

January 24, 2019

TEST REPORT

PN 145853
PO 0027604

PHYSICAL TESTING DEPARTMENT

Prepared For:

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Rev 101218



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SUBJECT: Physical Testing on material submitted by the above company to MIL-DTL-25988 Table 3 Type 2 Class 1 & 2 Grade 50 test specification.

RECEIVED: Blue slabs identified as SSP338AV Blue Batch JN068.

ORIGINAL PHYSICAL PROPERTIES, ASTM D 412, D 2240, D297

Die C dumbbells tested at 20 in/min.

	<u>RESULTS</u>	<u>REQUIREMENTS</u>	<u>PASS/FAIL</u>
Type A Durometer, points	50	50 ± 5	Pass
Tensile Strength, psi	1415	900 min.	Pass
Ultimate Elongation, %	481	200 min.	Pass
100% Modulus, psi	221	-	-
200% Modulus, psi	482	-	-
300% Modulus, psi	804	-	-
Specific Gravity	1.52	-	-

TEAR RESISTANCE, ASTM D 624, DIE B

Specimens tested at 20 in/min.

	<u>RESULTS</u>	<u>REQUIREMENTS</u>	<u>PASS/FAIL</u>
Tear Strength, ppi	220	40 min.	Pass

HEAT-AGED PROPERTIES, ASTM D 573

Specimens aged 70 hrs. @ 392°F in a forced air oven.

	<u>RESULTS</u>	<u>REQUIREMENTS</u>	<u>PASS/FAIL</u>
Durometer, point change	+6	±10, -5	Pass
Tensile Strength, % change	-21	-30 max.	Pass
Elongation, % change	-18	-25 max	Pass
Weight Change, % change	-1.04	-2 max.	Pass

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COMPRESSION SET, ASTM D 395, METHOD B

Specimens aged at following conditions below, 25% deflection, ½ hr. recovery.

	<u>RESULTS</u>	<u>REQUIREMENTS</u>	<u>PASS/FAIL</u>
Compression Set, %			
70 hrs. @ 75°F	4.4	15 max.	Pass
22 hrs. @ 347°F	11.4	35 max.	Pass
70 hrs. @ 302°F in AMS 3021	24.1	35 max.	Pass

FLUID IMMERSION PROPERTIES, ASTM D 471

Specimens immersed 72 hrs. @ 73°F in the below fluids.

22 hrs. @ 75°F – AMS2629 Type 1	<u>RESULTS</u>	<u>REQUIREMENTS</u>	<u>PASS/FAIL</u>
Durometer, point change	-11	-15 max.	Pass
Tensile Strength, % change	-27	-65 max	Pass
Elongation, % change	-20	-60 max	Pass
Volume Change, %	+22.7	1 to 30	Pass

70 hrs. @ 302°F – AMS3021	<u>RESULTS</u>	<u>REQUIREMENTS</u>	<u>PASS/FAIL</u>
Durometer, point change	-7	±15 max.	Pass
Tensile Strength, % change	-18	-45 max	Pass
Elongation, % change	-14	-30 max	Pass
Volume Change, %	+8.3	1 to 15	Pass

LOW TEMPERATURE RETRACTION, ASTM D 1329

Specimens conditioned 10 min. @ -94°F to -100°F in methanol.

Initial Specimen Length: 2 inches

Initial Elongation Used: 150%

Rate of Coolant Rise: 1.8°F/min.

Temperature measured by thermocouple.

Median of three specimens reported.

	<u>RETRACTION TEMPERATURE, °F</u>	<u>REQUIREMENTS</u>	<u>PASS/FAIL</u>
TR10	-81.4	-70 max.	Pass
TR30	-41.8		
TR50	-19.7		
TR70	-9.4		

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