus is formulated as an inhibited high energy explosive for use in secondary blasting where the rock is at an elevated temperature and/or exhibits reactive ground properties. The mouldable consistency of Powermite Plus allows it to be shaped to fit irregular surfaces, providing maximum coupling to the rock and provides high water resistance, minimising loss of the product in wet conditions.

Properties

Nominal Density (g/cm ³) ¹	1.15
Energy (MJ/kg) ²	3.81
Typical VOD (m/s) ³	4900 - 5300
Relative Weight Strength % ⁴	103
Relative Bulk Strength % ⁵	146
Water Resistance	High

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/cm³ 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 Plus is formulated to be sensitive to a No.8 strength detonator or 5g/m detonating cord. 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 break the plastic film. The detonator should be inserted into the moulded Powermite Plus charge at right angles to the rock surface. At temperatures of 70°C and above, only detonating cord (with the correct temperature rating) should be used.

Temperature range - Powermite Plus is suitable for use with rock temperatures ranging from 0° to 100°C. For applications in rock temperatures outside this range; contact your Dyno Nobel representative.

Reactive Ground - Powermite Plus is suitable for use with rock that exhibits reactivity with ammonium nitrate explosives. As with all secondary blasting, the explosive should be fired as soon as practicable after charging has been completed. If sleep times longer than 8 hours may be required, please contact your Dyno Nobel representative to have the necessary sleep time testing performed for your ground.

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

Shelf life - Powermite Plus products have a recommended shelf life of eighteen (18) months when transported and stored under ideal conditions.

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 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.

Packaging

Diameter and Length	Case Quantity	Case Weight	Net Explosive Weight
76 x 400 mm	25	25 kg	24.5kg

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 PLUS, 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.