

TITAN[®] 7000

Gassed Emulsion

Technical
Information



Description

TITAN[®] 7000 gassed emulsion is water resistant and designed to be pumped from a bulk underground delivery truck. The TITAN 7000 system uses the specialised 'charging vehicle' for applications in up and down-holes. The truck is equipped with a dedicated boom and patented hose retraction unit.

Advantages

The TITAN 7000 emulsion has been specifically formulated to provide excellent up-hole retention. The emulsion has been developed for blastholes with diameters of 35-102mm and up to 30m in length. TITAN 7000 emulsion can be loaded to variable densities of 0.8 – 1.25g/cc for tailoring to specific geological conditions.

NOTES:

1. All Dyno Nobel energy values are calculated using a proprietary Dyno Nobel thermodynamic code – Prodet. Other programs may give different values.
2. Water resistance is determined using laboratory testing methods.
3. For non-reactive ground.
4. RWS and RBS determined using a density of 0.82g/cc and an energy of 3.7MJ/kg for ANFO.
5. VODs were recorded using a continuous VOD method in 102mm internal diameter PVC pipes.

Properties

Property	TITAN 7000G
Density (g/cm ³)	0.8 – 1.25
Rec. Min. Diam. (mm)	35 mm
Energy (MJ/kg) ¹	2.92
Water Resistance ²	Excellent
Rec. Sleep Time ³	30 days
RWS ⁴	0.79
RBS (1.05g/cm ³) ⁴	1.01
RBS (1.15g/cm ³) ⁴	1.11
RBS (1.25g/cm ³) ⁴	1.20

Typical Velocities of Detonation

Product	Hole Diameter (mm)	Density (g/cm ³)	Booster	VoD (m/s)
TITAN 7000G	102 mm	1.10	400HDP	5000 ⁵

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Recommendations

Priming Requirements - TITAN 7000 emulsion is formulated to be booster sensitive and requires a minimum 250g Ringprime[®] booster. Smaller booster types may reduce the performance of the explosive. Double priming is recommended if hole dislocation is expected to disrupt the emulsion column.

Shelf Life - TITAN 7000 emulsion matrix has a minimum shelf life of three (3) months, when transported and stored under ideal conditions.

Sleep Time - Testing has established that the sleep time for TITAN 7000 gassed emulsion exceeds one (1) month. For applications where unusual conditions exist please consult your local Dyno Nobel representative.

Reactive Ground Conditions - TITAN 7000 emulsion 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 - TITAN 7000 emulsion is suitable for use in ground with a temperature of 0°C to a maximum of 55°C. For application in ground at higher temperatures, please consult your local Dyno Nobel representative.

Dangerous Goods Classification

Product Name:	TITAN [®] 7000 Gassed Series
Correct Shipping Name:	Explosive, Blasting, Type E
UN Number:	0241
DG Class:	1.1D

Safe handling, transportation & storage

First Aid - Detailed first aid information regarding this product is contained on the relevant Dyno Nobel Material Safety Data Sheet.

Safety - All explosives are classified as dangerous goods and can cause personal injury and damage to property if used incorrectly.

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.

The information and suggestions contained in this document concern explosive products that should only be dealt with by persons having the appropriate technical skills, training and licence. The results obtained from the use of such products depend to a large degree on the conditions under which the products are stored, transported and used.

While Dyno Nobel makes every effort to ensure the details contained in the document are as accurate as possible, the conditions under which the products are used are not within its control. Each user is responsible for being aware of the details in the document and the product applications in the specific context of the intended use. If technical advice is required in the specific application of the products then you should contact Dyno Nobel for assistance.

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