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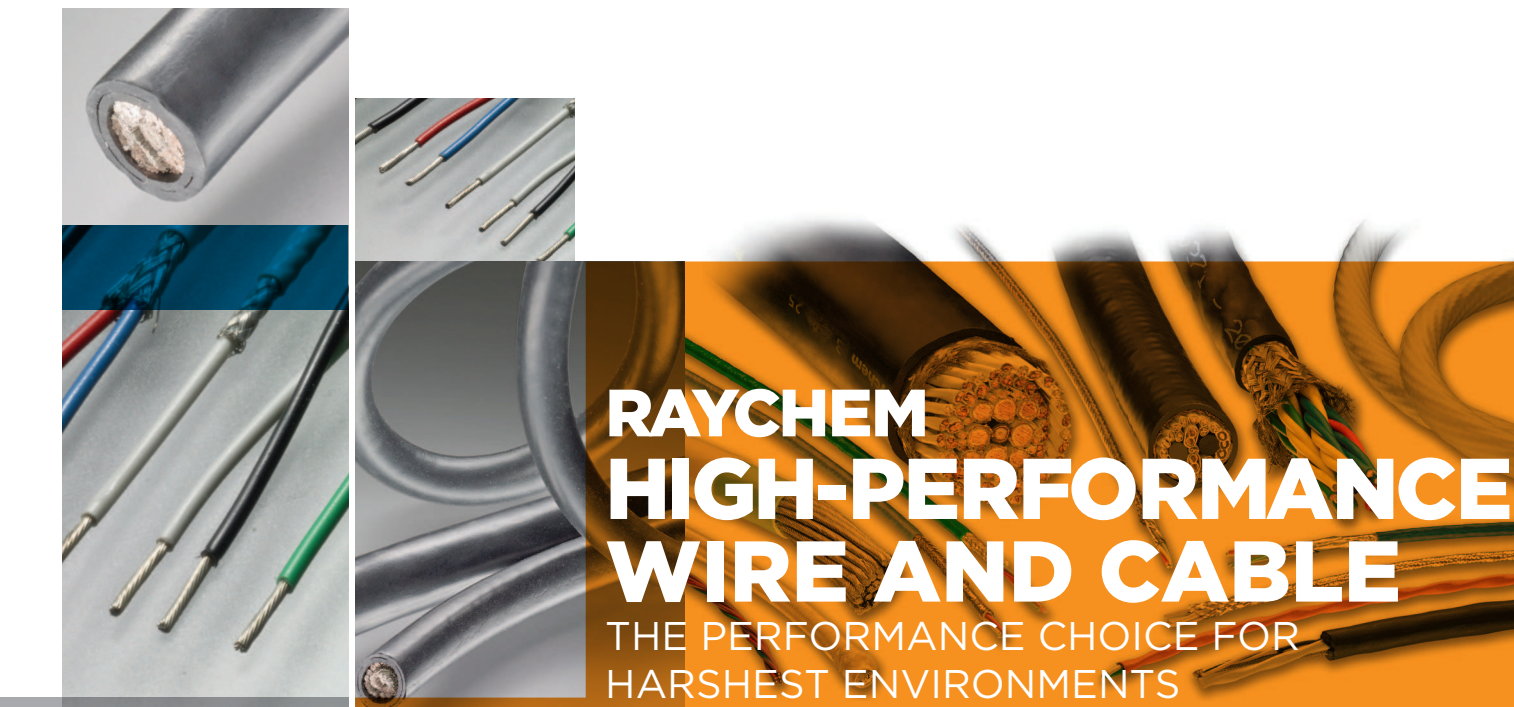
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Consult TE for the latest dimensions and design specifications.

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## QUICK REFERENCE GUIDE

### High Performance

- Meet your application challenges . . . from harsh to harshest
- Compatible with full range of connectors and harnessing components

### Space and Weight Savings

- Wide range of advanced cross-linked insulations and jackets
- Choice of tin-, nickel-, or silver-plated copper/copper alloy conductors

| Aerospace         |   |                       |                        |                                      |                |                   |                              |                              |                 |
|-------------------|---|-----------------------|------------------------|--------------------------------------|----------------|-------------------|------------------------------|------------------------------|-----------------|
| Product Family    |   | Conductor Sizes (AWG) | Temperature Range (°C) | Insulation Material                  | Voltage (V)    | Conductor Options |                              |                              | Colors          |
| SPEC 44 (AS81044) | Military Aerospace<br>Commercial Aerospace<br>In-Flight Entertainment<br>Space Applications<br>Satellites | 26 to 1/0             | -65 to 150             | Radiation-Cross-Linked PVDF          | 600/1000/2500  | Tin-Plated Copper | Nickel-Plated Copper / Alloy | Silver-Plated Copper / Alloy | All             |
| SPEC 55 (AS22759) |   | 30 to 4/0             | -65 to 200             | Radiation-Cross-Linked ETFE          | 450/600/1000   | Tin-Plated Copper | Nickel-Plated Copper / Alloy | Silver-Plated Copper / Alloy | All             |
| SPEC 80           |   | 30 to 4/0             | -65 to 200             | Radiation-Cross-Linked Flexible ETFE | 600/1000/2000* | Tin-Plated Copper | Nickel-Plated Copper / Alloy | Silver-Plated Copper / Alloy | All             |
| SHF-260           | Helicopters<br>Engines  | 24 to 4/0             | -65 to 260             | Modified PFA                         | 1000           | —                 | Nickel-Plated Copper         | —                            | Black and White |

| Marine                             |  |   |                        |  |                    |                   |                              |                              |             |
|------------------------------------|--|---|------------------------|--|--------------------|-------------------|------------------------------|------------------------------|-------------|
| Product Family                     |  | Conductor Sizes (AWG)                                       | Temperature Range (°C) | Insulation Material                            | Voltage (V)        | Conductor Options |                              |                              | Colors      |
| ZHPCG / ZHI (Class 5 & Class 6)    | Military Naval Applications<br>Military Electronics<br>Shipboard Weapon<br>Systems<br>Shipboard Communication<br>Systems<br>Offshore Marine<br>Applications<br>Umbilicals / Tethers<br>Drilling and Pumping<br>Equipment | 1.5 mm² to 400 mm²  | -45 to 125             | Radiation-Cross-Linked Halogen-Free Polyolefin | 600/1000/1900/3000 | Tin-Plated Copper | —                            | —                            | Black       |
| FRD25S                             |  | 8 to 4/0  | -55 to 125             | Flexible Diesel-Resistant Polyester Blend      | 1000               | Tin-Plated Copper | —                            | —                            | Black       |
| 10603                              |  | 14 to 4/0 and 250 and 350 MCM                               | -55 to 125             | Thermorad Dual Insulation                      | 600                | Tin-Plated Copper | —                            | —                            | Black       |
| SPEC 44/44M                        |  | 30 to 1/0   | -65 to 150             | Radiation-Cross-Linked PVDF                    | 600/1000/2500      | Tin-Plated Copper | Nickel-Plated Copper / Alloy | Silver-Plated Copper / Alloy | MIL-STD-681 |
| SPEC 99M                           |  | See Def Stan 61-12 Part 18 for construction available sizes | -40 to 120             | Radiation-Cross-Linked Modified Polyester      | 600/1000           | Tin-Plated Copper | —                            | —                            | MIL-STD-681 |
| 100G (VG-95218-Type 20 to Type 23) |  | 30 to 4/0   | -55 to 125             | Halogen-Free Polymer                           | 750/1300           | Tin-Plated Copper | —                            | —                            | MIL-STD-681 |

| Ground                             |   |                               |                             |  |                    |                   |                              |                              |                        |
|------------------------------------|---|-------------------------------|-----------------------------|--|--------------------|-------------------|------------------------------|------------------------------|------------------------|
| Product Family                     |   | Conductor Sizes (AWG)         | Temperature Range (°C)      | Insulation Material                            | Voltage (V)        | Conductor Options |                              |                              | Colors                 |
| ZHPCG / ZHI (Class 5 & Class 6)    | Grounds Systems<br>Military Ground Vehicles<br>Wheeled and Tracked<br>Vehicles<br>Amphibious Vehicles<br>Heavy and Light Trucks | 1.5 mm² to 400 mm²            | -45 to 125                  | Radiation-Cross-Linked Halogen-Free Polyolefin | 600/1000/1900/3000 | Tin-Plated Copper | —                            | --                           | Black                  |
| SPEC 44 (AS81044)                  |   | 26 to 1/0                     | -65 to 150                  | Radiation-Cross-Linked PVDF                    | 600/1000/2500      | Tin-Plated Copper | Nickel-Plated Copper / Alloy | Silver-Plated Copper / Alloy | MIL-STD-681            |
| SPEC 55 (AS22759)                  |   | 30 to 4/0                     | -65 to 200                  | Radiation-Cross-Linked ETFE                    | 450/600            | Tin-Plated Copper | Nickel-Plated Copper / Alloy | Silver-Plated Copper / Alloy | MIL-STD-681            |
| SPEC 80                            |   | 30 to 4/0                     | -65 to 200                  | Radiation-Cross-Linked Flexible ETFE           | 600                | Tin-Plated Copper | Nickel-Plated Copper / Alloy | Silver-Plated Copper / Alloy | MIL-STD-681            |
| SHF-260                            |   | 24 to 4/0                     | -65 to 260                  | Modified PFA                                   | 1000               | —                 | Nickel-Plated Copper         | —                            | White and Black        |
| PWR0113                            |   | 8 to 4/0                      | -65 to 200<br>(3000+ hours) | Fluoroelastomer                                | 600                | —                 | Nickel-Plated Copper / Alloy | —                            | Black or Red Preferred |
| FRD25S                             |   | 8 to 4/0                      | -55 to 125                  | Flexible Diesel-Resistant Polyester            | 1000               | Tin-Plated Copper | —                            | —                            | Black                  |
| 10603                              |   | 14 to 4/0 and 250 and 350 MCM | -55 to 125                  | Thermorad Dual Insulation                      | 600                | Tin-Plated Copper | —                            | —                            | Black                  |
| 100G (VG-95218-Type 20 to Type 23) |   | 30 to 4/0                     | -55 to 125                  | Halogen-Free Polymer                           | 750/1300           | Tin-Plated Copper | —                            | —                            | MIL-STD-681            |

\*2000 V is available as nonstandard part. Consult TE.

| Material Abrasion Resistance and Flexibility |                             |                     |             |
|--|-----------------------------|---------------------|-------------|
| Material                                     | Product Group               | Abrasion Resistance | Flexibility |
| FDR25  | FDR25                       | Fair                | Excellent   |
| Thermorad Dual Insulation                    | 10603                       | Good                | Good        |
| XL Halogen Free Polyolefin                   | ZHPCG                       | Good                | Good        |
| Modified PFA                                 | SHF-260                     | Good                | Good        |
| Fluoroelastomer                              | PWR0113                     | Good                | Good        |
| Radiation-Cross-Linked PVDF                  | SPEC 44                     | Very Good           | Fair-Good   |
| XL ETFE                                      | SPEC 55                     | Very Good           | Fair-Good   |
| XL Flexible ETFE                             | SPEC 80                     | Very Good           | Good        |
| XL ETFE                                      | VG-95218-Type 20 to Type 23 | Very Good           | Fair        |
| Radiation-Cross-Linked PVDF                  | VG-95218-Type 20 to Type 23 | Very Good           | Fair-Good   |

| Approvals/Specifications                              |   |
|---|---|
| Specification   | TE Wire and Cable Types                                       |
| SAE AS81044/5 to /13                                  | 81044/x   |
| SAE AS22759/32 to /35 and 22759/41 to /46             | 22759/x   |
| NEMA WC-27500   | Specific SPEC 44x and 55A parts ONLY                          |
| Defence Standard 61-12 Part 33/001 Issue 5            | Specific SPEC 55D parts ONLY                                  |
| Defence Standard 61-12 Part 18 - Type 1               | Specific SPEC 44M and SPEC 99 ONLY                            |
| Defence Standard 61-12 Part 26 - All Types            | Specific SPEC 44D ONLY  |
| VG 95218 Parts 20, 21, 22, 23, 1000                   | Specific SPEC VG ONLY   |
| NATO Stock Numbers (NSNs)                             | Exist for most standard constructions: check product offering |
| Raychem Specification SPEC 55, 55A, 55PC              | Covers all base SPEC 55 products                              |
| Raychem Specification SPEC 44                         | Covers all base SPEC 44 products                              |
| Boeing Spec BMS13-48                                  | Specify SPEC 55PC parts ONLY                                  |
| Airbus ABS 0820 through to 0826                       | Specific SPEC 55K ONLY  |
| European Space Agency 3901/012, 3901/020 and 3901/022 | Specific SPEC 55 and SPEC 99 ONLY                             |