Technical Data Sheet

Exan™
Packaged ANFO

The Power of Partnership

Description
Exan™ is a porous prilled Ammonium Nitrate based packaged explosives formulated for a range of blasting applications. The *Exan*™ is not suited for use in reactive environments.

Application
The Exan™ is suitable for use where the blastholes are dry and will remain dry until firing. It can be used as a column charge in open cut mining, quarrying and for general blasting. The *Exan*™ can be loose poured or pneumatically (blow) loaded into blastholes.

Key Benefits
- *Exan*™ is reliable and easy to use, providing consistent results.
- *Exan*™ is a cost effective explosive for dry hole blasting applications.
- *Exan*™ provides fully coupled explosive charges to maximise blasting outcomes.
- The *Exan*™ can be pneumatically loaded to increase explosive density, and to enable small blastholes to be loaded quickly and efficiently.

Recommendations for Use
Blasthole Diameter
The minimum recommended hole diameter for *Exan*™ is 35 mm.

Blasthole Depth
Exan™ can be used in holes of any practical depth.

Priming and Initiation
A *Pentex*™ primer is recommended for the reliable initiation of *Exan*™ in conjunction with an *Exel*™ detonator. Alternatively, a *Senatel*™ or *Eurodyn*™ packaged explosive cartridge of the largest possible diameter for the blasthole can also be used. The use of detonating cord with *Exan*™ is not recommended.

Technical Properties

Product	*Exan*™
Density (g/cm^3) (1)	0.78 – 0.88
Minimum Blasthole Diameter (mm) (2)	35
Hole Type	Dry
Typical VOD (m/s) (3)	2500 - 3500
Relative Effective Energy (REE) (4)	
Relative Weight Strength (%)	100
Relative Bulk Strength (%)	104
CO_2 Output (kg/t) (5)	178
Sleep time (d)	3

Ground Temperature
These products are available for use in ground temperatures -20 °C to a maximum of 40 °C. If your application requires you to operate outside this temperature range please contact your local Orica Account Manager.

Charging
The recommended pressure for pneumatic loading of *Exan*™ is 3.5 – 4.0 bar (350 – 400 kPa). During pneumatic loading a build-up of static electricity can occur. Precautions such as the use of a semi-conductive loading hose must be taken. The pneumatic loader must also be properly earthed. Pneumatic loading over bare detonators is not recommended. Never load *Exan*™ into wet blastholes.

Sleep Time within Blastholes
In dry blastholes the maximum recommended sleep time for *Exan*™ is 3 days. Sleep time is dependent on ground temperature or environmental humidity and becomes shorter as the temperature or humidity increases.

Packaging
Exan™ is available in

Packaging	Weight (kg)	Dimension (cm)
Small Bag	25	75 x 52 x 35

Contact your local Orica representative for further information.

Storage and Handling
Product Classification

Authorised Name:	*Exan*™
Proper Shipping Name:	Explosive, Type B
UN No.:	0082
Classification	1.1D
EC Type Certificate:	0589.EXP.1741/08

All regulations on the handling and use of such explosives apply.

Storage
Store *Exan*™ in a suitably licensed magazine for Class 1.1D explosives. *Exan*™ has a storage life of 12 months in stable, temperate conditions.

Exan™ is best stored at ambient temperatures between 0 °C and 30 °C. Extreme changes in temperature, which cause *Exan*™ to cycle through -18 °C or 32 °C, will reduce its shelf life, and make it lumpy and hard to handle.

Disposal
Disposal of explosives materials can be hazardous. Methods for safe disposal of explosives may vary depending on the user's situation. Please contact a local Orica representative for information on safe practices.

Safety
The post detonation fume characteristics of *Exan*™ make it suitable for both underground and surface blasting applications. Users should ensure that adequate ventilation is provided prior to re-entry into the blast area.

Exan™ can be initiated by extremes of shock, friction or mechanical impact. As with all explosives, *Exan*™ should be handled and stored with care. *Exan*™ must be kept clear of flame and excessive heat. *Exan*™ is readily desensitised by water.

Explosives based on Ammonium Nitrate such as *Exan*™ may react with pyretic 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 pyretic or other reactive material. Not for mines with a danger of fire damp or coal dust explosion.

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Notes
1. Nominal Density Only.
2. Contact your local Orica Representative for further advice on loading at minimum hole diameters.
3. VOD will depend on application including explosive density blasthole diameter and degree of confinement. The VOD range is based on minimum unconfined and calculated ideal.
4. REE is the Effective Energy relative to ANFO at a density of 0.8 g/cm^3. ANFO has an effective energy of 2.30 MJ/kg. Energies quoted are based on ideal detonation calculations with a 100 Mpa cut off pressure. Non-ideal detonation energies are also available on request. These take account of blasthole diameter, rock type and explosive reaction behaviour.
5. Carbon Dioxide is the main greenhouse gas produced. The output is calculated assuming ideal detonation.