

BlastLite®

Low Density Explosive

Technical
Information



Description

BlastLite® low density explosive is recommended as an ANFO replacement in soft to medium strength rock masses. BlastLite is a dry, free flowing bulk explosive comprised of ammonium nitrate prills and a brown fibrous bulking agent.

BlastLite can only be used in dry or dewatered blastholes in non-reactive ground. BlastLite may be useful where heave energy is preferable to shock energy. BlastLite has a lower Velocity of Detonation (VoD) than ANFO in similar blasthole diameters.

It is delivered as an augered product from a QUAD truck.

Advantages

- BlastLite has both a lower density and lower bulk strength than ANFO.
- The lower density allows powder factors to be reduced.
- The lower bulk strength allows improved explosive distribution throughout the blasthole.

Properties

Density (avg g/cm ³) ¹	0.53 – 0.59
Minimum Diameter (mm)	165
Energy (MJ/kg) ²	3.2
Relative Weight Strength (RWS) ³	87
Relative Bulk Strength (RBS) ³	59
Typical VoD (m/sec) ⁴	2100 – 3400
CO ₂ Emissions (tCO ₂ e/t) ⁵	0.075

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. RWS and RBS determined using a density of 0.82g/cm³ and an energy of 3.7MJ/kg for ANFO.
4. 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, blasthole 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.
5. CO₂ emissions calculated as tonnes of CO₂ equivalent per tonne of explosive. As per National Greenhouse Accounts; July 2012; Department of Climate Change and Energy Efficiency

Hazardous Shipping Description

Explosive, Blasting, Type E, 1.1D, UN 0082



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Recommendations

Priming Requirements - BlastLite is booster sensitive and should be primed with a minimum 400g cast booster. Smaller booster types may reduce the performance of the explosive. Additional boosters should be used when the column height exceeds 10 metres or where there is risk of column disruption. For specific priming requirements please contact your Dyno Nobel representative.

Sleep Time - Under normal conditions in dry, stemmed blastholes, BlastLite may be slept for a period of up to two (2) weeks. The sleep time may be limited to the recommended sleep time of the initiating system. For applications where unusual or specific conditions exist please consult your local Dyno Nobel representative.

Reactive Ground Conditions - BlastLite is not designed for use in reactive (pyritic) ground conditions. For applications in reactive ground conditions please consult your local Dyno Nobel representative.

Ground Temperature - BlastLite is suitable for use in ground with a temperature range of 0°C to a maximum of 55°C.

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.

Shelf Life – BlastLite has a maximum shelf life of six (6) months dependent on temperature and humidity conditions. Storage in a high humidity and high temperature environment will accelerate product breakdown and should be avoided.

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, BlastLite, and the Person and Pipe device are registered trademarks of the Dyno Nobel / Incitec Pivot Group. © Dyno Nobel Asia Pacific Pty Limited 2016. Reproduction without permission strictly prohibited.