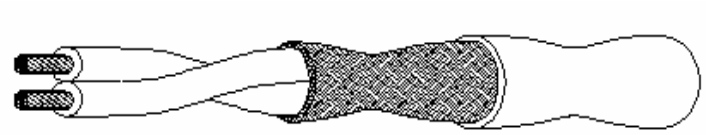

# Dataclear® Marine SecureVoice /64

## Low-Smoke Zero-Halogen Shipboard Communication Cable



**Dataclear® Marine SecureVoice /64** cables are Low Smoke Zero Halogen (LS0H) communication cables specifically designed and manufactured for secure voice and other electronic, signal, and voice/data applications used on US Naval warships and submarines where fluoropolymer (Teflon™) cables have typically been used. **Dataclear® Marine SecureVoice /64** provides two major solutions for shipboard communications:

1. Replacement of halogenated insulations (PVC, Fluoropolymer) in confined compartments, inter-cabinet wiring, and intra-cabinet wiring in open cabinets, thereby eliminating a major source of halogenated toxic gases in the event of fire.
2. EMI-protected cable for critical voice communication, low voltage signal, and low-speed analog and digital data transmission.

These cables are **qualified by NAVSEA to MIL-DTL-24643/64** for low-smoke zero-halogen cables.

**Features and Benefits**

- Meets NEC 711, NEC 713 smoke req'ts
- EMI/RFI protection via a braided shield.
- Irradiation Cross-Linked insulation and jacket materials provide increased abrasion and cut-through resistance.

**Applications**

- Shipboard Communications.
- Secure Voice Applications.
- Various communication applications requiring low-smoke, non-halogen twisted shielded pair cables.

## Cable Types and Dimensions

| MIL-Spec PN M24643/64 | Type | AWG | # of Pairs | Nominal Cable OD** | | MIL-Spec PN M24643/64 | Type | AWG | # of Pairs | Nominal Cable OD** |
|---|---|---|---|---|---|---|---|---|---|---|
| -01UN | LS1TPSJ24 | 24 | 1 | 0.170 | | -13UN | LS3TPSJ24 | 24 | 3 | 0.275 |
| -02UN | LS1TPSJ22 | 22 | 1 | 0.182 | | -14UN | LS3TPSJ22 | 22 | 3 | 0.285 |
| -03UN | LS1TPSJ20 | 20 | 1 | 0.200 | | -15UN | LS3TPSJ20 | 20 | 3 | 0.325 |
| -04UN | LS1TPSJ18 | 18 | 1 | 0.220 | | -16UN | LS3TPSJ18 | 18 | 3 | 0.390 |
| -05UN | LS1TPSJ16 | 16 | 1 | 0.234 | | -17UN | LS3TPSJ16 | 16 | 3 | 0.450 |
| -06UN | LS1TPSJ14 | 14 | 1 | 0.262 | | -18UN | LS3TPSJ14 | 14 | 3 | 0.490 |
| -07UN | LS2TPSJ24 | 24 | 2 | 0.260 | | -19UN | LS4TPSJ24 | 24 | 4 | 0.295 |
| -08UN | LS2TPSJ22 | 22 | 2 | 0.285 | | -20UN | LS4TPSJ22 | 22 | 4 | 0.325 |
| -09UN | LS2TPSJ20 | 20 | 2 | 0.325 | | -21UN | LS4TPSJ20 | 20 | 4 | 0.395 |
| -10UN | LS2TPSJ18 | 18 | 2 | 0.390 | | -22UN | LS4TPSJ18 | 18 | 4 | 0.450 |
| -11UN | LS2TPSJ16 | 16 | 2 | 0.420 | | -23UN | LS4TPSJ16 | 16 | 4 | 0.480 |
| -12UN | LS2TPSJ14 | 14 | 2 | 0.465 | | -24UN | LS4TPSJ14 | 14 | 4 | 0.540 |

Cable OD is the major diameter of the ellipse created by the twisted pair(s).



CHAMPLAIN CABLE
Champlain Cable Corporation
175 Hercules Drive
Colchester, Vermont 05446
P 800.451.5162
F 802.654.4224
sales@champcable.com


## Primary Wire Types and dimensions

| AWG | Strand | Conductor Diameter (±0.003") | Insulated Diameter (±0.003") | Conductor Resistance (Ω/1000 ft) |
|---|---|---|---|---|
| 24 | 19 X 36 | 0.024 | 0.044 | 24.91 |
| 22 | 19 X 34 | 0.030 | 0.050 | 15.59 |
| 20 | 19 X 32 | 0.039 | 0.059 | 9.57 |
| 18 | 19 X 30 | 0.049 | 0.069 | 6.10 |
| 16 | 19 X 29 | 0.056 | 0.076 | 4.73 |
| 14 | 19 X 27 | 0.070 | 0.090 | 2.99 |

| REQUIREMENTS PER MIL-DTL-24643/64 | | RESULT |
|---|---|---|
| **Basic Electrical:** | | |
| Voltage Rating: | | 600 V |
| Voltage Withstand (Volts RMS, minimum) | | |
| - Conductor to Conductor | | 2000 V |
| - Conductor to Shield | | 1000 V |
| Conductor Resistance (/1000 feet @ 25°C, maximum) | | See Table |
| Insulation Resistance (/1000 feet, minimum) | | 500 MΩ |
| Conductor and Shield Continuity | | No Failure |
| Jacket Flaws | | No Failure |
| **Group A - Visual and Dimensional** | | No Failure |
| **Group B – Insulation Strength** | | |
| Thermoset Proof Test (Insulation and jacket @ 200°C, maximum) | | 50% |
| Tensile Strength (un-aged, minimum) | Insulation: | 1800 lb/in$^2$ |
| | Jacket: | 1200 lb/in$^2$ |
| Elongation (un-aged, minimum) | Insulation: | 250% |
| | Jacket: | 150% |
| **Group C - Physicals (aged) Insulation and Jacket** | | |
| Tensile Strength (percent of un-aged, minimum) | | 80% |
| Elongation (percent of un-aged, minimum) | | 80% |
| Shrinkage | | No Failure |
| Heat Distortion (percent of un-aged, maximum) | | 30% |
| **Group D – Flame Tests** | | |
| Flame Propagation (finished cable) | | No Failure |
| **Qualification Inspection** | | |
| Acid Gas Equivalent (Insulation, Shield and Jacket) | | Pass |
| Halogen Content | | Pass |
| Smoke Index | | Pass |
| Toxicity Index | | Pass |





CHAMPLAIN CABLE
Champlain Cable Corporation
175 Hercules Drive
Colchester, Vermont 05446
P 800.451.5162
F 802.654.4224
sales@champcable.com