



# AUSTIN POWDER

A TRADITION OF SAFETY, STRENGTH AND SERVICE.

## Shock★Star® LP Detonators

*Non-Electric, Long Period Delay Detonators*

### DESCRIPTION

Shock★Star long period detonator products include LP In-Hole Delays and LP Dual-Delay Detonators.

*Shock★Star LP In-Hole Delays* are available in a sequence of 26 whole number periods from instantaneous (0 ms) to 9600 ms. Austin's LP delay sequence is appropriate for applications such as tunneling and shaft or raise mining where long delays are required between holes to allow for movement of broken rock. They are designed to be used as down-hole detonators for the initiation of cast boosters, high explosives or pneumatically loaded AN/FO. In-Hole delays come equipped with a T-Connector for compatibility with detonating cord initiation.

*Shock★Star LP Dual-Delays* with the 200/5000 ms configuration are designed to allow the efficiency of dual-delay detonators to be used in LP delay applications. They achieve high inventory efficiency by replacing an entire series of delay detonators with a single product. Dual-Delays are equipped with the patented eight tube capacity Quick-Relay Connector with a white colored end cap for better visibility in low light workplaces.

### **BENEFITS**

- 750 mg base charge of PETN to ensure strong initiation energy under even the most extreme conditions (down-hole detonator only).
- Delay composition encased in a steel jacket to prevent performance loss due to transient pressure from nearby detonating holes.
- Equipped with a tear-proof delay tag that lists DSC, delay time, delay period and length of the detonator.
- Manufactured with bright yellow shock tubing for high visibility.



*LP In-Hole Delays*



*LP Dual-Delays*

# Shock★Star LP Detonators

## LENGTH, DELAY & PACKAGING

LP IN-HOLE DELAYS LP - IHD				
Length		Coil Style	Quantity	NEQ Grams
(ft)	(m)			
8	2.4	Lariat	180	180
12	3.7	Lariat	150	150
16	4.9	Lariat	120	120
20	6.1	Lariat	120	120
24	7.3	Lariat	80	80
LP DUAL-DELAYS LP-DDD				
Length		Coil Style	Quantity	NEQ Grams
(ft)	(m)			
12	3.7	Fast 8	70	105
16	4.9	Fast 8	70	105
24	7.3	Fast 8	60	90

Available Periods – MS Delays					
Period#	0	1	2	3	4
Delay, ms	0	200	400	600	800
Period#	5	6	7	8	9
Delay, ms	1000	1200	1400	1600	1800
Period#	10	11	12	13	14
Delay, ms	2000	2500	3000	3500	4000
Period#	15	16	17	18	19
Delay, ms	4500	5000	5500	6000	6500
Period#	20	21	22	23	24
Delay, ms	7000	7500	8000	8500	9000
Period#	25				
Delay, ms	9600				
LP – Dual Delay	200ms / 5000ms				



For more information and service locations in your area, please contact Austin Powder Company's headquarters:

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### STORAGE

Store in accordance with all applicable local, state, provincial and federal laws.

### SHELF LIFE

For optimum accuracy, use within one year from date of manufacture under good storage conditions.

### UN CLASSIFICATION

**Shipping Name:** Detonator Assemblies, Non-Electric  
**Class & Division:** 1.1B LP IHD / 1.4B LP- DDD  
**ID Number:** UN 0360

### DOT REFERENCE NUMBER

EX-2012070727  
EX-2012070728  
EX-2012081113  
EX-2012081112

All Shock★Star non-electric detonators are manufactured by Austin Star Detonator Co., Brownsville, TX.

### **Disclaimer of Warranties and Limitations of Liabilities**

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