**FireLine®**

**17/80 HNS LS**

**Oil Field Detonating Cord**

**Product Description**

FIREFLINE 17/80 HNS LS is a flexible Ultra High Temperature detonating cord specifically developed for perforating systems that exceed the limits of FIREFLINE 17/80 HMX. FIREFLINE 17/80 HNS LS is Dyno Nobel’s best detonating cord for use in ultra high temperature environments and is made from the highest purity HNS explosive feedstock commercially available with “shrinkage resistant” construction and a special extruded high temperature jacket. In addition, FIREFLINE 17/80 HNS LS can be used in exposed service systems under certain conditions. Contact your Dyno Nobel representative for details.

**Temperature Range**

The temperatures listed are maximum values at ambient pressure. **DO NOT EXCEED.**

<table>
<thead>
<tr>
<th>Temperature in Degrees C (F)</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>260 (500)</td>
<td>1 Hour</td>
</tr>
<tr>
<td>246 (475)</td>
<td>1 Hour</td>
</tr>
<tr>
<td>240 (460)</td>
<td>1 Hour</td>
</tr>
<tr>
<td>238 (465)</td>
<td></td>
</tr>
<tr>
<td>204 (400)</td>
<td></td>
</tr>
<tr>
<td>149 (300)</td>
<td></td>
</tr>
<tr>
<td>90 (200)</td>
<td></td>
</tr>
<tr>
<td>38 (100)</td>
<td></td>
</tr>
</tbody>
</table>

**Properties**

- **Explosive Core Load**: 17 g/m (80 gr/ft) nominal
  15.3 g/m (72 gr/ft) minimum
- **Detonation Velocity**: 6400 m/s (21,000 ft/s) nominal
  6200 m/s (20,340 ft/s) minimum
- **Shrinkage**: 1% maximum @ 246°C (475°F) in 24 hrs
- **Jacket Thickness**: 0.20 mm (0.008 in) minimum
  +0.20 mm (0.008 in)
- **Dimensions**: 5.33 mm (0.210 in) nominal
- **Lap Joint Sensitive**: No
- **Product Code**: A585010 500 ft/spool
  A585003 100 ft/spool
- **Cord Components**: HNS explosive core (yellow)
  Shrink resistant braid (yellow/gold)
  Two black stripes / Teflon® jacket (clear)

<table>
<thead>
<tr>
<th>TEMPERATURE / PRESSURE</th>
<th>DURATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>475°F / 246°C</td>
<td>15,000 PSI</td>
</tr>
<tr>
<td>440°F / 227°C</td>
<td>20,000 PSI</td>
</tr>
</tbody>
</table>

- **Temperature resistance** graph is based upon the manufacturer’s laboratory tests in air, at ambient pressure only.
- **Shrinkage** is defined as the overall decrease in length.
- **Velocity** was tested unconfined, at ambient pressure.

**Hazardous Shipping Description**

Cord, Detonating, 1.1D, UN 0065 II EX 2007120149
Cord, Detonating 1.4S, UN 0349 II EX 1999010231

**Alternative packaging:** FIREPAK® 1.4S air cargo shipping containers

Product Code A585017 (FIREPAK only) and A585018 (FIREPAK and X-rayed)
Articles, Explosive N.O.S., 1.4S UN 0349 II EX 1999010231

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See Product Disclaimer on page 2.
FireLine®
17/80 HNS LS

Transportation, Storage and Handling
• For maximum shelf-life, detonating cord must be stored in cool, dry, well-ventilated magazines. Explosives inventory should be rotated. Use older inventory first. Recommended shelf life, under proper storage conditions, is five (5) years from date of manufacture.
• FIRELINE detonating cords must be transported, stored, handled and used in conformity with all federal, state, provincial and local laws and regulations.

Application Recommendations
• This product is recommended for exposure to well bore fluids.
• ALWAYS cut FIRELINE 17/80 HNS LS detonating cord with a razor blade.
• NEVER attempt to cut FIRELINE 17/80 HNS LS detonating cord with a blow from a sharp or blunt object, such as an axe, pipe wrench, or rock.
• NEVER saw 17/80 HNS LS detonating cord; it may explode and kill or injure.
• NEVER cut detonating cord with devices that produce metal-to-metal contact, such as scissors, wire cutters, crimpers or similar instruments.

NOTE: This product can be used at the temperatures and pressures detailed on page 1 and is well suited for use in exposed systems / conditions. FIRELINE 17/80 HNS LS has a similar flexibility of nylon jacketed FIRELINE required by some “High Shot Density” systems.

Packaging

<table>
<thead>
<tr>
<th>Package</th>
<th>Gross Weight*</th>
<th>Net Weight*</th>
<th>Explosive Weight*</th>
<th>Spools/Case</th>
<th>Length/Spool**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fiberboard box</td>
<td>5.1 kg/11.2 lbs</td>
<td>4.5 kg/9.9 lbs</td>
<td>2.59 kg/5.71 lbs</td>
<td>1 Spool</td>
<td>152 m/500 ft</td>
</tr>
<tr>
<td>Airpack</td>
<td>16.9 kg/37.2 lbs</td>
<td>4.5 kg/9.9 lbs</td>
<td>2.59 kg/5.71 lbs</td>
<td>1 Spool</td>
<td>152 m/500 ft</td>
</tr>
</tbody>
</table>

Note: Weights represent nominal values.
* All weights are approximate.
** ±2%; 152m spools may contain as many as 3 pieces, totally 152 m, with a minimum splice/piece length of 8 m (25 ft).

X-Ray services are also available for high profile applications requiring an extra level of assurance. Product Code: A585011

Case Dimensions
26 x 26 x 14 cm 10 ¼ x 10 ¼ x 5 ½ in

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