

1. Description

An industrial explosive made at the blast site by a multifunctional MMU that combines emulsion matrix with porous granular ammonium nitrate or porous granular ANFO in a specified proportion, while safely and efficiently loading the product into blastholes.

Bulk Heavy ANFO MMU



2. Applications

Suitable for surface mine blasting with no risk of combustible gas and/or mine dust explosions.

3. Key Benefits

Compared with packaged explosives, direct mechanized loading at the blast site reduces packaging, handling, storage and other intermediate steps, providing significant economic benefits to producers and users.

Process parameters can be adjusted in real time for climate, rock properties and charge configuration, varying VOD and density to match the explosive to the rock.

Good water resistance, high explosive power and strong work capacity. Bottom-up loading through the charging hose displaces water, overcoming discontinuous, poorly coupled and inefficient charging in wet holes.

Suitable for underwater drilling and blasting, and uphole loading in underground fan-drilled blastholes.

4. Technical Properties

Property	Technical Properties			
Density (g/cm ³)	1.00	1.10	1.20	1.28
VOD (m/s)	≥3800	≥3800	≥3800	≥3800
Work Capacity (mL)	220-223	220-223	220-223	220-223
Minimum Blasthole Diameter (mm)	115	115	120	150
Maximum Blasthole Depth (m)	80	80	80	80
Maximum Charge Length (m)	75	75	75	75
Hole Type	Dry	Dry	Dry	Dry / Dewatered
Delivery System	Auger			
Recommended Booster at Minimum Hole Diameter	500 g			
Relative Weight Strength, RWS (%)	104-109	109-111	112-114	114-117
Relative Bulk Strength, RBS (%)	129-136	151-152	168-171	182-187
Sleep Time (days)	21	21	21	21
CO ₂ Emissions (kg/t)	170	170	160	155
Maximum Emulsion Matrix Delivery Distance (km)	800			
Emulsion Matrix Shelf Life	7 days			

5. Recommendations for Use

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| 01 | Not detonator-sensitive; initiate with a booster. |
| 02 | Charge the precise quantities specified in the blast design. |
| 03 | Begin loading with the charging hose at the bottom of the blasthole. Keep the mixer embedded 30-50 cm in the emulsion matrix and raise the hose as the explosive level rises. |
| 04 | Ensure that the booster is embedded at the designed initiation position during loading. |

6. Storage and Shipping

Storage and Shipping	The finished explosive is not stored in a surface magazine; it is mixed in the blasthole. The components are emulsion matrix and porous granular ANFO.
UN No.	3375 (emulsion matrix component)
Classification Code	5.1 (emulsion matrix raw material)
Raw Material Storage	The finished explosive is not warehoused. Store each component separately in a magazine appropriate to its hazard class.

7. Precautions

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| 01 | Suitable for blast sites with ambient temperatures from -20°C to 45°C. | 03
In case of accidental fire, use water or a water-based extinguisher. Do not cover the fire with soil, sand or stones. If the situation becomes critical, evacuate immediately and clear personnel from the surrounding area. |
| 02 | If an abnormal condition occurs during loading, stop the equipment immediately. Resume loading only after the fault has been resolved. | |

8. Safety

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| 01 | After blasting, personnel may re-enter the blast area only when adequate ventilation has been ensured. |
| 02 | Impact, friction, mechanical shock and heat may initiate explosives. Exercise extreme care during storage, shipping and use. |

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Disclaimer

All ammonium nitrate-based explosives may react with sulfur-bearing ground and create potential hazards. Handar accepts no responsibility for such incidents.
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