

"More Than Testing, We Care"



AKRON RUBBER DEVELOPMENT LABORATORY, INC.  
2887 Gilchrist Road • Akron, Ohio 44305  
1-800-830-ARDL • (330) 794-6600 • FAX (330) 794-6610

March 29, 2000

## - TEST REPORT -


PN# 39606

PO# 8114


Prepared for:

Mr. John Yaghaubi  
Mission Rubber Co.  
1660 Leeson Lane  
Corona, CA 91719

Prepared by:

  
Sandy Jones

Approved by:

  
Jim Drummond



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ENGINEERING AND TESTING FIRMS  
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**SUBJECT:** Physical testing on material submitted by the above company to ASTM C 564-95a test specification.  
PO# 8114

**RECEIVED:** Four (4) slabs and four (4) compression buttons identified as N0571.

**ORIGINAL PHYSICAL PROPERTIES, PARA. 9.1 & 9.2**

Test Method: ASTM D 412-98a, D 2240-97

Die C dumbbells tested at 20 in/min.

	<u>RESULTS</u>	<u>REQUIREMENTS</u>	<u>PASS/FAIL</u>
Shore A Durometer, points	72	70 ± 5	Pass
Tensile Strength, MPa	17.4	10 min.	Pass
Ultimate Elongation, %	358	250 min.	Pass

**TEAR RESISTANCE, PARA. 9.3**

Test Method: ASTM D 624-98, Die C

Specimens tested at 20 in/min.

	<u>RESULTS</u>	<u>REQUIREMENTS</u>	<u>PASS/FAIL</u>
Tear Strength, N/cm	284.9	268 min.	Pass

**COMPRESSION SET, PARA. 9.4**

Test Method: ASTM D 395-97

Specimens aged 22 hrs. @ 70°C, 25% deflection, ½ hr. recovery.

	<u>RESULTS</u>	<u>REQUIREMENTS</u>	<u>PASS/FAIL</u>
Compression Set, %	13.6	25 max.	Pass

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**HEAT-AGED PROPERTIES, PARA. 9.5**

Test Method: ASTM D 573-88(94)  
Specimens aged 96 hrs. @ 70°C in a forced air oven.

	<u>RESULTS</u>	<u>REQUIREMENTS</u>	<u>PASS/FAIL</u>
Durometer, point change	+1	+10 max.	Pass
Tensile Strength, % change	-9.1	-15 max.	Pass
Elongation, % change	-5.5	-20 max.	Pass

**WATER ABSORPTION, PARA. 9.6**

Test Method: ASTM D 471-96  
Specimens immersed 168 hrs. @ 70°C in Distilled Water.

	<u>RESULTS</u>	<u>REQUIREMENTS</u>	<u>PASS/FAIL</u>
Weight Increase, %	+12.1	20 max.	Pass

**OZONE RESISTANCE, PARA. 9.7**

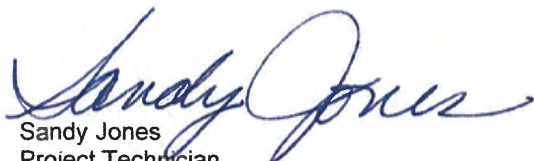
Test Method: ASTM D 1149-91(97)  
Test specimens per ASTM D 518-86(91), Method B (Bent Loop).  
Specimens exposed 100 hrs. @ 150 pphm @ 40°C, 20% elongation.  
Observations made at 2x magnification.

	<u>RESULTS</u>	<u>REQUIREMENTS</u>	<u>PASS/FAIL</u>
	No cracks	No cracks	Pass

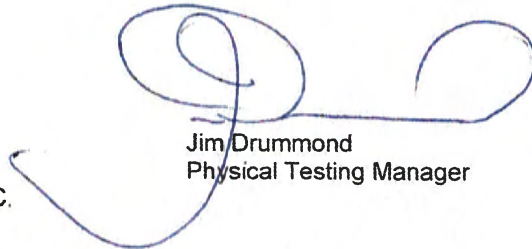
**OIL IMMERSION, PARA. 9.8**

Test Method: ASTM D 471-96  
Specimens immersed 70 hrs. @ 100°C in IRM 903 Oil.

	<u>RESULTS</u>	<u>REQUIREMENTS</u>	<u>PASS/FAIL</u>
Volume Change, %	+53.4	80 max.	Pass



Sandy Jones  
Project Technician  
AKRON RUBBER DEVELOPMENT LABORATORY, INC.



Jim Drummond  
Physical Testing Manager



THE AMERICAN ASSOCIATION  
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## ISO 9001 REGISTERED QUALITY SYSTEM


Through the Registration Panel of its Accreditation Council,  
A2LA has registered the Quality System of

**Akron Rubber Development Laboratory**  
of Akron, OH

This quality system meets the requirements of the ANSI/ASQC Q9001 (ISO 9001) standard for material design, development and evaluation, compositional analysis and formulation reconstruction, failure analysis and forensic services, quality assurance, and commercial testing (35-NACE K74.3) of rubber and plastic related materials and products.

Presented this 17<sup>th</sup> day of March, 2000.



  
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President  
For the Accreditation Council  
Certificate Number R-019  
Valid to December 31, 2000