



**POLYACRYLIC RUBBER (ACM), HOT AIR, HOT OIL AND
COMPRESSION STRESS RELAXATION RESISTANT, 50 IRHD**

WSD-M2D448-A

**POLYACRYLIC RUBBER (ACM), HOT AIR, HOT OIL AND
COMPRESSION STRESS RELAXATION RESISTANT, 65 IRHD**

WSD-M2D448-A2

1. SCOPE

The materials described by these specifications are 50 IRHD (WSD-M2D448-A) and 65 IRHD (WSD-M2D448-A2) polyacrylic rubber compounds with good resistance to hot air and hot oil. The materials have excellent resistance to compressive stress relaxation at temperatures up to 135 °C. WSD-M2D448-A material also has excellent resistance to splitting or bursting under combined conditions of compressive strains up to 60% and temperatures up to 150 °C.

2. APPLICATION

These specifications were released originally for material used as an intercooler tank gasket and O-rings or as shown on the engineering drawing

3. REQUIREMENTS

3.0 STANDARD REQUIREMENTS FOR PRODUCTION MATERIALS

Material suppliers and part producers must conform to the Company's Standard Requirements For Production Materials (WSS-M99P1111-A).

3.4 MATERIAL TESTING

3.4.1 Preparation of Test Specimens

Whenever possible, all test specimens shall be die-cut from the finished parts. When not feasible, specimens cut from molded test sheets manufactured from the same material and with equivalent state of cure to molded parts are recommended. The test sheets shall have the following dimensions:

150 x 150 mm, min x 2.0 +/- 0.2 mm

3.5 ORIGINAL PROPERTIES

		A	A2
3.5.1	Hardness, International (ISO 48)	45 - 55	65 - 70
3.5.2	Tensile Strength, MPa, min (ISO 37, Type 1 dumbbell)	8	10
3.5.3	Elongation at break, %, min (Test Method according to para 3.5.2)	200	100
3.5.4	Modulus at 100% Elongation, MPa (Test Method according to para 3.5.2)	2.0 - 3.5	6.0 - 7.5

Date	Action	Revisions
2004 09 30	Revised	Inserted 3.0; Deleted 3.1, 3.2, 3.3, 3.12 & 4
1993 09 30		Para 3.10 -A revised C10258828
1991 08 09	Released	C10155132



ENGINEERING MATERIAL SPECIFICATION

WSD-M2D448-A/A2

		A	A2
3.5.5	Ozone Resistance, Rating, max (FLTM BP 101-01, Procedure A)	0	0
3.5.6	Compression Set, %, max (ISO 815, Sample A) except 25% compression, plied-up specimens, 70 h at 135 +/- 2 °C)	35	35
3.6	HEAT AGED (ISO 188, 150 +/- 50 air changes/h, 168 h at 150 +/- 2 °C)		
3.6.1	Hardness Change		0 to +10
3.6.2	Tensile Strength Change, max		-20%
3.6.3	Elongation at Break Change, max		-35%
3.6.4	Visual Evaluation		
	No surface tackiness or cracks when folded flat against itself.		
3.7	HEAT AGED (ISO 188, 150 +/- 50 air changes/h, 1,000 h at 135 +/- 2 °C)		
3.7.1	Hardness Change		0 to +10
3.7.2	Tensile Strength Change, max		-20%
3.7.3	Elongation at Break Change, max		-35%
3.7.4	Visual Evaluation		
	No surface tackiness or cracks when folded flat against itself.		
3.8	IMMERSION IN OIL No. 1 (ISO 1817, 168 h at 150 +/- 2 °C)		
3.8.1	Hardness change		+/- 10
3.8.2	Tensile Strength Change, max		-20%
3.8.3	Elongation at Break Change, max		-30%
3.8.4	Volume Change		-5 to +5%
3.8.5	Visual Evaluation		
	No surface tackiness or cracks when folded flat against itself.		