

TECHNICAL DATA SHEET



HiMEX[®]E series – Bulk Products for Elevated temperature & Reactive Ground

Description

HiMEX[®]E series products are specially formulated range of bulk emulsion products for use in elevated temperature blastholes and especially reactive ground containing reactive sulphides. It is ideal for blasting in known 'reactive ground' mines or in specific areas within a mine site where reactive ground plus elevated temperature ground. HiMEX[®]E products are only applicable in high temperature ground. HiMEX[®]Ei products are applicable in both elevated temperature and reactive ground. Maximum allowable borehole loading temperature of HiMEX[®]E series is 100 °C. For temperatures greater than 100 °C contact your Hanwha representative.

The HiMEX[®]E series products are ideal for all blasting applications where optimum fragmentation and movement are desirable. Please contact your Hanwha technical representative for the specific application.

Features & Benefits

HiMEX[®]E series products have been developed to provide the following features and benefits:

- HiMEX[®]E series bulk products range are booster sensitive with low viscosity, which allows the product to be pumped into the borehole at constant rates
- HiMEX[®]E series product has excellent water resistance enabling long sleep times in wet conditions
- Safe and efficient blasting in elevated blastholes up to 100 °C;
- For optimum performance and results in 'reactive-ground' situations, it is recommended that the potential user submit a sample of the reactive ground or ore to the Hanwha representative for specific evaluation. This specific evaluation will ensure that the HiMEX[®]Ei bulk products will be successful in minimizing any reaction between the reactive ground/ore and the HiMEX[®]Ei bulk products.

Usage Instructions

HiMEX[®]E series products are ideally suitable for loading into dry, dewatered and wet blastholes. Please contact Hanwha technical representative for application in difficult blasting conditions.

Priming Requirements

Where blasthole temperature exceeds 55 °C, HiMEX[®]E series are recommended to use with emulsion explosive primer, specially designed packaged products and detonating cord, for initiating with detonating in top priming. 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

HiMEX[®]E series products are suitable for loading into blast holes up to 45~70 meters in depth. Blasthole diameter, inclination, product density 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

Hot & Reactive Ground up to 100°C: 8 hours

(may extend depending on site conditions)

Hot & Reactive Ground up to 70°C: 7 days

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

Gassing Time

Allow at least 20 minutes between loading and stemming blastholes.

Elevated Temperatures

Please contact your Hanwha Technical representative prior to use of HiMEX[®]E series products in blastholes with elevated temperature (higher than 100°C).

Reactive Ground

HiMEX[®]Ei bulk products are for loading in blastholes defined as reactive, according to the AEISG Code of Practice for Elevated Temperature and Reactive Ground. Provided the intended reactive ground or ore is sampled and approved for use with HiMEX[®]Ei bulk products.

Safety

When using HiMEX[®]E series products avoid contact with eyes or skin and wash hands thoroughly after handling. Keep HiMEX[®]E series products away from sources of heat, sparks, flame or hot surfaces and avoid mixing with combustibles or incompatible materials.

Handling Instructions

HiMEX[®]E series products are available in bulk type 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.

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Issued: 08/06/2020 (Ver 1.0)

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Technical Data

HiMEX [®] E series Bulk Products				
Name	HiMEX [®] E 100	HiMEX [®] Ei 100	HiMEX [®] E 70	HiMEX [®] Ei 70
Product Blend (Emulsion : PPAN)	100 : 0	100 : 0	70 : 30	70 : 30
Effective Energy (MJ/kg)	2.12	1.93	2.47	2.40
Nominal Density Range (g/cm ³)	1.05 – 1.25	1.05 – 1.25	1.05 – 1.25	1.05 – 1.25
Relative Weight Strength (%)	86	79	101	94
Relative Bulk Strength (%)	124	113	145	136
Velocity of Detonation (km/s)	5.2 - 5.8	5.2 – 5.8	5.0 – 5.7	5.0 – 5.7
Minimum Hole Diameter (mm)	64	64	64	64
Water Resistance	Excellent	Excellent	Excellent	Excellent
Recommended Sleep Time up to 70°C	7days	7days	7days	7days
Recommended Sleep Time up to 100°C	8 hrs	8hrs	Not applicable	Not applicable
Suitable for (Dry/Dewatered)	Dry/Dewatered/Wet	Dry/Dewatered/Wet	Dry/Dewatered/Wet	Dry/Dewatered/Wet
Note	Not in reactive ground	Hot and Reactive ground	Not in reactive ground	Hot and Reactive ground

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 B
Packing Group	II
Hazchem Code	1Y
EMS	F-H, S-Q

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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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HiMEX[®]E series – Bulk Products for Elevated temperature & Reactive Ground

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