AUSTIN POWDER
A TRADITION OF SAFETY, STRENGTH AND SERVICE.

E★Star® Cast Booster
High-Density Explosives for Primer Applications.

DESCRIPTION

Austin E★Star Cast Boosters are high-density molecular explosives designed to produce high detonation pressures for optimum initiation of blasting agents. Austin E★Star Cast Boosters are specifically designed to accommodate the E★Star electronic detonator and contains a detonator well of 4” length (101.5mm). The detonator well contains an internal, precisely located brass sleeve. This sleeve is positioned to provide additional protection to the sensitive electronic components of the E★Star detonator, while still insuring the high strength detonator base charge is in intimate contact with the sensitive cast booster explosive.

The E★Star cast booster is designed for the E★Star detonator. The use of any other detonator or detonating cord will result in misfires.

BENEFITS

- Austin Cast Boosters detonate in excess of 24,000 ft/sec (7,380 m/sec).
- Over 230 kb of detonation pressure ensures optimum steady state velocity for blasting agents.
- Excellent shelf life, highly resistant to water and oil.
- High visibility “Yellow” cup to differentiate from standard Cast Boosters
- Provides additional protection from transient pressure.

DIMENSIONS & TYPICAL USES

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Weight [oz]</th>
<th>Weight [g]</th>
<th>Outside Diameter [in]</th>
<th>Outside Diameter [mm]</th>
<th>Length [in]</th>
<th>Length [mm]</th>
<th>Units Per Case</th>
<th>Typical Uses</th>
</tr>
</thead>
<tbody>
<tr>
<td>E★Star 50</td>
<td>8.0</td>
<td>227</td>
<td>1.78</td>
<td>45.2</td>
<td>4.85</td>
<td>123.2</td>
<td>100</td>
<td>Priming blasting agents in holes of 2” diameter or larger. (Packaging – 2 x 50 units)</td>
</tr>
<tr>
<td>E★Star 75</td>
<td>12.0</td>
<td>340</td>
<td>2.07</td>
<td>52.6</td>
<td>4.85</td>
<td>123.2</td>
<td>60</td>
<td>Priming blasting agents in holes of 2 1/2” diameter or larger.</td>
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<tr>
<td>E★Star 100</td>
<td>16.0</td>
<td>454</td>
<td>2.35</td>
<td>59.7</td>
<td>4.85</td>
<td>123.2</td>
<td>50</td>
<td>Priming blasting agents in holes of 3” diameter or larger.</td>
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<tr>
<td>E★Star 200</td>
<td>32.0</td>
<td>908</td>
<td>3.03</td>
<td>77</td>
<td>4.85</td>
<td>123.2</td>
<td>25</td>
<td>Priming blasting agents in holes of 4” diameter or larger.</td>
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</tbody>
</table>
E★Star® Cast Boosters

E★Star Cast Booster

The E★Star cast booster contains a brass sleeve in the detonator well to provide additional protection from transient shock pressure to electronic detonator components. The brass sleeve is 2.0" long. The total length (depth) of the detonator well is 4". This design of a cast booster requires the electronic detonator to be fully inserted to the bottom of the detonator well to expose the base charge to the explosive cast booster mix. The bottom 1.72" of the detonator well does not contain the brass sleeve.

The E★Star cast booster is designed for the E★Star detonator. The use of any other detonator or detonating cord will result in misfires.

E★Star Packaging Information

<table>
<thead>
<tr>
<th>Product</th>
<th>Inner Carton*</th>
<th>Outer Case Volume (ft³)</th>
<th>Outer Case Volume (m³)</th>
<th>Total Gross case Weight (Lb)</th>
<th>Total Gross case Weight (Kg)</th>
<th>Total NEQ case Weight (Lb)</th>
<th>Total NEQ case Weight (Kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>E★Star 50</td>
<td>2 each</td>
<td>1.25</td>
<td>0.035</td>
<td>59</td>
<td>25.8</td>
<td>50</td>
<td>22.7</td>
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<tr>
<td>E★Star 75</td>
<td>N/A</td>
<td>0.88</td>
<td>0.025</td>
<td>47</td>
<td>21.4</td>
<td>45</td>
<td>20.4</td>
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<tr>
<td>E★Star 100</td>
<td>N/A</td>
<td>0.56</td>
<td>0.0158</td>
<td>32</td>
<td>14.5</td>
<td>30</td>
<td>13.6</td>
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<tr>
<td>E★Star 200</td>
<td>N/A</td>
<td>0.90</td>
<td>0.0255</td>
<td>52</td>
<td>23.59</td>
<td>50</td>
<td>22.7</td>
</tr>
</tbody>
</table>

*Inner carton can be used as D.O.T. shipping container

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

Austin Powder Company
25800 Science Park Drive
Cleveland, Ohio, USA 44122

Phone: 1-800-321-0752
Fax: 1-216-464-4418
Web: www.austinpowder.com
Email: info@austinpowder.com

SHELF LIFE
Five years from date of manufacture under good storage conditions.

UN CLASSIFICATION
Shipping Name: Boosters
Class & Division: 1.1D
ID Number: UN 0042

DOT REFERENCE NUMBER
EX-1993030285

IN CASE OF EMERGENCY CALL
CHEMTREC 800-424-9300
Maritime 1-703-527-3887
International: dial access code + 00-1-703-527-3887

Disclaimer of Warranties and Limitations of Liabilities

“Products described in this bulletin are sold by Austin Powder Company without warranty; express, implied or statutory or as to MERCHANTABILITY, except as expressly stated in Austin Powder's straight bill of lading. Under no circumstances shall seller be liable for loss of anticipated profits, consequential damages or incidental damages.”

[3/16/16]