

# TECHNICAL DATA SHEET



## XLOAD™ i Series – Bulk Products for Reactive Ground

### Description

XLOAD™i products are a specially formulated range of bulk products for use in blasthole applications where reactive ground is present. The XLOAD™i Series products have been specifically formulated to minimise the potential for blast fume (NOx gasses). The XLOAD™i Series products are ideal for all blasting applications where optimum fragmentation and movement are desirable.

### Features & Benefits

XLOAD™i 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 further mitigating the risk of an unplanned detonation;
- unique formulation of the XLOAD™i range delivers high heave outcomes not usually associated with inhibited bulk products
- This specific evaluation will ensure that the XLOAD™i bulk products will be successful in minimizing any reaction between the reactive ground/ore and the XLOAD™i bulk products.
- The XLOAD™i bulk products can be manufactured within a range of 100% emulsion, to 60% emulsion blend with ANFO. The blend ratios can be tailored to the specific needs or blasting requirements of the customer.

### Usage Instructions

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

#### Priming Requirements

The minimum primer recommended for use with XLOAD™i 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™i 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

**Reactive Ground:** 12 hours

Testing in accordance with the AEISG code of practice for Elevated Temperature and Reactive Ground to determine the sleep time.

**Unreactive Ground:** 21 days

However, site conditions such as groundwater may affect this period. Please contact your Hanwha technical representative for specific applications.

#### Ground Temperature

XLOAD™i Series products are suitable for use in borehole loading temperature up to 55°C. For temperatures greater than 55°C; contact your Hanwha representative.

### Technical Data (Augered Products)

XLOAD™i Series Products						
Name	60-080	60-085	60-090	60-100	60-110	60-120
Product Blend (Emulsion : ANFO)	60 : 40					
Effective Energy (MJ/kg)	1.92	1.99	2.06	2.20	2.33	2.45
Relative Weight Strength (%)	77	80	83	88	93	97
Relative Bulk Strength (%)	75	83	91	107	124	142
Velocity of Detonation (km/s)	3.5 – 5.0					
Nominal Density Range (g/cm <sup>3</sup> )	0.80	0.85	0.90	1.00	1.10	1.20
Minimum Hole Diameter (mm)	152					
Water Resistance / Suitable for(Dry/Dewatered)	Moderate / Dry/Dewatered					
Recommended Max. Sleep Time (in Non-reactive ground)	12 hrs (21days in Non-reactive ground)					

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### Technical Data (Pumped Products)

XLOAD™ i Series Products											
Name	70-100	70-110	70-120	80-100	80-110	80-120	100-080	100-090	100-100	100-110	100-120
Product Blend (Emulsion : ANFO)	70 : 30			80 : 20			100 : 0				
Effective Energy (MJ/kg)	2.13	2.26	2.37	1.99	2.12	2.23	1.50	1.64	1.76	1.87	1.97
Relative Weight Strength (%)	87	92	97	81	86	91	61	67	72	76	81
Relative Bulk Strength (%)	108	127	145	102	119	136	61	71	81	95	111
Velocity of Detonation (km/s)	3.5 – 5.0			3.5 – 5.0			3.5 – 5.0				
Nominal Density Range (g/cm <sup>3</sup> )	1.00	1.10	1.20	1.00	1.10	1.20	0.80	0.90	1.00	1.10	1.20
Minimum Hole Diameter (mm)	152			152			102				
Water Resistance	Excellent			Excellent			Excellent				
Recommended Sleep Time up to 55°C (in Non-reactive ground)	12 hrs (21 days in Non-reactive ground)										
Suitable for (Dry/Dewatered/Wet)	Dry/Dewatered/Wet			Dry/Dewatered/Wet			Dry/Dewatered/Wet				
Minimum Loading Hose Ø (inches)	2			2		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.

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

### Handling Instructions

XLOAD™ i 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 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.

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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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