

**SPECIFICATION CONTROL DRAWING**

**7820D0831**

**CHEMINAX**

78 OHM, AWG 20, 19 STRANDS OF AWG 32, TWINAXIAL CABLE

Date: 9-21-22  
Revision: C

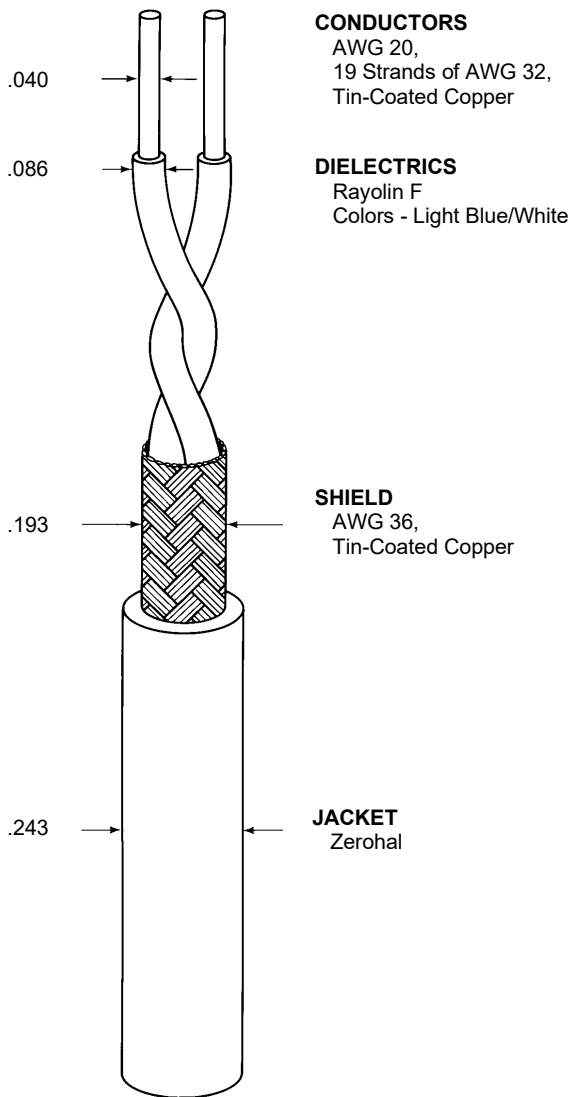
THIS SPECIFICATION SHEET FORMS A PART OF THE LATEST ISSUE OF RAYCHEM SPECIFICATION 1200.

**CONSTRUCTION DETAILS**

**ELECTRICAL CHARACTERISTICS**

DIMENSIONS ARE NOMINAL VALUES IN INCHES, UNLESS OTHERWISE DESIGNATED.

|                                       |                                |
|---------------------------------------|--------------------------------|
| CHARACTERISTIC IMPEDANCE              | 78 ± 7 ohms, Method C at 1 MHz |
| CAPACITANCE<br>CONDUCTOR TO CONDUCTOR | 18.8 pF/ft. (nominal)          |
| VELOCITY OF PROPAGATION               | 67% (nominal)                  |



**CONDUCTORS**  
AWG 20,  
19 Strands of AWG 32,  
Tin-Coated Copper

**DIELECTRICS**  
Rayolin F  
Colors - Light Blue/White

**SHIELD**  
AWG 36,  
Tin-Coated Copper

**JACKET**  
Zerohal

**ADDITIONAL REQUIREMENTS**

**ELECTRICAL**

|  |  |
|--|--|
| CONDUCTOR RESISTANCE<br>(prior to cabling) | 10.4 ohms/1000 ft. (nominal)             |
| INSULATION RESISTANCE                      | 10,000 megohms (minimum)<br>for 1000 ft. |
| JACKET FLAWS<br>SPARK TEST<br>IMPULSE TEST | 1.0 kV (rms)<br>6.0 kV (peak)            |
| VOLTAGE WITHSTAND (DIELECTRIC)             | 1000 volts (rms) (minimum)               |

**ENVIRONMENTAL**

|   |  |
|---|--|
| FLAMMABILITY                              | Method B, 60 seconds (maximum)<br>Afterburn: 3 inch (maximum)<br>burn length |
| HEAT SHOCK                                | 225°C  |
| LOW TEMPERATURE-COLD BEND                 | -30°C/7.00 inch mandrel  |
| VOLTAGE WITHSTAND<br>(Post Environmental) | 1000 volts (rms), 1 minute   |

**PHYSICAL**

|   |  |
|---|--|
| INSULATION (DIELECTRIC)<br>(prior to cabling)<br>ELONGATION<br>TENSILE STRENGTH | 200% (minimum)<br>1800 lbf/in <sup>2</sup> (minimum) |
| JACKET<br>ELONGATION<br>TENSILE STRENGTH  | 150% (minimum)<br>1200 lbf/in <sup>2</sup> (minimum) |
| JACKET THICKNESS  | .025 inch (nominal)                                  |
| SHIELD COVERAGE   | 90% (minimum)  |

Designate outer jacket color with a dash number in accordance with MIL-STD-681. Unless otherwise specified, outer jacket color will be black designated by a "-0" appended to the part number, e.g. 7820D0831-0.

Other codes and suffixes may be added to the part number, as necessary, to capture any additional requirements imposed by the purchase order.

WEIGHT 33.7 lbs/1000 ft. (nominal)

**ENGINEERING REFERENCE**

TEMPERATURE RATING 105°C (maximum)

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.

