

# TECHNICAL DATA SHEET



## HiDEX™ i – Bulk Products for Reactive Ground

### Description

HiDEX™i products are a specially formulated range of bulk products for use in blasthole applications where reactive ground is present. A blend of Ammonium Nitrate and emulsion, HiDEX™i products are ideal for use in dry blasthole applications where optimum fragmentation and movement are desirable.

### Features & Benefits

HiDEX™i products have been developed to provide the following features and benefits:

- high density emulsion provides greater range of available densities;
- formulation of the HiDEX™i range delivers high heave results from lower density blends compared with conventional Heavy ANFO products, reducing the total cost of mining;
- productive auger delivery and high blasthole loading efficiency.
- this specific evaluation will insure that the HiDEX™i bulk products will be successful in minimizing any reaction between the reactive ground/ore and the HiDEX™i bulk products.

### Usage Instructions

HiDEX™i products are suitable for loading into dry /dewatered blastholes. Please contact your Hanwha technical representative for application in dewatered blastholes.

### Technical Data

HiDEX™i Bulk Products						
Name	HiDEX™i 10	HiDEX™i 20	HiDEX™i 25	HiDEX™i 30	HiDEX™i 40	HiDEX™i 45
Product Blend (Emulsion : ANFO)	10 : 90	20 : 80	25 : 75	30 : 70	40 : 60	45 : 55
Effective Energy (MJ/kg)	2.45	2.51	2.61	2.69	2.71	2.71
Relative Weight Strength (%)	100	102	106	110	111	111
Relative Bulk Strength (%)	106	122	140	158	173	180
Velocity of Detonation (km/s)	3.7 - 4.6	3.7 - 4.6	3.7 - 4.7	3.7 - 4.7	3.7 - 5.2	3.7 - 5.2
Nominal Density Range (g/cm <sup>3</sup> )	0.80 - 0.90	0.90 - 1.00	1.00 - 1.10	1.10 - 1.20	1.20 - 1.30	1.26 - 1.33
Minimum Hole Diameter (mm)	100	115	140	152	203	203
Water Resistance	None	Poor	Poor	Poor	Moderate	Moderate
Recommended Maximum Sleep Time (in Non-reactive ground)	28 days in Non-reactive ground				12 hrs (28 days in Non-reactive ground)	
Suitable for (Dry/Dewatered)	Dry				Dry/Dewatered	
Delivery Method	Auger					

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.

### Priming Requirements

The minimum primer recommended for use with HiDEX™i 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

HiDEX™i 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.

**Non-reactive Ground:** 28 days

However, site conditions such as hole diameter, product density, confinement and groundwater may affect this period. Please contact your Hanwha technical representative for specific applications.

### Ground Temperature

HiDEX™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.

HiDEX™i

Revised on : April 9<sup>th</sup>, 2020 (Ver 1.1)  
[www.hanwhacorp.co.kr/eng/explosives](http://www.hanwhacorp.co.kr/eng/explosives)

# TECHNICAL DATA SHEET



## HiDEX™ i – Bulk Products for Reactive Ground

### Precautions for reactive ground

HiDEX™i 40 & 45 products only can use for reactive ground. HiDEX™i 10, 20, 25 and 30 must not be used in 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

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.

### Safety

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

### Handling Instructions

HiDEX™i products are available in bulk and are manufactured on site using Mobile Processing Units (MPU).

### Storage

All explosives 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.

HiDEX™i

Revised on : April 9<sup>th</sup>, 2020 (Ver 1.1)  
[www.hanwhacorp.co.kr/eng/explosives](http://www.hanwhacorp.co.kr/eng/explosives)

# TECHNICAL DATA SHEET



## *HiDEX™ i – Bulk Products for Reactive Ground*

Please contact the following offices for any emergency or enquiry.

### **Head Office (Korea)**

#### **Hanwha Corporation**

Hanwha Building 17th floor  
86 Cheonggyecheon-ro, Jung-gu  
Seoul, Korea 04541

**TEL.** +82 2 729 1629

**FAX.** +82 2 729 1850

**E-mail** [commercial@hanwha.com](mailto:commercial@hanwha.com)

### **HMS INDONESIA**

#### **PT. Hanwha Mining Services Indonesia**

Talavera Office Park, Suite Area, 21th Floor  
JL. TB Simatupang Kav 22 Cilandak  
Barat Jakarta Selatan 12430

**TEL.** +62 21 2782 8378

**FAX.** +62 21 2782 8643

**E-mail** [hmsindonesia@hanwha.com](mailto:hmsindonesia@hanwha.com)

### **HMS AUSTRALIA**

#### **Hanwha Mining Services Australia Pty Ltd**

Level 9, 132 Arthur Street North Sydney NSW 2060  
Australia

**TEL.** +61 416 770 529

**Emergency** 1800 054 055

**E-mail** [australia@hanwha.com](mailto:australia@hanwha.com)

### **HMS LATIN AMERICA**

#### **Hanwha Mining Services Chile**

Alonso de Cordova 5870, Office 707, Las Condes,  
Santiago, Chile

**TEL.** +56 2 2993 7546

**E-mail** [hmschile@hanwha.com](mailto:hmschile@hanwha.com)

### **HMS USA**

#### **Hanwha Mining Services USA**

420 East South Temple Suite 260, Salt lake City  
UTAH 84111, USA

**TEL.** +1 801 336 1553, 1602

**FAX.** +1 801 384 0567

**E-mail** [leehw@hanwha.com](mailto:leehw@hanwha.com)

### **SOUTH AFRICA**

#### **Hanwha Corporation Johannesburg**

Cedar Office estate Block 1, Unit 1A  
Corner Stinkwood Cl & Cedar Rd broad acres  
2021, Johannesburg, South Africa

**TEL.** +27 11 317 7300

**FAX.** +27 11 465 0499

**E-mail** [yhlee@hanwha.com](mailto:yhlee@hanwha.com)

**HiDEX™ i**

Revised on : April 9<sup>th</sup>, 2020 (Ver 1.1)  
[www.hanwhacorp.co.kr/eng/explosives](http://www.hanwhacorp.co.kr/eng/explosives)