

TECHNICAL DATA SHEET



ANFO – Bulk Product

Description

ANFO is an Ammonium Nitrate based product for use in dry blasthole applications only.

Features & Benefits

ANFO provides the following features and benefits:

- Productive auger delivery and high blasthole loading efficiency;
- Delivers high heave results, reducing the total cost of mining.

Usage Instructions

ANFO is suitable for loading into dry blastholes only.

Priming Requirements

The minimum primer recommended for use with ANFO is a 400g cast booster. For advice on the use of alternative primers, please contact your Hanwha technical representative. Where ground conditions may result in product column dislocation during blasting, additional primers are recommended to ensure complete initiation of the bulk product.

Charging Length

ANFO is suitable for loading into blast holes up to 80 metres in depth. Blasthole diameter, angle of inclination and presence of water will impact suitability of the selected product for a specific application. Please contact your Hanwha technical representative for further information.

Sleep Times

Under ideal conditions, the maximum recommended sleep time for ANFO is 28 days. However, site conditions such as groundwater may affect this period. Please contact your Hanwha technical representative for specific applications.

Elevated Temperatures

ANFO is not suitable for use in blastholes that are defined as elevated temperature (greater than 55°C).

Reactive Ground

ANFO is not suitable for loading in blastholes that are defined as reactive, according to the AEISG Code of Practice for Elevated Temperature and Reactive Ground.

Technical Data

| ANFO | |
|--|-------------|
| Name | ANFO |
| Product Blend (Emulsion : ANFO) | 0 : 100 |
| Effective Energy (MJ/kg) | 2.45 |
| Relative Weight Strength (%) | 100 |
| Relative Bulk Strength (%) | 100 |
| Velocity of Detonation (km/s) | 4.0 - 4.6 |
| Nominal Density Range (g/cm ³) | 0.75 - 0.82 |
| Minimum Hole Diameter (mm) | 76 |
| Water Resistance | None |
| Recommended Maximum Sleep Time (Dry) | 28 days |
| Suitable for (Dry/Dewatered) | Dry |
| Delivery Method | Auger |

1. Energy values and relative strengths are calculated using ideal detonation modelling (for reference, ANFO = 2.45MJ/kg).
2. Velocity of Detonation (VoD) values are approximate only and may vary according to site conditions.
3. Product density values are indicative only and may vary according to component density, charge length and site conditions.

Hazard Classification

| | |
|---------------------------|----------------------------|
| UN No. (Class / Division) | 0082 / 1.1D |
| Proper Shipping Name | EXPLOSIVE BLASTING, TYPE B |
| Packing Group | II |
| Hazchem Code | E |
| EMS | F-B, S-Y |

Safety

When using ANFO avoid contact with eyes or skin and wash hands thoroughly after handling. Keep ANFO away from sources of heat, sparks, flame or hot surfaces and avoid mixing with combustibles or incompatible materials.

Incorrect application of ANFO may result in undesirable levels of blast fume.

Handling Instructions

ANFO is available in bulk and is manufactured on site using Mobile Processing Units (MPU).

ANFO

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www.hanwhacorp.co.kr/eng/explosives

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Storage

All explosives are classified as Dangerous Goods and must be stored and secured in accordance with relevant local and national regulations.

Disclaimer

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The use of Product is an intrinsically dangerous activity and must be restricted to qualified and trained users in possession of any necessary permits and licenses, and comply at all times with appropriate safety and risk prevention measures and with applicable laws.

This document and any accompanying information is not intended to constitute – and shall not be construed as – an offer or contractual commitment on Hanwha's side. For further information about Hanwha Products, please contact your distributor or sales representative directly.

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