SBE200/SBE230 Series

Surface Bulk Emulsion explosive

Safety • Quality • Reliability

DISCOVER YOUR WORLD OF BLASTING

SBE200

Standard

SBE200 is a straight based emulsion with an excellent water resistance. The product is sensitised in-situ by the gassing solution while charging it into the blast holes using the MMU's units. The minimum recommended primer to detonate this product is 150g pentolite booster and its critical density is at 1.29g/cm^3. The Maximum charge depth of 33m can be achieved through a cup density of 0.85 g/cm^3 for dry holes and 26m through a cup density of 1.03g/cm^3 for wet holes when using Aggregate and 3m stemming length. The recommended minimum hole diameter is 70mm.

SBE230

Premium

SBE230 is a good water-resistant doped emulsion. The product is charged in blast holes when blended with porous AN prill and sensitized with gassing solution using the MMU's units. The minimum recommended primer to detonate this product is 150g pentolite booster and its critical density is at 1.26g/cm^3. The Maximum charge depth of 36m could be achieved through a cup density of 0.95 g/cm^3 for dry holes and 30m through a cup density of 1.03 g/cm^3 for wet holes when using Aggregate and 3m stemming length. The recommended minimum hole diameter is 70mm.

Notes: The tables and graphs at the appendix of this TDS provide further detailed to the relationship between the different parameters of all the surface bulk explosive products above: in-hole density, Maximum charge depth, stemming type and length, hole condition (dry & wet) and charge mass.

GENERAL SPECIFICATIONS OF SBE200/SBE230 SERIES

Application

- Open Pit
- Opencast
- Quarrying

Features

- Reliable in wet and dry blast holes
- Variable density and energy loading to maximise fragmentation and improve mine productivity
- Fully coupled explosive charges to maximise blasting
- Energetic explosives with proven reliability in most challenging blasting applications
- Used up to temperatures of 65°C
- Maximum sleep time 21 days for dry holes
- Maximum sleep time 14 days for wet holesAppearance

Solar SBE200-Standard is a straight emulsion with black and honey coloured features depending on the type of oil used during the manufacturing. It is chemically sensitised on bench to become an explosive.

Benefits

SBE200-standard has a charge depth benefit up to 33m for dry hole

SBE230-standard has a charge depth benefit up to 36m for dry holes

All Solar's Surface Bulk Explosive series are pumped down-the-hole using state of the art MMU trucks

Product Quality

Solar bulk emulsions are manufactured and loaded according to accredited ISO standards

Product Classification Information

Class / Division	5.1
Group / Type	E
UN No.	3375

Delivery

- Emulsion tanker
- Prill tanker
- MMU

Do's & Dont's

- Products should be sensitised only on the benches
- Charging of SBE200/SBE230 Series into the blasting holes should be accomplished only by the recommended Solar Mining Services equipment

Disclaimer

All information contained on this document is accurate and up to date. Solar Mining Services cannot anticipate or control the circumstances under which this review of information in the specific context of the intended application. Solar Mining Services will not be responsible for any damage of any nature resulting from those implied warranties, given other than those implied mandatories by local legislation.

TECHNICAL PROPERTIES – SBE200/SBE230 SERIES

PRODUCT NAME	SBE200 Standard	SBE230 Premium
Based Density (ungassed) g/cm^3	**1.35 – 1.38**	**1.3 – 1.32**
Oxygen Balance	**-6.38**	**-1.13**
REE @ 100 MPa	**86 – 91**	**96 – 104**
RBS @ 100 Mpa	**124 – 143**	**138 – 160**
REE @ 20 Mpa	**78 – 82**	**87 – 97**
RBS @ 20 Mpa	**112 – 129**	**125 – 149**
Water Resistance	**Excellent**	**Excellent**
Recommended Maximum Density (g/cm^3)	**1.29**	**1.26**
VOD (m/s)	**4000 - 5500**	**4500 - 5500**
Recommended Minimum Hole Diameter (mm)	**70**	**70**
Mean Density Range g/cm^3	**1.15**	**1.15**
Maximum Charge Depth (m): using Aggregate with 3m Stemming – DRY HOLES ONLY	**33**	**36**
Maximum Charge Depth (m): using Aggregate with 3m Stemming – WET & DRY HOLES	**26**	**30**
Minimum Primer (Recommended Initiator)	70mm – 140mm 150g Pentolite Booster Above 140mm 250g – 400g Pentolite Booster	70mm – 140mm 150g Pentolite Booster Above 140mm 250g – 400g Pentolite Booster
Gassing Time @ 25°C	**45minutes**	**45minutes**
Loading Method	**Pump**	**Pump**

Notes

- Effective Energy (EE) is the useful chemical energy that an explosive can release to break the rock. It is calculated as the total energy released by the explosive gasses as they expand to do useful work from the initial detonation pressure down to a cut-off pressure of either 20Mpa or 100Mpa
- Relative Effective Energy (REE) is the effective energy of an explosive compared to the effective energy of an equal mass of ANFO, which is rated as 100 (i.e. 94% AN, 6% Fuel, relative density of 0.8).
- Relative Bulk Strength (RBS) is the effective energy of an explosive compared to the effective energy of an equal volume of ANFO, which is rated as 100,

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