# 7 In 18SPF Mirage Big Hole HMX Shaped Charge

<table>
<thead>
<tr>
<th>Part No.: 101414821</th>
<th>CE Certificate No.: N/A</th>
<th>DOT EX No.: EX2005050299</th>
</tr>
</thead>
</table>

## Technical Drawing

1. Case  
2. Liner  
3. Explosive, main  
4. Explosive, booster  
5. Paint  
6. Glue ring

## Packing Information

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quantity per box</td>
<td>30 pieces</td>
</tr>
<tr>
<td>Gross weight per box</td>
<td>8.71 kg (19.2 lb)</td>
</tr>
<tr>
<td>Net weight per box</td>
<td>6.53 kg (14.4 lb)</td>
</tr>
<tr>
<td>NEC per box</td>
<td>1.3500 kg</td>
</tr>
<tr>
<td>Box dim</td>
<td>45.7 x 30.5 x 16.5 cm</td>
</tr>
<tr>
<td></td>
<td>18 x 12 x 6.5 in</td>
</tr>
<tr>
<td>Package type</td>
<td>Trays with desiccant</td>
</tr>
<tr>
<td></td>
<td>enclosed by vacuum bag,</td>
</tr>
<tr>
<td></td>
<td>then placed inside</td>
</tr>
<tr>
<td></td>
<td>fibreboard box</td>
</tr>
<tr>
<td>Product Designation</td>
<td>Z510 (P/N 101414821)</td>
</tr>
</tbody>
</table>

## Technical Information

### APPLICATION:
Shaped charge for oilfield use

### PERFORATING SYSTEM
**SPECIFICATION:**
- **Diameter:** 7 inch (177.8 mm) OD  
- **Collapse rating:** 15,000 psi (1,034 bar)  
- **Tensile rating:** 802,000 lb (363,700 kg)

### EXPLOSIVES:
- **Booster:** Pure HMX, 1g  
- **Main load:** Desensitized HMX, 44 g  
- **Density:** > 1.5 g/cm³

### TEMPERATURE LIMITS:
- **400 F / 204 C**  1 h  
- **338 F / 170 C**  24 h  
- **310 F / 154 C**  100 h

### PERFORMANCE:
- Registered API 19B Section 1 data:
  - **Hole Diameter:** 1.02 in (25.9 mm)  
  - **Penetration:** 6.5 in (165 mm)  
- Manufacturing quality control data:
  - **Hole Diameter:** 1.12 in (28.4 mm)  
  - **Penetration:** 7.64 in (194 mm)

### SHELF LIFE:
- 10 years when stored unopened in original packaging. Storage temperature:  
  - 0 C / 32 F min  
  - 54 C / 130 F max

### DISPOSAL:
Dispose of product not suitable for oilfield use according to applicable laws and regulations.

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Proper Shipping Name:
UN0059, CHARGES, SHAPED, 1.1D, PG II

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