

**SPECIFICATION CONTROL DRAWING**

**2019D0301**

**CHEMINAX**

120 OHM, 0.75 mm<sup>2</sup>, 19 STRANDS OF 0.23 mm,  
TWINAXIAL CABLE, J1939-11 COMPLIANT

Date: 10-2-14  
Revision: D

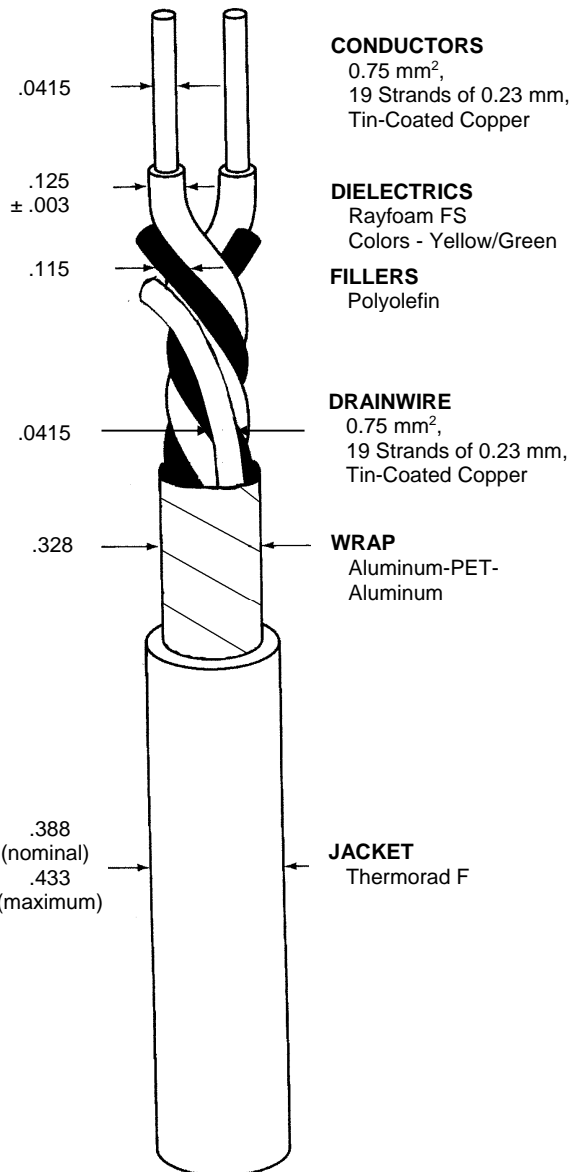
THIS SPECIFICATION SHEET FORMS A PART OF THE LATEST ISSUE OF RAYCHEM SPECIFICATION 1200.

**CONSTRUCTION DETAILS**

**ELECTRICAL CHARACTERISTICS**

DIMENSIONS ARE NOMINAL VALUES IN INCHES, UNLESS OTHERWISE DESIGNATED.

|  |   |
|--|---|
| CHARACTERISTIC IMPEDANCE                       | 120 ± 12 ohms, Method D at 1 MHz with shield grounded |
| MUTUAL CAPACITANCE                             | 10.5 pF/ft. (nominal) at 1 MHz                        |
| VELOCITY OF PROPAGATION                        | 74% (nominal)   |
| SURFACE TRANSFER IMPEDANCE (per MIL-DTL-85485) | 225 milliohms/meter (maximum) at 0.1 to 1 MHz         |



**CONDUCTORS**  
0.75 mm<sup>2</sup>,  
19 Strands of 0.23 mm,  
Tin-Coated Copper

**DIELECTRICS**  
Rayfoam FS  
Colors - Yellow/Green

**FILLERS**  
Polyolefin

**DRAINWIRE**  
0.75 mm<sup>2</sup>,  
19 Strands of 0.23 mm,  
Tin-Coated Copper

**WRAP**  
Aluminum-PET-  
Aluminum

**JACKET**  
Thermorad F

**ADDITIONAL REQUIREMENTS**

|   |   |
|---|---|
| <b>ELECTRICAL</b>                       |   |
| CONDUCTOR RESISTANCE (prior to cabling) | 7.53 ohms/1000 ft. (nominal)  |
| INSULATION RESISTANCE                   | 10,000 megohms (minimum) for 1000 ft.                               |
| JACKET FLAWS                            |   |
| SPARK TEST                              | 1.0 kV (rms)  |
| IMPULSE TEST                            | 6.0 kV (peak)   |
| VOLTAGE WITHSTAND (DIELECTRIC)          | 1500 volts (rms)  |
| <b>ENVIRONMENTAL</b>                    |   |
| FLAMMABILITY                            | Method C  |
| HEAT SHOCK                              | 225°C   |
| LOW TEMPERATURE-COLD BEND               | -55°C/11.0 inch mandrel   |
| VOLTAGE WITHSTAND (Post Environmental)  | 1000 volts (rms), 1 minute  |
| <b>PHYSICAL</b>                         |   |
| INSULATION (DIELECTRIC)                 |   |
| ELONGATION                              | 100% (minimum)  |
| TENSILE STRENGTH                        | 1000 lbf/in <sup>2</sup> (minimum)                                  |
| JACKET                                  |   |
| ELONGATION                              | 200% (minimum)  |
| TENSILE STRENGTH                        | 2000 lbf/in <sup>2</sup> (minimum)                                  |
| JACKET THICKNESS                        | .025 inch (minimum),<br>.030 inch (nominal),<br>.040 inch (maximum) |
| WRAP                                    | .003 inch thick (nominal),<br>10% overlap (minimum)                 |

CABLE IDENTIFICATION: Outer jacket shall be marked in white ink at 12 inch (nominal) intervals as follows: "RAYCHEM J1939-11 0.75 mm<sup>2</sup>"

WEIGHT 54.1 lbs/1000 ft. (nominal)

**ENGINEERING REFERENCE**

TEMPERATURE RATING 125°C (maximum)

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. 2019D0301-0). 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.

