

# TECHNICAL DATA SHEET



## XLOAD™ Pumped Series – Hybrid Bulk Products

### Description

XLOAD™ Pumped Series products are a range of variable energy bulk products that do not require gassing chemicals, for use in wet blasthole applications. A blend of Ammonium Nitrate, a high-energy emulsion and Expanded Polystyrene (EPS), its flexibility and ease of loading makes the product ideal for all but the most challenging blast conditions. The XLOAD™ Pumped Series products have been specifically formulated to minimise the potential for blast fume (NOx gasses). The XLOAD™ Pumped Series products are ideal for all blasting applications where optimum fragmentation and movement are desirable.

### Features & Benefits

XLOAD™ Pumped Series products have been developed to provide the following features and benefits:

- product formulation and detonation characteristics minimise blast fume potential when used with good blasting practices;
- use of EPS allows customers to select lower and consistent in-hole product densities, providing optimum energy for a wide range of ground conditions while reducing the total cost of mining;
- with no requirement for gassing chemicals, eliminates wait times before stemming making the product ideal for deck loading applications;
- unique formulation of the XLOAD™ range delivers high heave outcomes not usually associated with water resistant products;
- reduce environmental impacts of blasting, particularly airblast and vibration.

### Usage Instructions

XLOAD™ Pumped Series products are ideally suited for loading into dry and dewatered blastholes. Please contact your Hanwha technical representative for application in difficult blasting conditions.

#### Priming Requirements

The minimum primer recommended for use with XLOAD™ Pumped Series products is a 400g cast booster. For advice on the use of alternative primers, please contact your Hanwha technical representative. Where ground conditions may result in product column dislocation during blasting, additional primers are recommended to ensure complete initiation of the bulk product.

#### Charging Length

XLOAD™ Pumped Series products are suitable for loading into blast holes up to 45 metres in depth. Blasthole diameter, inclination and presence of water will impact on suitability of the selected product for a specific application. Please contact your Hanwha technical representative for further information.

#### Sleep Times

Under ideal conditions, the maximum recommended sleep time for XLOAD™ Pumped Series products is 28 days. However, site conditions such as groundwater may affect this period. Please contact your Hanwha technical representative for specific applications.

### Technical Data

XLOAD™ Pumped Series Products					
Name	XLOAD™ 70-110	XLOAD™ 70-120	XLOAD™ 80-100	XLOAD™ 80-110	XLOAD™ 80-120
Product Blend (Emulsion : ANFO)	70 : 30	70 : 30	80 : 20	80 : 20	80 : 20
Effective Energy (MJ/kg)	2.25	2.37	2.05	2.17	2.29
Relative Weight Strength (%)	92	97	84	88	93
Relative Bulk Strength (%)	126	145	105	122	140
Velocity of Detonation (km/s)	3.5 – 5.0	3.5 – 5.0	3.5 – 5.0	3.5 – 5.0	3.5 – 5.0
Nominal Density (g/cm <sup>3</sup> )	1.10	1.20	1.00	1.10	1.20
Minimum Hole Ø (mm)	152	152	152	152	152
Water Resistance	Excellent	Excellent	Excellent	Excellent	Excellent
Recommended Maximum Sleep Time (Dry)	28 days	28 days	28 days	28 days	28 days
Suitable for (Dry/Dewatered/Wet)	Wet	Wet	Wet	Wet	Wet
Delivery Method	Pump	Pump	Pump	Pump	Pump
Minimum Loading Hose Ø (inches)	2	2	2	2	1¼

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XLOAD™ Pumped Series Products					
Name	XLOAD™ 100-080	XLOAD™ 100-090	XLOAD™ 100-100	XLOAD™ 100-110	XLOAD™ 100-120
Product Blend (Emulsion : ANFO)	100 : 0	100 : 0	100 : 0	100 : 0	100 : 0
Effective Energy (MJ/kg)	1.62	1.76	1.88	2.00	2.11
Relative Weight Strength (%)	66	72	77	81	86
Relative Bulk Strength (%)	66	81	96	112	129
Velocity of Detonation (km/s)	3.5 – 5.0	3.5 – 5.0	3.5 – 5.0	3.5 – 5.0	3.5 – 5.0
Nominal Density (g/cm <sup>3</sup> )	0.80	0.90	1.20	1.10	1.20
Minimum Hole Diameter Ø (mm)	102	102	102	102	102
Water Resistance	Excellent	Excellent	Excellent	Excellent	Excellent
Recommended Maximum Sleep Time (Dry)	28 days	28 days	28 days	28 days	28 days
Suitable for (Dry/Dewatered/Wet)	Wet	Wet	Wet	Wet	Wet
Delivery Method	Pump	Pump	Pump	Pump	Pump
Minimum Delivery Hose Ø (inches)	1¼	1¼	1¼	1¼	1

1. Energy values and relative strengths are calculated using ideal detonation modelling (for reference, ANFO = 2.45MJ/kg).
2. Velocity of Detonation (VoD) values are approximate only and may vary according to site conditions.
3. Product density values are indicative only, and may vary according to component density charge length and site conditions.

### Elevated Temperatures

XLOAD™ Pumped Series products are not suitable for use in blastholes that are defined as elevated temperature. Please contact your Hanwha technical representative for specific applications.

### Reactive Ground

XLOAD™ Pumped Series products are not suitable for loading in blastholes that are defined as reactive, according to the AEISG Code of Practice for Elevated Temperature and Reactive Ground.

### Hazard Classification

UN No. (Class / Division)	0241 / 1.1D
Proper Shipping Name	EXPLOSIVE, BLASTING, TYPE E
Packing Group	II
Hazchem Code	E
EMS	F-B, S-X

### Safety

When using XLOAD™ Pumped Series products avoid contact with eyes or skin and wash hands thoroughly after handling. Keep XLOAD™ Pumped Series products away from sources of heat, sparks, flame or hot surfaces, and avoid mixing with combustibles or incompatible materials.

### Handling Instructions

XLOAD™ Pumped Series products are available in bulk and are manufactured on site using Mobile Processing Units (MPU).

### Storage

All products are classified as Dangerous Goods and must be stored and secured in accordance with relevant local and national regulations.

### Disclaimer

The information in this Technical Data Sheet is correct as of the date issued and are subject to periodic review. Hanwha reserves the right in its sole discretion and without prior written notice to modify the product(s) and/or specifications described herein ("Product"). Hanwha disclaims any warranties with respect to Product, the safety or suitability thereof, or the results to be obtained, whether express or implied, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR COURSE OF PERFORMANCE OR USAGE OF TRADE. Given the variety of factors that can affect the use and application of Product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluate the Product to determine whether it is fit for a

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particular purpose and suitable for the user's method of use or application.

The use of Product is an intrinsically dangerous activity and must be restricted to qualified and trained users in possession of any necessary permits and licenses, and comply at all times with appropriate safety and risk prevention measures and with applicable laws.

This document and any accompanying information is not intended to constitute – and shall not be construed as – an offer or contractual commitment on Hanwha's side. For further information about Hanwha Products, please contact your distributor or sales representative directly.

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