

ANFO

Description

ANFO is a free flowing (loose poured) mixture of porous prilled Ammonium Nitrate (*Nitropril*®) and Fuel Oil (FO), formulated to be oxygen balanced for use in dry blastholes. ANFO is suitable for most dry blasting applications. It is not applicable in ground containing reactive sulphides. ANFO is part of the range of bulk products delivered by Orica's Mobile Manufacturing Units (*MMU*®) which are capable of delivering multiple products. For large blasts the *MMU*® may be replenished on bench using the Orica *Reload*® System.

Key Benefits

- High productivity via *Reload*® System.
- Consistent high quality gives consistent blast performance.

Performance

Property	ANFO	
Density (g/cm ³) ⁽¹⁾	0.8	
Minimum Blasthole Diameter (mm)	76	
Maximum Blasthole Depth (m)	80	
Maximum Charge Length (m)	75	
Hole Type	Dry	
Delivery System	Augured / Blowloaded	
Recommended <i>Pentex</i> ™	76 – 102mm	H
Booster for minimum hole diameter	>102	PPP
Typical VOD (km/s) ⁽²⁾	2.50 - 4.80	
Relative Effective Energy (REE)⁽³⁾		
Relative Weight Energy	100	
Relative Bulk Strength	100	
CO ₂ Output (kg/tonne) ⁽⁴⁾	182	
Sleep Time	42 days	

Recommendations for Use

Please consult your Orica Account Manager if you need to use ANFO in dry blastholes less than 76mm in diameter or in poorly confined ground. Ammonium nitrate may react with pyritic materials in the ground and create potentially hazardous situations. ANFO should not be used in ground containing pyritic or other reactive material. Incorrect application of this product may result in elevated levels of post blast fume.

Reactive Ground

Explosives based on Ammonium Nitrate such as the ANFO may react with pyritic materials in the ground and create potentially hazardous situations. Orica accepts no responsibility for any loss or liability arising from use of the product in ground containing pyritic or other reactive material.

Ground Temperature

These products are available for use in ground temperatures 0° to a maximum of 55°C. If your application requires you to operate outside this temperature range please contact your local Orica Account Manager.

Product Quality

Orica's bulk explosives are manufactured and loaded using an ISO9001 accredited quality process. The Orica ANFO product & delivery system has been developed specifically for the mining industry using ISO9001 accredited Research and Engineering processes.

Safety Features

ANFO is relatively insensitive to accidental initiation by shock, friction or mechanical impact under normal conditions of use. Detonation may occur from heavy impact or excessive heating particularly under conditions of confinement. No adverse health effects are expected if the product is handled according to directions. If it comes in contact with any part of the body, wash with large amounts of soapy water. More detailed information can be found in the product Material Safety Data Sheet.

Explosive Classification

Authorised Name: ANFO
 Correct Shipping Name: Explosive, Blasting, Type B
 UN No: 0082
 Classification: 1.1D

(In Western Australia, ANFO is classified as a blasting agent).



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Disclaimer

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Emergency Telephone Numbers

Within Australia: 1800 033 111
Outside Australia: 61 3 9663 2130

Notes:

- (1.) Nominal Density Only.
- (2.) The actual VOD depends on the conditions of use including the diameter of the hole and the degree of confinement.
- (3.) 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. Non-ideal detonation energies are also available on request. These take account of blasthole diameter, rock type and explosive reaction behaviour.
- (4.) Carbon dioxide is the main greenhouse gas produced. The output is calculated assuming ideal detonation.

