Akron Rubber Development Laboratory, Inc.

AKRON RUBBER DEVELOPMENT LABORATORY, INC.
www.ardl.com

TEST CERTIFICATE

This document certifies Avalon® 89

From

Greene, Tweed & Co.

PASSED

the technical requirements for Fluid Aging

In accordance with Annex B, ISO 23936-1, 2009 Edition and NORSOK M-710, Rev.3

Test Gas Classification	B.1.1 Table B.1 Multi-Phase High H_2S Sour Gas Aromatic Fluid Mix
Test Temperature	195°C, 210°C, and 225°C
Initial Charge Pressure	6.0 +/- 0.5 MPa (870 +/- 72 psi)
Test Specimen	ASTM D638 Type IV dumbbell test specimens
Operational Service Temperature / Classification	180°C / ISO 10423 Service Classification “X”

Prepared By: _____
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ACCREDITED
A Testing Lab
*Certificate Numbers 255.01 & 255.02

An A2LA Accredited Testing Laboratory — Certificate Numbers 255.01 & 255.02
ISO 9001:2008 Registered

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Registered

ARDL verifies that Avalon® 89 ASTM D638 Type IV dumbbell test specimens, supplied by Greene, Tweed & Co., have been subjected to ISO 23936-1 Annex B and NORSOK M-710 Rev 3 test specifications with no failures during the 42 day aging test.

Property	Measured	Allowable Change	Source	Comment
% Change Volume min/max	+0.1%/+1.6%	-1%/+5%	ISO 23936-1 NORSOK M-710	No failures during aging test
Hardness min/max	-4.6/+4.6 (points)	Report	ISO 23936-1 NORSOK M-710	Data only to be reported
% Change 50% Modulus min/max	-16.9%/+9.7%	-50%/+50%	ISO 23936-1 NORSOK M-710	No failures during aging test
% Change Stress At Break min/max	-0.6%/+7.1%	-50%/+50%	ISO 23936-1 NORSOK M-710	No failures during aging test
% Change Elongation min/max	-22.8%/+13.0%	-50%/+50%	ISO 23936-1 NORSOK M-710	No failures during aging test

The results indicate that the material is resistant to the simulated fluid media specific herein. The Avalon® 89 Plastic PASSED the full requirements of Annex B per ISO 23936-1 and Norsok M710 Rev 3, under the stated conditions.

Bob Zickefoose
Staff Engineer
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ARDL is accredited by A2LA for the test methods listed on the attached scope