



# TEST CERTIFICATE: APT-TC-200102-01

**Standard:** API 6A 21st Edition Annex F.1.13.5.2  
**Material:** Compound 678  
**Status:** Qualified

**Issued To:** Greene, Tweed & Company  
1930 Rankin Rd., Houston, TX 77073  
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**Qualification Statement:** The elastomer compound 678 is qualified to API 6A 21st Edition according to Annex F.1.13.5.2 immersion testing for material class FF/HH 10% H<sub>2</sub>S design validation procedures meeting ISO 23936-2:2011 sour aging acceptance criteria.

Qualification Parameters	
6A Gas 35%	10% H <sub>2</sub> S / 80% CO <sub>2</sub> / 10% CH <sub>4</sub>
6A Hydrocarbon 60%	Kerosene (Diesel #1)
6A Water 5%	Water
Exposure	To the hydrocarbon phase
Pressure	1000 ± 100 psi
Duration	160 hours
Temperature	350°F (177°C)

Acceptance Criteria	
Property	Criteria
Hardness	+5/-20 units
Volume	+25 / -5 %
Tensile Strength	± 50%
Elong at Break	± 50%
50% Modulus	± 50%

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Accredited to: ISO/IEC 17025:2005, Field of Accreditation: Mechanical Testing