

(a) *Flameproof and Explosionproof Enclosures.* Conduit seals shall be required for connections to enclosures that are required to be flameproof or explosionproof, in accordance with 505.16(B)(1) and (B)(2). All portions of the conduit run or nipple between the seal and enclosure shall comply with 505.16(B).

(b) *Conduits Between Zone 2 and Unclassified Locations.* Conduit seals shall be required in each conduit run passing from a Zone 2 location into an unclassified location. The conduit seals and conduit run shall comply with all the following:

- (1) The sealing fitting shall be permitted on either side of the boundary of the location within 3.05 m (10 ft) of the boundary.
- (2) The sealing fitting shall be designed and installed to minimize the amount of gas or vapor within the Zone 2 portion of the conduit from being communicated to the conduit beyond the seal.
- (3) Threaded rigid metal conduit (RMC) or threaded intermediate metal conduit (IMC) shall be used between the sealing fitting and the point at which the conduit leaves the Zone 2 location, and a threaded connection shall be used at the sealing fitting.
- (4) There shall be no union, coupling, box, or fitting between the conduit seal and the point at which the conduit leaves the Zone 2 location except for listed explosionproof reducers at the conduit seal.
- (5) Conduits shall be sealed to minimize the amount of gas or vapor within the Zone 2 portion of the conduit from being communicated to the conduit beyond the seal.
- (6) Such seals shall not be required to be flameproof or explosionproof but shall be identified for the purpose of minimizing passage of gases under normal operating conditions and shall be accessible.

(c) *Conduits Passing Through a Zone 2 Location.* Metal conduit containing no unions, couplings, boxes, or fittings and passing completely through a Zone 2 location with no fittings less than 300 mm (12 in.) beyond each boundary shall not be required to be sealed if the termination points of the unbroken conduit are in unclassified locations.

(d) *Conduit Systems Ending in an Unclassified Location.* Conduit systems terminating in an unclassified location where a wiring method transition is made to cable tray, cablebus, ventilated busway, Type MI cable, or cable that is not installed in a raceway or cable tray system shall not be required to be sealed where passing from the Zone 2 location into the unclassified location. The unclassified location shall be outdoors or, if the conduit system is all in one room, it shall be permitted to be indoors. The conduits shall not terminate at an enclosure containing an ignition source in normal operation.

(e) *Pressurized Enclosures or Pressurized Rooms.* Conduit systems passing from enclosures or rooms that permit general-purpose equipment as a result of pressurization into a Zone 2 location shall not require a seal at the boundary.

Informational Note: See NFPA 496, *Standard for Purged and Pressurized Enclosures for Electrical Equipment*, for information on purged and pressurized equipment.

(f) *Outdoor Conduit System Segments.* Segments of above-ground conduit systems shall not be required to be sealed where passing from a Zone 2 location into an unclassified location if all the following conditions are met:

- (1) The conduit system segment shall not pass through a Zone 0 or Zone 1 location where the conduit contains unions, couplings, boxes, or fittings within 300 mm (12 in.) of the Zone 0 or Zone 1 location.
- (2) The conduit system segment shall be located entirely in an outdoor location.
- (3) The conduit system segment shall not be directly connected to canned pumps, process or service connections for flow, pressure, or analysis measurement, and so forth, that depend on a single compression seal, diaphragm, or tube to prevent flammable or combustible fluids from entering the conduit system.
- (4) The conduit system segment shall only have threaded rigid metal conduit (RMC) and threaded intermediate metal conduit (IMC) with threaded unions, couplings, conduit bodies, and fittings in the unclassified location.
- (5) The conduit system segment shall be sealed at its entry to each enclosure or fitting housing terminals, splices, or taps in Zone 2 locations.

Δ (2) **Cable Seals.** Cable seals shall be installed in accordance with 505.16(C)(2)(a) through (C)(2)(c).

(a) *Explosionproof and Flameproof Enclosures.* Cables entering enclosures required to be flameproof or explosionproof shall be sealed at the point of entrance. The seal shall comply with 505.16(D). Multiconductor or optical multifiber cables with a gas/vaportight continuous sheath capable of transmitting gases or vapors through the cable core shall be sealed in the Zone 2 location after removing the jacket and any other coverings so that the sealing compound surrounds each individual insulated conductor or optical fiber tube to minimize the passage of gases and vapors. Multiconductor or optical multifiber cables in conduit shall be sealed as described in 505.16(B)(4).

Exception No. 1: Cables passing from an enclosure or room that is unclassified as a result of Type Z pressurization into a Zone 2 location shall not require a seal at the boundary.

Exception No. 2: Shielded cables and twisted pair cables shall not require removal of the shielding material or separation of the twisted pairs if the termination is by an approved means to minimize the entrance of gases or vapors and prevent propagation of flame into the cable core.

(b) *Restricted Breathing Enclosures “nR”.* Cables entering restricted breathing enclosures required to be restricted breathing shall be sealed at the point of entrance into the enclosure. These seals shall be installed in accordance with 505.16(D).