

TITAN[®] 7000SX

Gassed Emulsion



Description

TITAN[®] 7000SX is a booster sensitive, high performance bulk emulsion designed specifically for use in underground mining operations in which sulphide ore reactivity¹ and secondary dust explosions are potential hazards. Dyno Nobel proprietary technology minimises the risks of using bulk explosives in these sulphide ore environments.

Advantages

The TITAN 7000SX emulsion has been specifically formulated to provide excellent up-hole retention, while minimising the risk of secondary dust explosions in sulphide ore. The emulsion has been developed for diameters 38-102mm, up to 30m in length. TITAN 7000SX emulsion can be gassed to variable densities of 0.8 – 1.25g/cm³ for tailoring the energy density to specific geological conditions.

NOTES:

1. The level of reactivity is determined by DNAP and AEISG standard reactive ore tests.
2. All Dyno Nobel energy values are calculated using a proprietary Dyno Nobel thermodynamic code – Prodet. Other programs may give different values.
3. Water resistance is determined using laboratory testing methods.
4. For non-reactive ground.
5. RWS and RBS determined using a density of 0.82g/cm³ and an energy of 3.7MJ/kg for ANFO.

Properties

Property	TITAN 7000SX G
Density (g/cm ³)	0.8 – 1.25
Rec. Min. Diam. (mm)	38 mm
Energy (MJ/kg) ²	2.85
Water Resistance ³	Excellent
Rec. Sleep Time ⁴	30 days
RWS ⁵	0.77
RBS (0.80 g/cm ³) ⁵	0.75
RBS (1.00 g/cm ³) ⁵	0.94
RBS (1.20 g/cm ³) ⁵	1.13

Typical Velocities of Detonation

Product	Hole Diameter (mm)	Density (g/cm ³)	Booster	VoD (m/s)
TITAN 7000SX G	38 mm	1.10	150g HDP	3,700
TITAN 7000SX G	102 mm	1.10	400g HDP	4,800

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Technical
Information



Recommendations

Priming Requirements - TITAN 7000SX emulsion is formulated to be booster sensitive and require 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 7000SX emulsion matrix has a minimum shelf life of three (3) months, when transported and stored under ideal conditions.

Sleep Time - The maximum sleep time for TITAN 7000SX gassed emulsion is one (1) month in non-reactive ground. When using the product in reactive ground please consult your local Dyno Nobel representative for assistance in determining recommended sleep times.

Reactive Ground Conditions -TITAN 7000SX gassed emulsion has been specifically designed for use in reactive (pyritic) ground conditions. For applications in reactive ground please consult your local Dyno Nobel representative to undertake the appropriate test work prior to the development of suitable site specific procedures.

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

Dangerous Goods Classification

Product Name:	TITAN [®] 7000SX 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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Groundbreaking Performance