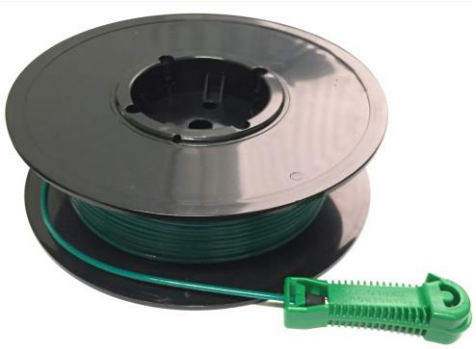
TECHNICAL DATA SHEET

HiNEL Plus® - Starter

Description

HiNEL Plus® Starter is a non-electric detonator produced by Hanwha that is used to start a blast in both open pit and underground applications. *HiNEL Plus® Starter* detonators have a zero (0ms) delay time and can initiate up to six shock tubes at the same time. It can also be extended to provide a greater separation from the blasting area.

The shock tube is both abrasion resistant and high-strength and transmits the signal to detonator in order to initiate. The shock tube is crimped into the detonator shell at one end and closed by a waterproof seal at the other.



Features & Benefits

HiNEL Plus® Starter detonators consist of a non-electric detonator containing a delay element, a low strength Diazo Dinitro Phenol (DDNP) base charge , a connector block, a length of green shock tube and a J-hook connector(optional).

HiNEL Plus® Starter detonators have a base charge of DDNP to optimally deliver effective blasting signals whilst minimizing damage to the connectors and preventing cut-offs. By adopting a 3 layer shock tube, rubber plug and triple crimping, *HiNEL Plus® Starter* also have enhanced tensile strength.

Usage Instructions

HiNEL Plus® Starter detonators are made up of a 3 layer shock tube and have enhanced tensile strength, however moisture may become present if the tubing is split or cut in any way, and this may result in a misfire. *HiNEL Plus® Starter* shock tube and connector should be protected from impact or damage. Misfires may occur if shock tube is damaged or cut.

Using the “clip and slide” technique, clip each shock tube individually into connector block, ensuring that connector tube is kept at right angles.

Technical Data

	HiNEL Plus® Starter
Base Charge	DDNP (200mg)
Shell	Aluminum
Outer Diameter of Shell (mm)	7.5
Outer Diameter of Shock Tube (mm)	3.0
Length of Shell (mm)	59
Tensile Strength of Shock Tube	Nominal 45 kgf
Length of Shock Tube (m)	500 m (Custom made possible)

Standard Delay Range

Delay Time (ms)	Color of the Shock Tube
0 (~10)	Green

Hazard classification

UN No. (Class / Division):	0360(1.1B) / 0500 (1.4S)
Proper Shipping Name	DETONATOR ASSEMBLIES, NON- ELECTRIC for blasting
EmS	F-B, S-X (1.1B / 1.4S)

Packaging

HiNEL Plus® Starter detonators are packaged in cardboard boxes

Grade	UN 0500 / 1.4S, UN 0360/ 1.1B (225 x 440 x 250mm)		
Length	**Each/Box**	**Net Weight** (kg)	**Gross Weight** (kg)
30m	6	2.5	4.0
50m	6	4.0	5.5
100m	6	5.5	7.0
150m	6	7.5	9.0

Grade	UN 0500 / 1.4S, UN 0360/ 1.1B (225 x 440 x 250mm)		
Length	**Each/Box**	**Net Weight** (kg)	**Gross Weight** (kg)
500m	2	5	9.0

* Based on one box (UN certified)

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Safety

HiNEL Plus® Starter detonators are designed to reduce the risk of initiation by static electricity, stray electrical currents and radio wave transmissions. As high-electrical shocks, such as lightning, may cause initiation, it is recommended that personnel evacuate to a safe distance and keep away from the blasting site whenever this hazard is present. *HiNEL Plus® Starter Series* detonators should be isolated from energy sources including impact, heat or friction. *HiNEL Plus® Starter* detonators may be used in temperatures up to 70℃.

Storage

All ignition sources, such as matches and lighters, are strictly prohibited within 8 meters of explosives.
HiNEL Plus® Starter detonators should be stored in a properly conditioned magazine of cool and dry atmosphere.

HiNEL Plus® Starter detonators must be used within 12 months after opening the packaging. Detonators that are older than four years should not be used.

Store in a secure magazine, access to products and storage should be restricted to authorized personnel.
Delay detonators should be used in order of manufacturing date as they deteriorate with age. Use oldest stored product first.

Disclaimer

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