

**SPECIFICATION CONTROL DRAWING**

**7724S1664**

**CHEMINAX**

77 OHM, AWG 24, 19 STRANDS OF AWG 36, OPTIMIZED SHIELD,  
DATA BUS CABLE, MIL-STD-1553, OUTER SPACE USE

Date: 8-15-14  
Revision: F

THIS SPECIFICATION SHEET FORMS A PART OF THE LATEST ISSUE OF RAYCHEM SPECIFICATION 1200.

**CONSTRUCTION DETAILS**

**ELECTRICAL CHARACTERISTICS**

DIMENSIONS ARE NOMINAL VALUES IN INCHES, UNLESS OTHERWISE DESIGNATED.

CHARACTERISTIC IMPEDANCE 77 ± 5 ohms, Method C at 1 MHz  
MUTUAL CAPACITANCE 30.0 pF/ft. (maximum)  
ATTENUATION 1.4 dB/100 ft. (maximum) at 1 MHz  
SURFACE TRANSFER IMPEDANCE 100 milliohms/meter (maximum) at 30 MHz (Per SAE AS85485)

**ADDITIONAL REQUIREMENTS**

**COMPONENT WIRE PRIOR TO CABLING**  
(Test procedures per SAE AS22759)

CONDUCTOR RESISTANCE 26.5 ohms/1000 ft. (nominal)  
CROSSLINKING PROOF TEST 300 ± 3°C for 1 hour, .625 inch mandrel, .375 lb, 2.5 kV dielectric test  
INSULATION (DIELECTRIC)  
ELONGATION 50% (minimum)  
TENSILE STRENGTH 5000 lbf/in<sup>2</sup> (minimum)  
INSULATION FLAWS  
SPARK TEST 3.0 kV (rms)  
IMPULSE TEST 8.0 kV (peak)  
INSULATION RESISTANCE 5000 megohms for 1000 ft. (minimum)  
LOW TEMPERATURE-COLD BEND -65 ± 3°C for 4 hours, .750 inch mandrel, 1.00 lb, 2.5 kV dielectric test  
SHRINKAGE 200 ± 3°C for 1 hour, .125 inch (maximum) in 12 inches

**FINISHED CABLE**

(Test procedures per NEMA WC 27500, unless otherwise specified)

BLOCKING 200°C for 6 hours  
CABLE LAY LENGTH .75 inch (minimum), 1.25 inches (maximum)  
CROSSLINKED VERIFICATION 300 ± 5°C for 6 hours, 6.00 inch mandrel  
FLAMMABILITY 3 seconds (maximum); 3 inches (maximum); no flaming of facial tissue (Method B of Spec 1200)  
JACKET  
ELONGATION 50% (minimum)  
TENSILE STRENGTH 5000 lbf/in<sup>2</sup> (minimum)  
JACKET FLAWS  
SPARK TEST 1.0 kV (rms)  
IMPULSE TEST 6.0 kV (peak)  
JACKET THICKNESS .008 inch (nominal)  
LOW TEMPERATURE-COLD BEND -55 ± 5°C for 4 hours, 6.00 inch mandrel  
VOLTAGE WITHSTAND 1500 volts (rms) (DIELECTRIC)

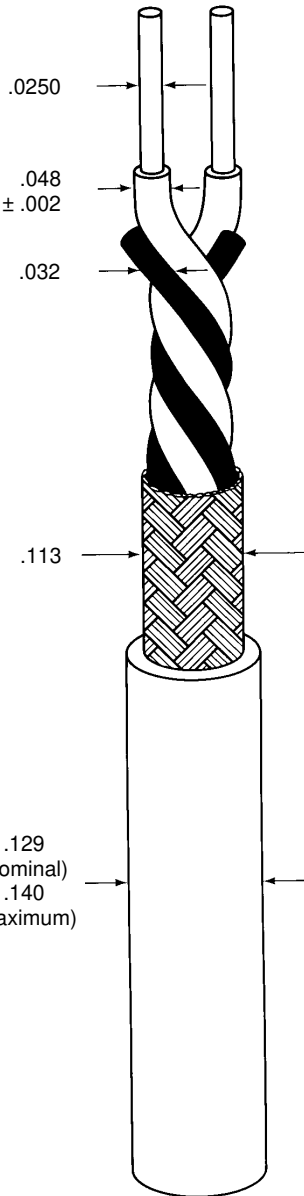
WEIGHT 14.5 lbs/1000 ft. (nominal)

**OUTER SPACE REQUIREMENTS**

RADIATION RESISTANCE 500 megarads, 3.75 inch mandrel, 1.0 kV dielectric test  
VACUUM STABILITY  
TOTAL MASS LOSS (TML) 1.00% (maximum)  
VOLATILE CONDENSABLE MATERIAL (VCM) 0.10% (maximum)  
WEIGHT LOSS 0.45% (maximum)

**ENGINEERING REFERENCE**

TEMPERATURE RATING 200°C (maximum)



**CONDUCTORS**  
AWG 24,  
19 Strands of AWG 36,  
Silver-Coated High-Strength Copper Alloy

**DIELECTRICS**  
Low Outgassing,  
Radiation-Crosslinked,  
Modified ETFE  
Colors - Light Blue/White

**FILLERS**  
Low Outgassing,  
Radiation-Crosslinked,  
Modified ETFE

**SHIELD**  
AWG 38,  
Silver-Coated Copper,  
Optimized

**JACKET**  
Low Outgassing,  
Radiation-Crosslinked,  
Modified ETFE

Designate outer jacket color with a dash number in accordance with MIL-STD-681. Unless otherwise specified, outer jacket color will be white (designated by a "-9" appended to the part number, e.g. 7724S1664-9). Other codes and suffixes may be added to the part number, as necessary, to capture any additional requirements imposed by the purchase order.

Users should evaluate the suitability of this product for their application. Specifications are subject to change without notice. Tyco Electronics Corporation also reserves the right to make changes in materials or processing, which do not affect compliance with any specification, without notification to Buyer.

