Technical Data Sheet

The Power of Partnership

CONE PAK / MINI CONE PAK

Description

Cone Pak and *Mini Cone Pak* are shaped charges designed for secondary blasting. Both products contain *Magnafrac*™ explosive that is used to focus the energy of the explosive. The explosive charge is loaded into conical containers and when ignited release a high-velocity stream (jet) of force that penetrates a formation.

Application

Cone Pak and *Mini Cone Pak* are specialty products used in open pit mines, quarries, underground mines and prospecting applications.

Key Benefits

- *Cone Pak* and *Mini Cone Pak* shaped charges have excellent adhesion to rock surfaces.
- *Cone Pak* and *Mini Cone Pak* have an excellent shattering effect.
- *Cone Pak* and *Mini Cone Pak* can reduce fly rock due to the focus of the charge.

Technical Properties

Cone Pak and Mini Cone Pak		
Typical Velocity of Detonation[1]		4,500 m/s 14,700 ft/s
Water Resistance		Excellent
Fume Class		1
Relative Effective Energy (REE)[2]	Relative Weight Strength (RWS)	89
	Relative Bulk Strength (RBS)	120

Packaging

Cone Pak and *Mini Cone Pak* are packaged in rigid, smooth plastic cones. The rugged containers contain pre-measured charges. Standard sizes are as follows:

	Weight per Unit
Mini Cone Pak	0.9 kg (2.0 lb)
Cone Pak	1.7 kg (3.7 lb)

Recommendations for Use

Priming and Initiation

These products are not intended for use when their internal temperature is below -15°C (5°F). These charges can be initiated with the use of any appropriately sized detonating cord, or a detonator, or combination thereof.

Attach the built-in detonating cord initiator to a *B-LINE*™ trunk line with an appropriate knot.

Complete the *B-LINE*™ trunkline circuit and fire with a DCD detonator assembly.

Loading: Underground, as a pole charge:

1. Insert the pole into the *Cone Pak* or *Mini Cone Pak* socket.
2. Tape the pole securely to the socket.
3. Attach the *B-LINE*™ to the built-in detonating cord initiator.
4. Remove the lid.
5. Tape the *B-LINE*™ to the pole at intervals.
6. Position the pole charge on the target.
7. Move all personnel to a safe place.
8. Attach DCD detonator to *B-LINE*™.
9. Fire from a safe location.

Loading: As a secondary blast charge:

1. Remove the lid and the plastic cover.
2. Press *Cone Pak* or *Mini Cone Pak* explosives charge firmly onto the rock surface.
3. Attach *B-LINE*™ to the built-in detonating cord initiator.
4. Move all personnel to a safe place.
5. Attach DCD detonator to *B-LINE*™.
6. Fire from a safe location.

Storage and Handling

Product Classification

Authorized Name:	*Cone Pak* and *Mini Cone Pak*
Shipping Name:	Explosive, Blasting, Type E
UN No:	0241, PGII
Class Code:	1.1D
EX Number:	1993110031

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All regulations pertaining to the handling and use of such explosives apply.

Storage

For best results, store at moderate temperatures above -5°C (23°F), and in dry conditions in a well-ventilated, approved, high explosives magazine.

Cone Pak and *Mini Cone Pak* can be initiated by extremes of shock, friction or mechanical impact. As with all explosives, *Cone Pak* and *Mini Cone Pak* should be handled and stored with care and must be kept clear of flame and excessive heat.

Shelf Life

Cone Pak and *Mini Cone Pak* have a **shelf life** of up to nine months from date of manufacture in a well ventilated, approved magazine.

For recommended good practices in transporting, storing, handling, and using this product, refer to the "Always and Never" booklet packed inside each case.

Transport

Cone Pak and *Mini Cone Pak* should be transported between -15°C (5°F) and +30°C (86°F).

Disposal

Disposal of explosives materials can be hazardous. Methods for safe disposal of explosives may vary depending on the user's situation. Please contact an Orica Technical Representative for information on safe practices.

Safety

The post detonation fume characteristics of *Cone Pak* and *Mini Cone Pak* 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.

Trademarks

Disclaimer

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CONE PAK / MINI CONE PAK

Emergency Contact Telephone Numbers:

For chemical emergencies (24 hour) involving transportation, spill, leak, release, fire or accidents:
Canada: Orica Canada emergency response **1-877-561-3636**
USA: Chemtrec **1-800- 424-9300**

For lost, stolen or misplaced explosives:
USA: BAFT **1-800-800-3855**. Form ATF F5400.0 must be completed and local authorities (state / municipal police, etc) must be advised.

Notes

1. VOD will depend on application including explosive density, blasthole diameter and degree of confinement. The VOD range is based on minimum unconfined and calculated ideal. Unconfined at 5ºC (41ºF).
2. The "Relative Effective Energy (REE) of an explosive is the energy calculated to be available to do effective blasting work. All energy values are calculated using the *IDeX*™ computer code owned by Orica for the exclusive use of its companies. Energy values are based on standard ANFO with a density of 0.84 g/cc and a cut-off pressure of 100Mpa. Other computer codes may give different values.