ENGINEERED FOR
FAST & EASY INSTALLATION

KPS Piping: Conductive & Non-Conductive
Petrol | Diesel | Jet-A1 | Ethanol Blends | Alcohols Resins | Conduits

www.kpspiping.com
KPS Piping: The Simple Solution
Petrol | Diesel | Jet-A1 | Ethanol Blends | Alcohols | Resins | Conduits

Specified and installed by oil companies around the globe for over 25 years, the KPS piping system is engineered around safety, easy installation, and performance. In fact, KPS’ secondary containment electrofusion fittings are the only system on the market to weld both pipe walls simultaneously.

No Leaks, No Permeation
Engineered for all current liquid fuels and many chemical products, KPS electrofusion piping is made from high-density polyethylene (HDPE) with an EVOH barrier in every pipe (primary and secondary) far surpassing the EN 14125 standards.

For sensitive areas and fluids (like fuel transfer) KPS’ double wall (multi-layer) electrofusion piping system provides an extra layer of protection. All double wall KPS bends, electrofusion fittings and tees also have permeation protection and an interstitial space.

Technical Support & Training
KPS offers technical support from the beginning to the end of every project, including drawings, site surveys, on site training and pipefitter certification.

Approvals
EN 14125, ATEX 137, EN 13463-1 plus many other country or fuel specific standards.

For a full list of certifications and approvals, visit the approvals page on the KPS website.

Local Service. Globally
Regionalised manufacturing, and a worldwide network of employees and distributors, ensures hands-on support, local service and solutions, around the globe. KPS piping is manufactured in Sweden for the EMEA region under the watchful eye of the KPS technical team, ensuring consistent quality.

Key Benefits
• Engineered for fast and easy Installation: reducing cost and build time
• Compact electrofusion fittings, elbows and tees
• Conductive (electrostatically safe) or non-conductive
• Zero permeation EVOH barrier, protecting the environment
• Corrosion-free
• Technical support, training and certification (classroom and on site)
• Approvals: EN 14125, ATEX 137, EN 13463-1 plus many other country or fuel specific standards
• Leak detection & interstitial monitoring (secondary containment / multi-layer)
• Lightweight
• Available in straights or coils
• Operating pressure 3.5 bar (test pressure 5 bar to 30 bar)
• Temperature rating -20ºC to +50ºC

Fluid Compatibility
• Petrol
• Diesel
• Biodiesel
• Ethanol blends*
• AdBlue
• Jet-A1
• Alcohols*
• Acids*
• Chemical products*
• Other*

*For full compatibility details, contact KPS at info@kpspiping.com

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Products

All piping is available in conductive or non-conductive (excluding conduits) and includes a comprehensive range of compact easy-install electrofusion fittings. Custom solutions are also available.

Secondary Containment (Double Wall)
- 125/110mm 4”
- 75/63mm 2”
- 40/32mm 1”

Primary Containment (Single Wall)
- 110mm 4”
- 63mm 2”
- 32mm 1”
- 25mm 1½”

Conduits
- 75mm 2”
- 32mm 1”

Industries & Applications

The KPS plastic piping system provides easy-install, safe, long-term fluid transfer solutions for a broad range of industries and applications.

Industries
- Power Supply: Critical Power & Backup Generators
- Residential & Industrial Heating
- Chemical Processing
- Nuclear
- Salt Water / Desalination Plants
- Fleet, Commercial & Public Transport Vehicle Refuelling
- Depot Facilities
- Service Stations & Forecourts

Applications
- Data Centre Power Supply
- Hospital Generators
- Fuel Transfer (Oil, Lubricant Oil, Jet-A, Petrol, Diesel, Ethanol Blends, Alcohols)
- AdBlue / Diesel Exhaust Fluid (DEF) Transfer
- Marinas, Ports & Harbours
- Airports
- Military
- Polluted Water Transfer
- Hydrocarbon Drainage
- Cable Protection & Wire Management (Conduits)
- Other Fluid Distribution

Other Industries & Applications
Looking for an application or industry you don’t see here? Give us a call: +44 (0) 1756 799 773 or send us an email: info@kpspiping.com

For More Information Contact KPS or visit the KPS website

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Depot Facility, France

Depot Facility, France

EDF Thermal Power Plant, Saint Pierre, France

Calls +44 (0) 1756 799 773 Email: info@kpspiping.com
KPS Piping: The Simple Solution
Technical Specifications

### Mechanical & Physical Properties

The KPS piping range is tested and approved according to EN 14125. Hydrostatic pressure testing is performed at 23°C and after conditioning at 50°C. At 23°C pipework is pressurised to the lower test pressure for 5 min and the higher test pressure for 1 min, see table (right). After conditioning at 50°C pipework is pressurised to the lower test pressure for 5 min.

Vacuum testing is performed on pipes intended for vacuum suction including vent, vapour recovery and secondary containment type C2. Test vacuum is specified in table. Pipework is also (for positive pressure) subjected to cyclic pressure testing at 21.5°C. Pressure is varied between 1.0 and 4.0 bar for 1.5 × 10⁶ cycles.

### Operating & Test Pressures [EN 14125]

<table>
<thead>
<tr>
<th>All Measurements</th>
<th>Operating Pressure</th>
<th>Test Vacuum</th>
<th>Lower Test Pressure</th>
<th>Higher Test Pressure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pressure in [bar]</td>
<td>3.5</td>
<td>-</td>
<td>5.0</td>
<td>30.0</td>
</tr>
<tr>
<td>Primary Delivery</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pipework</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Positive Pressure</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vacuum</td>
<td>-0.6</td>
<td>-0.9</td>
<td>5.0</td>
<td>30.0</td>
</tr>
<tr>
<td>Pipework</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vacuum Suction</td>
<td>1.0</td>
<td>-0.9</td>
<td>5.0</td>
<td>30.0</td>
</tr>
<tr>
<td>Pipework</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vent &amp; Vapour</td>
<td>1.0</td>
<td>-0.9</td>
<td>5.0</td>
<td>30.0</td>
</tr>
<tr>
<td>Recovery Pipework</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary Delivery</td>
<td>0.5</td>
<td>-</td>
<td>1.0</td>
<td>5.0</td>
</tr>
<tr>
<td>Pipework</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Secondary</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Containment Type C1</td>
<td>0.5</td>
<td>-</td>
<td>1.0</td>
<td>5.0</td>
</tr>
<tr>
<td>Containment Type C2</td>
<td>-0.5 to 4.5</td>
<td>-0.6</td>
<td>5.0</td>
<td>10.0</td>
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</table>

*KPS approval includes secondary containment type C2

### Physical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
<th>Unit</th>
<th>Test Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Density</td>
<td>1180</td>
<td>kg/m³</td>
<td>ISO 1183</td>
</tr>
<tr>
<td>Tensile Strength</td>
<td>34</td>
<td>MPa</td>
<td>ISO 527</td>
</tr>
<tr>
<td>Elongation At Break</td>
<td>15</td>
<td>%</td>
<td>ISO 527</td>
</tr>
<tr>
<td>Youngs Modulus</td>
<td>2.7</td>
<td>GPa</td>
<td>ISO 527</td>
</tr>
<tr>
<td>Flexural Modulus</td>
<td>3.8</td>
<td>GPa</td>
<td>ISO 517</td>
</tr>
</tbody>
</table>

### Physical & Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
<th>Test Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature Range</td>
<td>-20 to 50°C</td>
<td>EN 14125</td>
</tr>
<tr>
<td>Bend Radius</td>
<td>20 × d</td>
<td>-</td>
</tr>
<tr>
<td>Crush Resistance</td>
<td>2000 N</td>
<td>EN 14125</td>
</tr>
<tr>
<td>Puncture Resistance</td>
<td>500</td>
<td>EN 14125</td>
</tr>
<tr>
<td>Impact At -20°C</td>
<td>&gt; 8.8</td>
<td>EN 14125</td>
</tr>
<tr>
<td>Fuel Compatibility</td>
<td>Wide range of commercially available fuels</td>
<td>EN 14125, UL 971</td>
</tr>
<tr>
<td>Fuel Permeability</td>
<td>&lt; 0.2 g/m²·d</td>
<td>EN 14125</td>
</tr>
<tr>
<td>Static Electricity</td>
<td>Insulative</td>
<td>EN 13463-1, CENELEC TR50404</td>
</tr>
<tr>
<td>Weathering (EN-981)</td>
<td>&gt; 3.5 GJ/m²</td>
<td>EN ISO 14871, EN ISO 4892-2</td>
</tr>
<tr>
<td>Estimated Working Life</td>
<td>30 years</td>
<td>EN 14125, ISO 9080</td>
</tr>
</tbody>
</table>

### Permeation Barrier Layer

Ethylene Vinylalcohol Copolymer with superior barrier properties towards fuel vapours.

### Pipe Structure

Conductive lining primary pipe
EVOH permeation barrier primary pipe
Polyethylene primary pipe
EVOH permeation barrier secondary pipe
Polyethylene secondary pipe

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