

- (1) In addition to the provisions of this article, service-entrance cable used for feeders or branch circuits, where installed as exterior wiring, shall be installed in accordance with Part I of Article 225. The cable shall be supported in accordance with 334.30.
- (2) Type USE cable installed as underground feeder and branch circuit cable shall comply with Part II of Article 340.

Exception: Single-conductor Type USE and multi-rated USE conductors shall not be subject to the ampacity limitations of Part II of Article 340.

338.12 Uses Not Permitted.

Δ (A) **Service-Entrance Cable.** Type SE cable shall not be used under the following conditions or in the following locations:

- (1) Where subject to physical damage unless protected in accordance with 230.50(B)
- (2) Underground with or without a raceway
- (3) For exterior branch circuits and feeder wiring unless the installation complies with Part I of Article 225 and is supported in accordance with 334.30 or is used as messenger-supported wiring as permitted in Part II of Article 396

(B) **Underground Service-Entrance Cable.** Type USE cable shall not be used under the following conditions or in the following locations:

- (1) For interior wiring
- (2) For aboveground installations except where USE cable emerges from the ground and is terminated in an enclosure at an outdoor location and the cable is protected in accordance with 300.5(D)
- (3) As aerial cable unless it is a multiconductor cable identified for use aboveground and installed as messenger-supported wiring in accordance with 225.10 and Part II of Article 396

Cables marked only as "Type USE service-entrance cable" are not required to have a flame-retardant covering, according to the definition of cable, service entrance (Type USE) in Article 100.

338.24 Bending Radius. Bends in Types USE and SE cable shall be so made that the cable will not be damaged. The radius of the curve of the inner edge of any bend, during or after installation, shall not be less than five times the diameter of the cable. For flat cables, the major diameter dimension of the cable shall be used to determine the bending radius.

Part III. Construction Specifications

338.100 Construction.

(A) **Assemblies.** Cabled assemblies of multiple single-conductor Type USE conductors shall be permitted for direct burial. All conductors shall be insulated.

Informational Note: The term "cabled" refers to a manufacturing process of twisting single conductors together and may also be referred to as "plexed."

(B) **Uninsulated Conductor.** Type SE or USE cable with an overall covering containing two or more conductors shall be permitted to have one conductor uninsulated.

338.120 Marking. Service-entrance cable shall be marked as required in 310.8. Cable with the neutral conductor smaller than the ungrounded conductors shall be so marked.

ARTICLE 340

Underground Feeder and Branch-Circuit Cable: Type UF

Part I. General

340.1 Scope. This article covers the use, installation, and construction specifications for underground feeder and branch-circuit cable, Type UF.

340.6 Listing Requirements. Type UF cable and associated fittings shall be listed.

Part II. Installation

340.10 Uses Permitted. Type UF cable shall be permitted as follows:

- (1) For use underground, including direct burial in the earth.
- (2) As single-conductor cables. Where installed as single-conductor cables, all conductors of the feeder or branch circuit, including the grounded conductor and equipment grounding conductor, if any, shall be installed in accordance with 300.3.
- (3) For wiring in wet, dry, or corrosive locations.
- (4) Installed as nonmetallic-sheathed cable. Where so installed, the installation and conductor requirements shall comply with Parts II and III of Article 334, except for 334.12(B), and shall be of the multiconductor type.
- (5) As single-conductor cables as the nonheating leads for heating cables as provided in 424.43.
- (6) Supported by cable trays. Type UF cable supported by cable trays shall be of the multiconductor type.

Informational Note: See 310.14(A)(3) for temperature limitation of conductors.

340.12 Uses Not Permitted. Type UF cable shall not be used as follows:

- (1) As service-entrance cable
- (2) In commercial garages