

N (G) Type CMUC Undercarpet Wires and Cables. Type CMUC undercarpet communications wires and cables shall be listed as being suitable for undercarpet use and shall also be listed as being resistant to flame spread.

Informational Note: See ANSI/UL 2556, *Standard for Wire and Cable Test Methods*, for one method of determining that cable is resistant to flame spread in accordance with the FV-2/VW-1 flame test.

N (H) Communications Wires. Communications wires, such as distributing frame wire and jumper wire, shall be listed as being resistant to the spread of fire.

Informational Note No. 1: See UL Flame Exposure, Vertical Flame Tray Test in ANSI/UL 1685-2015, *Standard for Safety for Vertical-Tray Fire-Propagation and Smoke-Release Test for Electrical and Optical-Fiber Cables*, for one method of defining cable flame resistance to the spread of fire where the cables do not spread fire to the top of the tray. The smoke measurements in the test method are not applicable.

Informational Note No. 2: See CSA Vertical Flame Test — Cables in Cable Trays, as described in CSA C22.2 No. 0.3-09 (R2019), *Test Methods for Electrical Wires and Cables*, for another method of defining resistance to the spread of fire is for the damage (char length) of the cable to not exceed 1.5 m (4 ft 11 in.).

N (I) Optional Markings. Cables shall be permitted to be surface marked to indicate special characteristics of the cable materials.

Informational Note: These markings can include, but are not limited to, markings for limited-smoke, halogen-free, low-smoke halogen-free, and sunlight resistance.

800.180 Grounding Devices. Where bonding or grounding is required, devices used to connect a shield, a sheath, or non-current-carrying metallic members of a cable to a bonding conductor or grounding electrode conductor shall be listed or be part of listed equipment.

Δ 800.182 Cable Routing Assemblies and Communications Raceways. Cable routing assemblies and communications raceways shall be listed in accordance with 800.182(A) through (C). Cable routing assemblies shall be marked in accordance with Table 800.182(a). Communications raceways shall be marked in accordance with Table 800.182(b).

Informational Note: See ANSI/UL 2024-5-2015, *Cable Routing Assemblies and Communications Raceways*, for information on listing requirements for both communications raceways and cable routing assemblies.

TABLE 800.182(a) Cable Routing Assembly Markings

Type	Marking
Plenum Cable Routing Assembly	Plenum Cable Routing Assembly
Riser Cable Routing Assembly	Riser Cable Routing Assembly
General-Purpose Cable Routing Assembly	General-Purpose Cable Routing Assembly

TABLE 800.182(b) Communications Raceway Markings

Type	Marking
Plenum Communications Raceway	Plenum Communications Raceway
Riser Communications Raceway	Riser Communications Raceway
General-Purpose Communications Raceway	General-Purpose Communications Raceway

Δ (A) Plenum Cable Routing Assemblies and Plenum Communications Raceways. Plenum cable routing assemblies and plenum communications raceways shall be listed as having adequate fire-resistant and low-smoke-producing characteristics.

Informational Note No. 1: See ASTM E84-19B, *Standard Test Method for Surface Burning Characteristics of Building Materials*, or ANSI/UL 723-2018, *Standard Test Method for Surface Burning Characteristics of Building Materials*, for one method of defining cable routing assemblies and communications raceways that have adequate fire-resistant and low-smoke-producing characteristics and exhibit a maximum flame spread index of 25 and a maximum smoke developed index of 50.

Informational Note No. 2: See NFPA 262-2019, *Standard Method of Test for Flame Travel and Smoke of Wires and Cables for Use in Air-Handling Spaces*, for another method of defining communications raceways that have adequate fire-resistant and low-smoke-producing characteristics and exhibit a maximum peak optical density of 0.50 or less, an average optical density of 0.15 or less, and a maximum flame spread distance of 1.52 m (5 ft) or less.

Informational Note No. 3: See 4.3.11.2.6 or 4.3.11.5.5 of NFPA 90A-2021, *Standard for the Installation of Air-Conditioning and Ventilating Systems*, for information on materials exposed to the airflow in ceiling cavity and raised floor plenums.

Δ (B) Riser Cable Routing Assemblies and Riser Communications Raceways. Riser cable routing assemblies and riser communications raceways shall be listed as having adequate fire-resistant characteristics capable of preventing the carrying of fire from floor to floor.

Informational Note: See ANSI/UL 1666-2017, *Standard Test for Flame Propagation Height of Electrical and Optical-Fiber Cable Installed Vertically in Shafts*, for one method of defining fire-resistant characteristics capable of preventing the carrying of fire from floor to floor of the cable routing assemblies and communications raceways.

Δ (C) General-Purpose Cable Routing Assemblies and General-Purpose Communications Raceways. General-purpose cable routing assemblies and general-purpose communications raceways shall be listed as being resistant to the spread of fire.

Informational Note: See ANSI/UL 1685-2015, *Standard for Safety for Vertical-Tray Fire-Propagation and Smoke-Release Test for Electrical and Optical-Fiber Cables*, for one method of defining resistance to the spread of fire where the cable routing assemblies and communications raceways do not spread fire to the top of the tray.

The application of listed communications raceways and cable routing assemblies is summarized in Tables 800.154(b) and (c). The