

Solef®



**SOLVAY**

asking more from chemistry®



**Solef® PVDF**  
for HT Pressure Hoses

**SPECIALTY  
POLYMERS**

Fluoropolymers are able to withstand the harsh operating environments found in the Oil & Gas Industry, delivering high-temperature performance, resistance to chemical permeation, toughness, flexibility and long-term reliability.

Solvay Specialty Polymers, a global leader in fluorinated materials, and SPIR STAR®, a company specializing in high-pressure hoses, have collaborated to create the HT series of PVDF high-pressure hoses with steel reinforcement.

Typical applications are offshore hose bundles, methanol service on platforms, chemical injection at the well and hydraulic component control.

### Why use Solef® PVDF?

- Very low permeation combined with high chemical resistance
- Very low permeation to methanol
- Mechanical properties and dimensional stability from -20 °C up to 150 °C
- Pressure resistance up to 15,000 psi
- Burst resistance tested 1:4
- No hydrolysis (unlike polyamides)
- Intrinsic high purity, no biofilm formation
- No contamination and low surface tension (no sticking)
- Creep resistance
- Excellent long-term aging resistance
- No plasticizer, no additives
- Intrinsic UV resistance

### Why is Solef® PVDF better than PA11?

- Higher temperature range
- Lower permeation
- Excellent resistance to most chemicals
- No hydrolysis

### Why use Solef® PVDF vs. steel tubing?

- Easier to install
- Time and labor costs are drastically reduced
- No elbows or unions needed as the hose is flexible
- No leakage
- Production length up to 4,500 m
- Up to 40% cost saving



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### Typical design of a SPIR STAR® HT-Hose

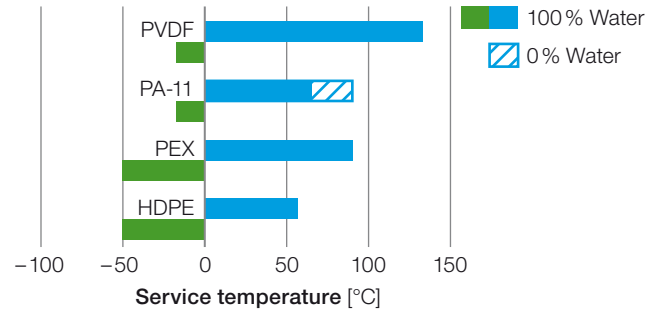


**Outer Cover**  
Solef® PVDF

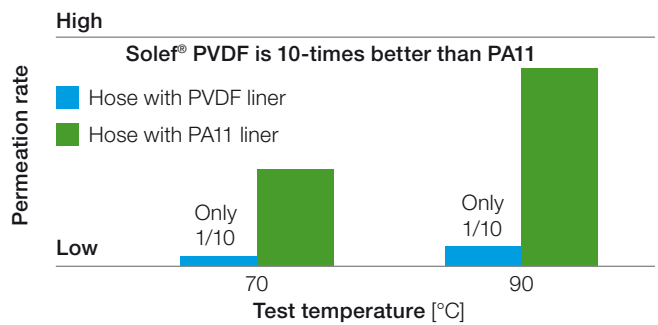
**Pressure Support**  
4 layers of high-tensile steel wire

**Inner Core**  
Solef® PVDF

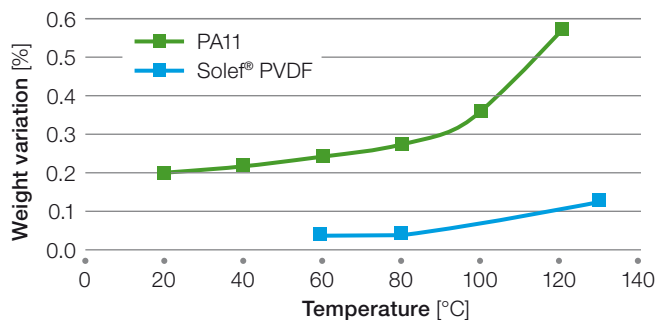
### Temperature ranking



### Comparison of permeation rates at 15,000 psi working pressure



### Methanol absorption



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