

SANFOLD®

Technical
Information



Description

SANFOLD® is a low density explosive formulated for use in underground blasting, designed to overcome segregation problems during loose pouring and pneumatic loading of explosive product. It has a TITAN® emulsion matrix content in addition to the ammonium nitrate, polystyrene beads and fuel oil components.

Application

The SANFOLD range of products provides a range of explosive strengths for applications that require lower strength explosives such as in perimeter blasting. The lower energy of SANFOLD combined with its excellent charge distribution ensures that vibration is minimised, wall control maintained whilst still achieving good fragmentation.

Properties

Explosives Class: 1.1D

U.N. No: 0082

| SANFOLD Product | 70:30 | 50:50 | 30:70 |
|---|-------|-------|-------|
| Poured Density (g/cm ³) | 0.75 | 0.55 | 0.30 |
| Pneumatic Loaded Density (g/cm ³) | 0.87 | 0.67 | 0.54 |
| Energy (MJ/kg) ¹ | 3.63 | 3.51 | 3.28 |
| Minimum Diameter ² (mm) | 40 | 50 | 50 |
| Minimum Diameter Pneumatically Loaded ² (mm) | 32 | - | 40 |

1. All Dyno Nobel energy values are calculated using a proprietary Dyno Nobel thermodynamic code. Other programs may give different values.

2. Minimum hole diameter will vary: Polystyrene content, product density and confinement.

SANFOLD®

Technical Information



Features & Benefits

- The TITAN emulsion in the formulation binds the ANFO and polystyrene together making the product ideal for use in inclined holes where segregation could occur whilst the sticky nature of the product keeps the explosive in the blasthole.
- SANFOLD is therefore particularly suited to perimeter blasting in uphole stopes, with the different blends allowing the explosive properties to be matched with the particular geology.
- As SANFOLD contains TITAN emulsion, it has an increase in water resistance over both ANFO and ANFO PS blends.

Recommendations

Use - SANFOLD is formulated both for use in upholes as well as horizontal or slightly inclined holes in drives. SANFOLD is also suitable in steeply inclined holes as product segregation is minimised due to the emulsion binding the ANFO and polystyrene beads together.

Priming Requirements - SANFOLD is not detonator sensitive. It must be primed with a suitable diameter cast primer or Powermite® Pro cartridge. If in doubt about specific priming requirements, please contact your Dyno Nobel representative.

Water Resistance - SANFOLD has limited water resistance.

Ground Temperature – SANFOLD 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 and Regulatory Authority.

Reactive Ground Conditions - SANFOLD is not designed for use in reactive (pyritic) ground conditions. For applications in reactive ground conditions please consult your local Dyno Nobel representative.

Shelf Life - SANFOLD products should be used within three months where possible. The maximum storage life for SANFOLD is six (6) months under ambient temperature and low humidity conditions. Storage in a high humidity and high temperature environment will accelerate product breakdown and should be avoided. Signs of product degradation are hardening or caking which can lead to difficulty in loading and as a result, may lead to poor blasting performance.

Sleep Time - Under normal conditions in dry stemmed blastholes, SANFOLD may be slept for up to three (3) months. The sleep time will be limited to the recommended sleep time of the initiating system. The presence of water will dramatically reduce sleep time. For additional information on sleep time please contact your local Dyno Nobel representative for your particular application.

Packaging

SANFOLD is available in packaged form in plastic bags. SANFOLD 70, 50 and 30 are available in 18 kg, 12.5 kg and 8 kg plastic bags coloured green, purple and yellow respectively. SANFOLD 70, 50 and 30 are delivered in 50 bag per pallet loads containing 900 kg, 625 kg and 400 kg of product respectively.



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.

Dyno Nobel makes no warranties in relation to the products it sells other than those implied by law. Except to the extent determined by law, Dyno Nobel bears no risk, responsibility or liability arising from the use of the products and the information in this document by the buyer or user of the products.

® SANFOLD, TITAN & Powermite are registered trademarks of the Dyno Nobel Group.

© Dyno Nobel Asia Pacific Pty Limited. 2009 Reproduction without permission strictly prohibited.

VERSION NO.: 4.0
Last Updated: 12/09