



HOSE, AIR CONDITIONING REFRIGERANT (NYLON 6 BARRIER) RESISTANT, MEDIUM PRESSURE

WSS-M96D25-A3

1. SCOPE

The material defined by this specification is a polychloroprene (CR) rubber/nylon/elastomeric layer (nitrile, polychloroprene) inner tube, high tensile polyester reinforcement, butyl rubber cover, medium pressure refrigerant hose.

2. APPLICATION

This specification was originally released for hoses designed for use with refrigerant R-134a and refrigerant oils that must be serviceable over an ambient temperature range of -40 °C to 125 °C, and that must exhibit good long term transport/minimal fluid change properties at an operating temperature of -40 °C to 125 °C and a maximum operating pressure of 3.4 MPa.

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 CONSTRUCTION

The hose shall consist of a seamless smooth bore inner tube of a layered polychloroprene rubber/nylon/elastomeric layer (nitrile, neoprene), reinforced with a high tensile ply or plies of polyester fabric bonded to the inner tube, and a butyl rubber weather resistant outer cover. The outer cover shall be perforated (pin pricked).

3.5 MOLDED TEST SPECIMEN/TEST SLABS

3.5.1 Preparation of Test Specimens - Nylon Core

Unless otherwise specified all tests shall be carried out on extrusion molded specimens. The specimens shall be prepared according to ASTM D 1879. The test specimens have the following dimensions: 150 x 12.7 mm x 3.2 +/- 0.2 mm (tensile bar) and 120 x 12.7 x 3.2 +/- 0.2 mm (flex bar). No annealing allowed.

3.5.2 Preparation of Test Specimens - Butyl and Nitrile Rubber

Whenever possible, all test specimens shall be die-cut from the finished parts. When not feasible, specimens cut from molded test slabs manufactured from the same material and with equivalent cure to molded parts are recommended. The test slabs shall have the following dimensions: 150 x 150 mm, min x 2.0 +/- 0.2 mm.

Date	Action	Revisions
2006 09 20	Revised	Inserted 3.0; Deleted 3.1, 3.2, 3.3, 3.10, 3.11 & 4
2000 04 25	Revised	Revised 3.5.4
1995 12 12	Activated	



Documents

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		Nylon Core Barrier	Polychloro- prene Inner Core	Butyl Rubber Cover
3.5.3	Density, g/cm ³ (ISO 1183, Method A)	1.09 - 1.19	1.40 - 1.55	1.05 - 1.30
3.5.4	Hardness, Durometer A (ISO 868/ASTM D 2240, instantaneous plied-up specimen. Hand held durometers shall not be used.)		80 - 90	60 - 80
3.5.5	Tensile Strength, MPa, min (ISO 37/ASTM D 412, Die C)	17.2	9.0	6.2
3.5.6	Elongation, % (ISO 37/ASTM D 412, Die C)	200	150	125
3.5.7	Melt Temperature, C, min (ISO 3146, Method C, 10 C/min heating rate)	200	N/A	N/A
3.5.8	Flexural Modulus, MPa, max (ISO 178, 2 mm test speed)	517	N/A	N/A
3.5.9	Moisture Content, %, max	0.3	N/A	N/A
3.5.10	Ozone Resistance, max (ASTM D 1171, Method A, 70 h at 50 pphm)	---	---	Rating 0

3.6 DIMENSIONS

The hose shall conform to the dimensions and tolerances specified in Table 1. Measurement shall be made in accordance with ASTM D 380.

