



SOLVAY

asking more from chemistry®

High-Performance Polymers for
Anti-Corrosion Liners

**SPECIALTY
POLYMERS**

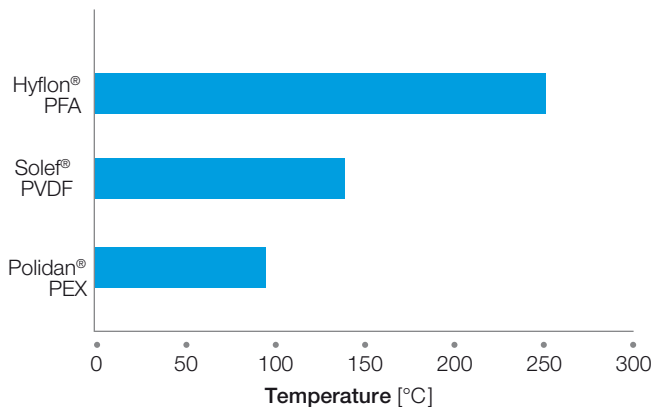
The Oil & Gas industry often faces technical challenges that require innovative solutions and higher performance materials. Whether onshore or offshore, steel pipes transporting crude hydrocarbons are increasingly exposed to high operating temperatures, high concentrations of corrosive fluids and gases, high water cut and must be designed and protected for safe and reliable operation.

Stainless steels and corrosion-resistant alloys are well established but costly solutions, and chemical inhibitors do not always offer reliable prevention at high temperature. Polymer liners installed in carbon steel pipes can deliver significant cost and performance benefits to Oil & Gas operators.

Key Features

- Polymer barrier between steel and corrosive fluids and gases to prevent corrosion
- Tight-fit installation into host pipe
- Suitable solution for new pipes and rehabilitation
- Secondary containment with good thermal insulation properties
- Long-term liner integrity
- Easy processing, welding and installation
- No monitoring necessary, low maintenance, less downtime
- Longer service life, lower cost of ownership

Temperature rating guideline (ASTM and UL)



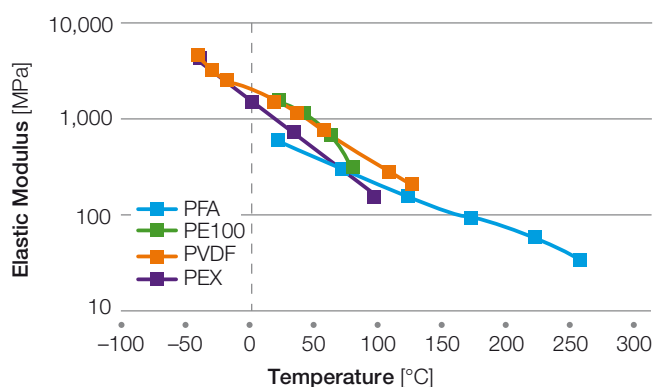
Performance Benefits

- Chemical resistance combined with thermal stability and low swelling in hydrocarbons
- Low permeation to gases combined with high mechanical properties prevents liner collapse
- Excellent resistance to rapid gas decompression
- Excellent erosion and abrasion resistance
- Low coefficient of friction and surface tension prevent wax build-up and increase flow
- Excellent resistance to H₂S and CO₂ also in supercritical phase

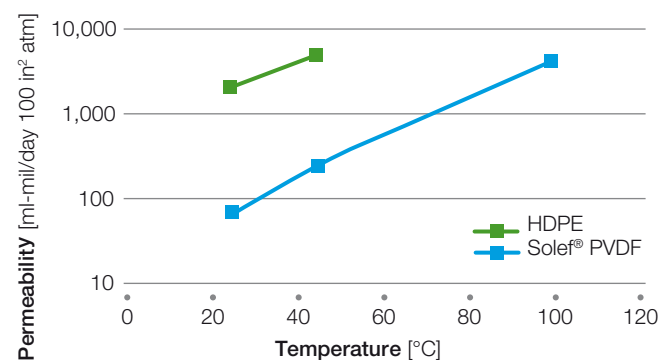
Liner Materials

- Polidan® PEX
- Solef® PVDF
- Hyflon® PFA

Mechanical properties with Temperature



H₂S permeability



Hyflon® PFA is chemically inert to H₂S

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