SOLAR MINING SERVICES
EXPLOSIVES & ACCESSORIES

TECHNICAL DATA SHEET

SOLAR CORD

DETONATING CORD

SAFETY • QUALITY • RELIABILITY

DESCRIPTION

SOLAR CORD provides quick, safe and convenient means of simultaneously initiating any number of independent or inter-related charges. **SOLAR CORDs** are strong, flexible and lightweight, comprising of an explosive core of PETN contained within a spiral of tape, plastic sheathing and natural or synthetic fibres. **SOLAR CORD** is available with a variety of PETN charge weights designed for different applications.

APPLICATION

All Applications (Underground, Open Pit, Quarry and Construction)

APPEARANCE

Explosive core containing high explosives (PETN) composition, very strong, flexible and lightweight within a spiral of natural or synthetic fibres, plastic sheathing and tapes. **SOLAR CORDs** consist of different colours assigned per core load weight or mass of PETN. The charge weights of **SOLAR CORD** vary from 5g/m for “light” cord to 80g/m for “heavy” cord and the most commonly used are 10 to 12 g/m cords with a VOD of 6500–7000 m/sec.

FEATURES

- Initiated by No. 06 or No. 08 plain detonator, electric or non-electric detonators secured to the cord.
- High tensile strength
- Initiates emulsions, watergels cartridges and special primers or Boosters
- Strong, flexible and lightweight
- Excellent water and oil resistance
- Relatively insensitive to electrostatic discharge and other forms of electricity
- High Velocity Of Detonation (VOD)

STORAGE

Store **SOLAR CORD** under moderate temperatures and dry conditions in well ventilated approved explosives storage facility/box or approved licenced magazine for 1.1D Explosives.

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SHELF LIFE

SOLAR CORD has a minimum shelf life of 3 years when stored in a recommended good storage condition.

SHIPPING INFORMATION

Class / Division	1.1
Group	D
UN No.	0065
Shipping Name	Cord, Detonating, Flexible

PACKAGING

SOLAR CORD – Detonating cord is packed in cardboard cases.

TM	Reel Length (m)	No spool per case
SOLAR CORD A	300	4
SOLAR CORD I	300	4
SOLAR CORD II	250	4
SOLAR CORD III	250	4
SOLAR CORD IV	125	4
SOLAR CORD V	75	4
SOLAR CORD VI	50	4

TECHNICAL PROPERTIES

MOC of cord	**Synthetic fibres, plastic sheathing & tapes**
VOD (m/sec)	**6500 – 7500**

TM	PETN Charge Wt	Diameter	Colour	Tensile Strength
SOLAR CORD A	5 g	4.1 ± 0.1	Yellow	60 kg
SOLAR CORD I	6 g	4.2 ± 0.1	White	60 kg
SOLAR CORD II	10 g	4.8 ± 0.1	Red	70 kg
SOLAR CORD III	12 g	5.0 ± 0.1	Blue	70 kg
SOLAR CORD IV	20 g	6.0 ± 0.2	Orange	70 kg
SOLAR CORD V	40 g	8.3 ± 0.2	Green	90 kg
SOLAR CORD VI	80 g	11.2 ± 0.2	Green	90 kg

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SAFETY

SOLAR CORD is a high explosive that must be handled with care and respect at all times. Except for direct lightning strike, detonating cord is unaffected by stray currents generated by electrical storms, power lines and radio/radar transmitters. During normal handling, the use of detonating cord is safe and insensitive to accidental initiation, however intense impact or friction can initiate detonating cord. **SOLAR CORD** can detonate when subjected to extremely high temperature, but remains stable for use up to 70 degrees C. For temperatures between 70 degrees and 80 degrees' exposure should not exceed 24 hours.

NOTE

Recommendations for use:
SOLAR CORD detonating downlines must be a continuous length of cord & must never incorporate knots splices inside a blast hole. Detonating cord should be cut with approved cord cutter (an anvil type tool cutter or a sharp knife). Cutting devices, which have a shearing action (e.g. scissors) must not be used to cut detonating cord. Detonating cord can be attached to a cartridge of high explosives by simply tying the cord securely around cartridge. When using Cast boosters ensure usage of detonating cord which has a PETN charge that is greater than 5g/m. Ensure booster is securely attached to detonating cord by threading the cord through the tunnel provided and tie cord in a loop as per figure 1:

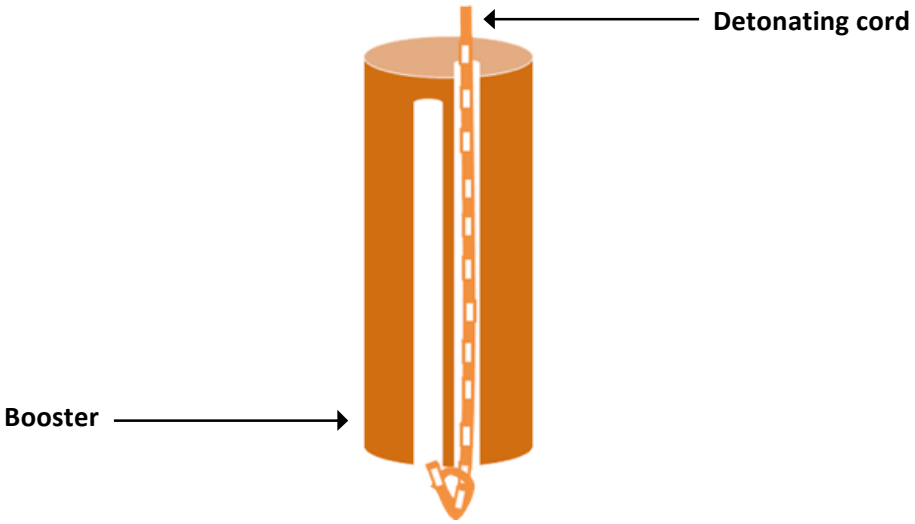

Figure 1

Lower complete assembly to desired depth in blast hole, cut detonating cord downline with approved cord cutter from its reel and secure on top of blast hole collar. Lift primer booster and cord up to desired design depth and secure during loading process of blast hole to ensure proper coupling between booster and explosives. For any subsequent booster on the same downline, unfasten the detonating cord tail, thread the end of the cord through the straight walled tunnel. Re-secure the tail of the cord at the collar, slide or lower the booster to desired location and repeat process.

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IMPORTANT INSTRUCTIONS

- Always knot end of cord to prevent water ingress.
- Always keep loose ends as short as possible.
- All cord connections should be pulled tight to ensure proper connection.
- All branch connections to be done on a 90° angle.
- Always prevent loops, kinks and line crossings.
- Always ring feed to ensure proper initiation and avoid possible misfires.

DISCLAIMER

All information contained on this case 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