

#### PRODUCT INFORMATION BROCHURE



**SHOCK\*STAR TS** detonator products are available in a sequence of 50 delays from 0 ms to 9,000 ms.

Austin's TS 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 in-hole detonators for the initiation of cast boosters and high explosives. In-hole delays may be equipped with a J-hook for compatibility with detonating cord initiation.

### **BENEFITS**

- 720 mg base charge.
- · High impact protection.
- · Manufactured with bright yellow shock tube for high visibility.
- Excellent delay time accuracy ensures greater than 99% probability of in-sequence initiation.

## **PROPERITES**

Delay sequence

| Delay #            | 0     | 1     | 2     | 3     | 4     | 5     | 6     | 7     | 8     | 9     |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Nominal delay (ms) | 0     | 25    | 50    | 75    | 100   | 125   | 150   | 175   | 200   | 225   |
| Delay #            | 10    | 11    | 12    | 13    | 14    | 15    | 16    | 17    | 18    | 19    |
| Nominal delay (ms) | 250   | 275   | 300   | 325   | 350   | 375   | 400   | 425   | 450   | 475   |
| Delay #            | 20    | 21    | 22    | 23    | 24    | 25    | 26    | 27    | 28    | 29    |
| Nominal delay (ms) | 500   | 550   | 600   | 650   | 700   | 750   | 800   | 850   | 900   | 950   |
| Delay #            | 30    | 31    | 32    | 33    | 34    | 35    | 36    | 37    | 38    | 39    |
| Nominal delay (ms) | 1,000 | 1,100 | 1,200 | 1,400 | 1,600 | 1,800 | 2,000 | 2,500 | 3,000 | 3,500 |
| Delay #            | 40    | 41    | 42    | 43    | 44    | 45    | 46    | 47    | 48    | 49    |
| Nominal delay (ms) | 4,000 | 4,500 | 5,000 | 5,500 | 6,000 | 6,500 | 7,000 | 7,500 | 8,000 | 8,500 |
| Delay #            | 50    |       |       |       |       |       |       |       |       |       |
| Nominal delay (ms) | 9,000 |       |       |       |       |       |       |       |       |       |



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### STANDARD TECHNICAL DESCRIPTION

| DETONATOR                         |   |  |  |
|-----------------------------------|---|--|--|
| Detonator shell material          | Aluminum  |  |  |
| Base charge                       | 720 mg  |  |  |
| Water pressure resistivity        | 0.3 MPa / 7 days  |  |  |
| Temperature range for application | from -30 °C to +60 °C   |  |  |
| Shelf life (storage conditions)   | 2 years (-30 °C to +40 °C, R.H. max. 65%) in original, sealed package |  |  |
| Label marking                     | Delay #, Detonator type, Delay ms, ST length,<br>Oder number          |  |  |
| SHOCK TUBE                        |   |  |  |
| Velocity of detonation            | 2,000 ± 100 m/s   |  |  |
| Color                             | Yellow  |  |  |



# STANDARD PACKAGING DETAILS

| Shock tube<br>length (m) | Packaging 1.1B UN 0360 | Packaging 1.4S UN 0500 |  |  |  |
|--------------------------|------------------------|------------------------|--|--|--|
|                          | Units / Box            | Units / Box            |  |  |  |
| 2.4                      | 180                    | 100                    |  |  |  |
| 3.6                      | 140                    | 100                    |  |  |  |
| 4.8                      | 100                    | 80                     |  |  |  |
| 7.2                      | 80                     | 50                     |  |  |  |
| 9                        | 80                     | 50                     |  |  |  |
| 12                       | 50                     | 40                     |  |  |  |

SHOCK\*STAR TS detonators are packaged in cardboard carton of outer dimension 385x235x282 mm.

Contact your local Austin Powder representative for further information.

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