## Akron Rubber Development Laboratory, Inc.



## **TEST CERTIFICATE**

## This document certifies Arlon® 3000XT

From

## Greene, Tweed & Co.



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 <sub>2</sub> S 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 /           | 180°C / ISO 10423 Service Classification "X"                  |  |  |
| Classification          |   |  |  |

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ARDL verifies that Arlon® 3000XT 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<br>Volume<br>min/max          | +3.0%/+5.0%   | -1/ +5%          | ISO 23936-1<br>NORSOK M-710 | No failures during aging test |
| % Change<br>Young's Modulus<br>min/max | -31.6%/+20.5% | ±50%             | ISO 23936-1<br>NORSOK M-710 | No failures during aging test |
| % Change<br>Stress @ Break<br>min/max  | -10.0%/-0.1%  | ±50%             | ISO 23936-1<br>NORSOK M-710 | No failures during aging test |
| % Change<br>Elongation<br>min/max      | -35.8%/-5.9%  | ±50%             | ISO 23936-1<br>NORSOK M-710 | No failures during aging test |

The results indicate that the material is resistant to the simulated fluid media specific herein. The Arlon® 3000XT Plastic PASSED the full requirements of Annex B per ISO 23936-1 and Norsok M710 Rev 3, under the stated conditions.

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