

Data Sheet: AFLAS 90 AED

COLOUR: BLACK

GENERAL SERVICE TEMPERATURE: -5°C – 250°C

PHYSICAL PROPERTIES	REQUIREMENT	TEST RESULT
HARDNESS SHORE A	90+/-5	91.7
TENSILE STRENGTH, Psi	2200	3900
ELONGATION, %	100	112.1
SPECIFIC GRAVITY		1.62
AIR AGING 22 hrs @204°C		
COMPRESSION SET, %, MAX	30	25.3
AIR AGING 70 hrs @204°C		
COMPRESSION SET, %, MAX		34.5
AIR AGING 168 hrs @204°C		
HARDNESS CHANGE (SHORE A)		+1.4
TENSILE STRENGTH CHANGE, %, MAX		-7.5
ELONGATION CHANGE, %, MAX		-4.3

AED TEST CONDITIONS

4 O-ring specimens (size 312) were exposed in a gas phase at the conditions tabulated below for at least 8 cycles.

Test gas mixture	90/10 mol% CH ₄ /CO ₂ (B.1.i in standard)
Pressure	150 +10/-5 bar (2,175 ±145, -72 psi)
Temperature	100 ±2 °C (212°F)
No. cycles	8
Vent rate	2 ± 0.2 MPa/min (290 ± 29 psi)
First cycle duration	68 hours, minimum
Cycle 2-8 duration	6 hours, minimum
Dwell between cycles	60-70 minutes
Seal replication	4, minimum

The exposure test was undertaken between 3/8/2019 2:00:00 PM and 3/21/2019 7:30:00 AM. Visual evaluations were performed at room temperature after the eight RGD cycles have been completed.

The acceptance criteria given in section B.4 of ISO 23936-2:2001 (E) standard 1 was applied. The rating system in Table B.4 is shown below.



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RGD damage features	Rating	Pass/fail
• No cracks, holes or blisters permitted. - the exposed surface shall be intact.	0	PASS
Any number of cracks, each < 25 % CSD: total crack length shall not exceed CSD. - external cracks shall be < 10 % CSD; no splits permitted.	1	
• Any number of cracks, each < 50 % CSD: total crack length shall not exceed 2X CSD. - external cracks shall be < 25 % CSD; no splits permitted.	2	
• Any number of cracks of which 2 internal cracks can each have length 50 % to 80 % CSD: total crack length shall not exceed 3X CSD. - external cracks shall be < 50 % CSD; no splits permitted.	3	
• Any number of cracks having total length greater than 3X CSD, or • at least 1 internal crack > 80 % CSD, or • 3 or more internal cracks each > 50 % CSD, or • any external crack > 50 % CSD. - no splits permitted.	4	FAIL
• Any split, regardless of location and length. - no exceptions permitted.	5	

RATINGS AFTER RGD TESTING

Compound	Fixture	O-ring	ISO rating	Result
ES-8033-TS0106	B23	1	0000	Pass
		2	0000	Pass
	B33	3	0000	Pass
		4	0000	Pass



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The above test results are based on test slabs / buttons. The results from the actual parts may be different.



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