

TECHNICAL DATA SHEET

HiNEL Plus® - SDD Series



Description

HiNEL Plus® SDD (Surface Delay Detonator) Series detonators are non-electric detonators used as the connection detonators in both open pit and underground mines. HiNEL Plus® SDD Series detonators can provide various delay times (0, 17, 25, 42, 67, 109, 176 and 200) to realize a wide range of initiation sequences. HiNEL Plus® SDD Series detonators can ignite up to six shock tubes at the same time. They can also be used in combination with HiNEL Plus® MS/LP and DHD Series detonators to maximize performance. The shock tube is both abrasion resistant and high-strength and transmits the signal to detonator in order to initiate. With a plastic J-hook connector providing a secure and rapid means of attaching shock tubes to the detonating cord, it is color coded and stamped with the firing time. 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® SDD Series detonators consist of a non-electric detonator containing a delay element, a low strength Di-azo Di-Nitro Phenol (DDNP) base charge, a color-coded connector block, a length of shock tube, and a J-hook connector(optional). Labels showing the lengths and delay times are attached on the shock tube.

HiNEL Plus® SDD Series 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® SDD Series detonators also have enhanced tensile strength.

Usage Instructions

HiNEL Plus® SDD Series 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® SDD Series shock tube and connector should be protected from impact or damage. Misfires may occur if shock tube is damaged or cut.

Functioning as a surface relay system, HiNEL Plus® SDD Series detonators enable an unlimited number of blast holes to be fired sequentially and are designed for use with a delay detonator in each blast hole for effective and accurate surface timing. Surface detonators control the firing sequence.

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® SDD	
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)	3.6 / 4.8 / 6.0 / 7.2 / 9.0 / 12 / 15 / 18 / 21 / 24 / 30 (Custom made possible)

Standard Delay Range

Delay Time (ms)	Color of Connector	Color of Shocktube
0	Green	Pink
17	Yellow	
25	Red	
42	White	
67	Blue	
109	Orange	
176	Black	
200	Light Blue	

* Please contact Hanwha representative for application of shock tubes with other colors and order-made products.

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)

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Packaging

HiNEL Plus® SDD Series detonators are packed in cardboard boxes. Each box contains only a single lead length and delay.

Grade UN 0360 / 1.1B (470 X 295 X 330 mm)				
Length (m)	Each/Bundle	Each/Box	Net Weight (kg)	Gross Weight (kg)
3.6	10	200	9.5	11.0
4.8	10	180	9.5	11.0
6.0	10	160	9.5	11.0
7.2	10	120	8.0	9.5
9.0	5	120	9.5	11.0
12.0	5	90	8.5	10.0
15.0	5	70	8.0	9.5
18.0	5	50	6.5	8.0
21.0	5	50	7.5	9.0
24.0	4	40	6.5	8.0
30.0	4	40	8.0	9.5

Grade UN 0500 / 1.4S (470 X 295 X 315 mm)				
Length (m)	Each/Bundle	Each/Box	Net Weight (kg)	Gross Weight (kg)
3.6	10	200	9.5	11.0
4.8	10	180	9.5	11.0
6.0	10	160	9.5	11.0
7.2	10	120	8.0	9.5
9.0	5	120	9.5	11.0
12.0	5	90	8.5	10.0
15.0	5	70	8.0	9.5
18.0	5	50	6.5	8.0
21.0	5	50	7.5	9.0
24.0	4	40	6.5	8.0
30.0	4	40	8.0	9.5

* Based on one box (UN certified)

Safety

HiNEL Plus® SDD Series detonators are designed to reduce the risk of initiation by static electricity, stray electrical currents and radio wave transmissions. The delay detonator is completely enclosed within the connector block and protects against accidental initiation. As this detonator is assembled into the connector block, never attempt to disassemble in any way. 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® SDD Series detonators should be isolated from energy sources including impact, heat or friction. HiNEL Plus® SDD Series detonators may be used in temperatures up to 70°C.

Storage

All ignition sources, such as matches and lighters, are strictly prohibited within minimum of 8 meters radius of the detonators.

HiNEL Plus® SDD Series detonators should be stored in a properly conditioned magazine of cool and dry atmosphere. HiNEL Plus® SDD Series 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

The information in this Technical Data Sheet is correct as of the date issued however, subject to periodic review. Hanwha reserves the right in its sole discretion and without prior written notice to modify the product(s) and/or specifications described herein ("Product"). Hanwha disclaims any warranties with respect to Product, the safety or suitability thereof, or the results to be obtained, whether express or implied, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR COURSE OF PERFORMANCE OR USAGE OF TRADE. Given the variety of factors that can affect the use and application of Product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluate Product to determine whether it is fit for a particular purpose and suitable for the user's method of use or application.

The use of Product is an intrinsically dangerous activity and must be restricted to qualified and trained users in possession of any necessary permits and licenses. Always comply with appropriate safety and risk prevention measures and with applicable laws.

This document and any accompanying information are not intended to constitute – and shall not be construed as – an offer or contractual commitment on Hanwha's side. For further information about Product, please contact your distributor or sales representative directly.

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