



DAYAGEL MAGNUM

High strength and robust
detonator sensitive
emulsion explosives



Explosives Services for
General Mining
Quarry and Construction
Oil and Gas

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DAYAGEL MAGNUM



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DESCRIPTION

Dayagel Magnum is an especially high strength and robust detonator sensitive emulsion explosives. The product is grey in colour with a firm putty-like consistency

SAFETY

The post detonation fume characteristics of DAYAGEL MAGNUM, make the product well suited to both underground and surface blasting applications but as with all explosives, operators should ensure that adequate ventilation is provided prior to re-entry to the blast site.

While sensitive to initiation by a No. 8 detonator, DAYAGEL MAGNUM has a very low mechanical impact sensitivity. This impact insensitivity criterion is a very important safety feature.

If exposed to fire, DAYAGEL MAGNUM will self extinguish unless a vigorous external source of heat is applied. whilst DAYAGEL MAGNUM does not burn easily, it should be kept clear of flame or excessive heat.

If DAYAGEL MAGNUM remnants are to be destroyed by burning, advice on the correct method should be sought from DAHANA's Explosives Technical Specialists or from the local explosives statutory authority.

APPLICATIONS

DAYAGEL MAGNUM is a water resistant packaged explosives designed to deliver high energy in both priming applications and as a relatively high density column explosives in mining, quarrying and general blasting work.

Small diameter cartridges of DAYAGEL MAGNUM are packed in films which readily split during tamping to maximize coupling and bulk strength within the blasthole. Intermediate diameter cartridges are package in film which resists tearing and

maintains the dimensional stability of the cartridge to ensure it remains intact for rising out of water. Alternatively the packaging can be slit where slumping is required to maximize coupling and bulk strength within the blasthole.

DAYAGEL MAGNUM is highly water resistant and will detonate reliably under heads of water up to 150 m, making this explosives suitable for most underwater blasting applications.

RECOMMENDATIONS FOR USE

Blasthole Depth

Suitable for use to 150 meters depth of water.

Priming

DAYAGEL MAGNUM has been designed as a detonator sensitive explosives and will deliver maximum energy and efficiency when initiated by a detonator of No. 8 or greater strength.

Watergels or nitroglycerine based explosives are NOT recommended as primers for DAYAGEL emulsions due to their relatively low velocity of detonation.

Detonating Cord Effects

While 10 g/m detonating cords may be used either as uplines or downlines to initiate DAYAGEL MAGNUM.

Detonating cords of lower charge mass than 10 g/m are not recommended for use with DAYAGEL MAGNUM. If in doubt consult DAHANA's Explosives Technical specialists.

Charging

Maximum energy per meter of blasthole is achieved in small blasthole diameters by tamping the explosives with a wooden tamping rod appropriate to the hole diameter. DAYAGEL MAGNUM does however offer an energy advantage over other commonly available emulsion and watergel explosives so that tamping may not be necessary to realise the in hole energy yield required. Under these circumstances faster loading is possible particularly when using 700 mm product lengths by reducing loading times and achieving more rapid advancement.

Sleeping Time Within Blastholes

In dry blastholes, given the explosives packaging is undamaged, DAYAGEL MAGNUM may be charges and fired several months later. If the explosives package is damaged, the sleeping time in a blasthole is influenced by the extent of damage to the packaging and by the nature of any water present. Even with full length slitting of cartridges, they will give good performance after two weeks immersion.

If due care is taken to seal and protect the detonator access point through the cartridge, then sleeping time in wet conditions may approach those given for dry holes.

PACKAGING						
	∅ 25	∅ 30	∅ 32	∅ 35	∅ 50	∅ 65
Length (mm)	200	200	200	200	200/400	245
Cartridges per Case (ea)	150	110	100	80	40/20	20
Weight per Cartridge (gr)	133	182	200	250	500/1000	1000
Weight per Case (gr)	20	20	20	20	20	20

TECHNICAL PROPERTIES	
Energy	
For diameter between 25 mm & 38 mm @ Operating density 1.23 gr/cm ³	
- REE* - Weight Strength (relative to ANFO = 100% @ 0.8 gr/cm ³)	119 %
- REE* - Bulk Strength (relative to ANFO = 100% @ 0.8 gr/cm ³)	183 %
For diameter between 45 mm & 130 mm @ Operating Density 1.25 gr/cm ³	
- REE* - Weight Strength (relative to ANFO = 100% @ 0.8 gr/cm ³)	122 %
- REE* - Bulk Strength (relative to ANFO = 100% @ 0.8 gr/cm ³)	194 %

* The "Relative Effective Energy" (REE) of an explosive is the energy calculated to do effective blasting work.

Velocity of Detonation	
Unconfined in 25 mm@ 10 °C	4.6 - 5.0 km/s
Unconfined in 32 mm@ 10 °C	5.0 - 5.4 km/s
Unconfined in 55 mm@ 10 °C	5.4 - 5.6 km/s

DISCLAIMER

All information contained in this Data Sheet is as accurate and as up to date as possible. Since DAHANA cannot anticipate or control the conditions under which this information and its products may be used. each user should review the information in the specific context of the intended application. DAHANA will not be responsible for damage of any nature resulting from the use of or reliance upon the information. No expressed or implied warranties are given other than those implied mandatorily by Government.