



Safety • Quality • Reliability

# Technical Data Sheet

## Superpower 90<sup>®</sup> emulsion explosives



### Description & Application

Superpower 90 packaged emulsion explosive is a robust, high strength, detonator sensitive explosive. The explosive is having a firm putty-like consistency. Products are sensitized through chemical gassing / micro-spheres / combination of both. It is a water resistant packaged explosive.

Superpower 90 is designed for priming applications and as a column explosive in surface and underground mining and general blasting. The high detonation velocity and the robust nature of Superpower 90 make it an ideal primer for the initiation of column charge.

### Advantages

- Delivers excellent fragmentation with improved dig ability.
- Low post blast fumes helps to improve turnaround time in underground mines.
- Highly water resistant, minimizes leaching and reduces environmental impact.

### Technical Properties

Nominal Density (g/cc)	1.20 ± 0.05
Relative Weight Strength*	118 %
Relative Bulk Strength*	166 %
Minimum Velocity of Detonation (Km/Sec)	3.5

\*Compared to ANFO@ 0.85 g/cc

### Notes :

1. REE is the Effective Energy relative to ANFO at a density of 0.85g/cc. ANFO has an effective energy of 2.30 MJ/kg.
2. VOD will depend on application including explosive density, blasthole diameter, temperature and degree of confinement. The minimum VOD quoted is based on unconfined test firing data and calculated energy values.

### Packaging

Superpower 90 is packaged in plastic film with product name & other details. Each Box contains 25kg of product.

Cartridge Dia mm	Nominal length mm	Nominal Wt. gm	Cartridge/Box No's.
25	200	125	200
32	200	200	125
40	300	390	64
50	240	500	50
50	450	1000	25
60	460	1560	16
80	480	2780	9
90	420	2780	9

Other diameter / grams combinations can be offered on request.

### Recommendations for Use

- Suitable for use upto 20m depth of watery holes.
- Can be initiated with an electric or a non electric detonator (minimum No.8 strength) and detonating cord (5g and above).
- Maximum energy of blasthole can be achieved by tamping the explosive with a wooden tamping rod.
- Do Not use metal instrument to tamp explosives.
- Do Not tamp primer cartridge containing a detonator.
- Post detonation fume characteristics of the product make it suitable for both underground and surface blasting applications, however users should ensure that adequate ventilation is provided prior to re-entry into the blast area.
- Avoid extremes of shock, heat, friction or mechanical impact to prevent pre-mature initiation.



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### Reactive Ground & Ground Temperature

- Not suitable for ground containing reactive Sulphides.
- Suitable for use in ground temperatures up to 65°C.
- In case application requires to operate outside this temperature range, please contact your Solar representative.

### Sleep Time within Blastholes

The undamaged product may be charged and fired several days later in dry holes (provided the product remains within its recommended shelf life).

If the explosives packaging is damaged, the sleep-time in a blasthole 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.

### Storage

For the best results, store under moderate temperatures and dry conditions in a well ventilated, approved magazine.

If stored in cool, dry, well ventilated magazine and handled properly, the shelf life of Superpower 90 is 12 Months from the date of Manufacturing. However exposure to hot or cold extremes may cause the product to deteriorate pre-maturely.

### Shipping Information :

Authorised Name of Explosive : SUPERPOWER 90  
Proper Shipping Name : EXPLOSIVE, BLASTING, TYPE E  
Class / Div. : 1.1D  
UN No. : 0241

### Disposal

The disposal of explosives material is dangerous and require special training. Methods used for safe disposal may vary from case to case and will depend upon conditions under which the operations take place. For further information please contact Solar representative in your area.

### Disclaimer

Use of these products by anyone who lacks adequate training, experience & supervision may kill or injure. It is expressly understood that any technical advice furnished by SILL with reference to the use of its Products is given gratis & SILL assumes no obligation or liability for the advice given or results obtained, & all such advice being given is accepted at Customer's risk.

SILL makes no warranty of any kind, written or oral, express or implied, except that the Products shall meet SILL's standard specifications for such Products. Customer shall assume all risk and liability for results obtained by the use of such Products whether used singly or in combination with other products. Under no circumstances shall SILL or any of its subsidiaries be liable for special, consequential or incidental damages or for anticipated loss of profits.

Any dispute arising out of above information shall be dealt in accordance with the laws of Republic of India and subject to jurisdiction of Courts at Nagpur, India.

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