



# TEST CERTIFICATE: APT-TC-190415-02

**Standard:** API 6A 21st Edition Annex F.1.13.5.2

**Material:** Avalon 87

**Status:** Qualified

**Issued To:** Greene, Tweed & Company  
1930 Rankin Rd., Houston, TX 77073  
October 3, 2019

**Qualification Statement:** The Avalon 87 compound is qualified to API 6A 21st Edition according to Annex F.1.13.5.2 immersion testing for material class FF/HH 10% H2S design validation procedures meeting Norsok M710 Rev 3 sour aging acceptance criteria.

Qualification Parameters	
6A Gas 35%	10% H2S / 80% CO2 / 10% CH4
6A Hydrocarbon 60%	Kerosene (Diesel #1)
6A Water 5%	Water
Exposure	To the hydrocarbon phase
Pressure	1000 ± 100 psi
Duration	160 hours
Temperature	392°F (200°C)

Acceptance Criteria	
Property	Criteria
Volume	+5 / -1 %
Tensile Strength	± 50%
Elongation at Break	± 50%
Modulus (Secant 1%)	± 50%
Visual Concerns	None

Prepared By: *Joshua Kennedy*  
Joshua Kennedy  
Staff Scientist

Approved By: *J. Buc Slay*  
J. Buc Slay  
CTO

