



TECHNICAL DATA SHEET

1. Product Classification



Authorized name: Superpower	Shipping Name: Explosive, Blasting, Type E	UN No: 0241	Class Code: 1.1D
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2. Description

SUPERPOWER 90 is a cap sensitive emulsion explosive having superior rock fragmentation capability designed for tunnel blasting and all kind of underground and surface blasting operations. SUPERPOWER90 is grey in color with a firm putty-like consistency.

3. Application

SUPERPOWER 90, due to energy release and detonation values, brings excellent results in blasting operations. Despite the fact that it is designed for tunnel blasting, it can also be used satisfactorily in all kinds of surface blasting operations. The high detonation velocity and the robust nature of Superpower90 make it an ideal primer for the initiation of ANFO and booster sensitive explosive columns.

4. Key Benefits

- Superpower90 delivers excellent fragmentation with easy mucking.
- Superpower90 reduces post-blast fumes and improves cycle time.
- Superpower90 is highly water resistant.
- SUPERPOWER90 does not contain dangerous explosive chemicals such as TNT and nitroglycerine in its composition.

5. Technical Properties

Bulk Density (g/cc)	1.20±0.5
V.O.D. (Velocity of Detonation-m/sec.) in 40mm steel tube	6000
Water Resistance	Excellent
Transmission of Detonation in minimum cartridge diameter-27mm	Ok (2cm)

6. Packaging

Superpower90 emulsions are packed in white plastic film with Clipping at both ends. The cartridges are packed in approved cardboard boxes. The net weight in each box is 20kgs.

Diameter (mm)	Weight (gr)	Nominal count per case	Net weightper case (kgs)
27	160	125	20
31.5	400	50	20
32	200	100	20
32	400	50	20
36	500	40	20
38	500	40	20



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50	500	40	20
50	1000	20	20
60	2000	10	20
65	1000	20	20
65	2000	10	20
90	2000	10	20

7. Recommendations for Use

7.1. BlastHole Depth

Superpower90 is suitable for use in holes of any practical depth.

7.2. Priming and Initiation

The preferred initiation system for Superpower90 is a No. 8 strength Detonator or a 10g/m detonating cord. Detonating Cords under 10g/m PETN charge wt. are not recommended.

7.3. Charging

In small diameter blasthole the maximum energy per meter of blast hole can be achieved by tamping the explosive with a wooden tamping rod appropriate to the hole diameter. No metal instrument should be used to tamp explosives. The primer cartridge containing a detonator must not be tamped.

7.4. Sleep time within Blastholes

In dry blastholes given the explosives packaging is undamaged, Superpower90 may be charged and fired several month later (provided the product remains within its recommended shelf life). If the explosive packaging is damaged, the sleep-time in blastholes is influenced by the extent of damage to the packaging and by the nature of any water present. Even with full length slitting of cartridges, the explosive will give good performance after two weeks immersion.

Sleep time information states that good performance will be given with a fully slit cartridge immersed in water.

8. Storage and Handling

Store this product in a suitably licensed magazine for class 1.1D explosives. The cases should be stacked in the manner designated on the cases.

Superpower90 has a storage life up to 12 months in an approved magazine. However, exposure to hot or cold extremes may cause the product to deteriorate prematurely. Superpower90 is best stored at temperatures between -15°C to +35°C. All regulations pertaining to the handling and use of such explosives apply.

9. Disposal

Disposal of explosive material can be hazardous. Method for safe disposal of explosives may vary depending on the specific case. Please contact a Solar representative for information on safe practices.

10. Safety

The post detonation fumes characteristics of Superpower90 make the product suitable for both underground and surface blasting applications. Users should ensure that adequate ventilation is provided prior to re-entry into the blast area. Superpower90 can be initiated by extreme of shock friction of mechanical impact. As with all explosives, Superpower90 should be handled and stored with care and must be kept clear of flame of excessive heat.

Superpower90 does not burn easily, but it must be kept clear of flame and excessive heat.

11. Disclaimer

Explosives based on Ammonium Nitrate such as Superpower90 may react with pyritic materials in the ground and create potentially hazardous situations. Solar accepts no responsibility for any loss or liability arising from use of the product in ground containing pyritic or other reactive material.



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12. Approvals

Solar Explosives company has its own integrated management system ISO 9001:2015 Quality Management System, ISO 14001:2015 Environmental Management System, ISO 45001:2018 Occupational Health&Safety Management System and in an addition, ISO 10002:2014 Customer Satisfaction Management System.

13. Other Informations

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