

DIFFERENCE BETWEEN BELOW GROUND AND ABOVE GROUND CONDUIT*

The main difference between above ground and below ground conduit is its fire resistance. Above ground has a fire resistance per UL 2515 and CSA C22.2 No. 2515, meaning that the conduit will extinguish within 15 seconds after each of 5 successive applications of a flame per the UL standard. Below ground conduit meets the UL 94 HB requirement.

Dimensions, color, physical, mechanical and electrical criteria are otherwise similar between above ground and below ground conduit. Note that conduit marked for above ground use, can also be used for below ground.

WHICH CONDUIT TO INSTALL WHERE*

Above Ground

Base the diameter of conduit on the allowable wire fill per page 56-57 in this catalog. For support distance, see pages 58-61. Normally, a mid-span deflection of $\frac{3}{8}$ " (16mm) should not be exceeded.

Please note that Iron Pipe Size (IPS) type of fiberglass conduit can easily be used with standard pipe clamps. Due to the smaller outside diameter of tubular (ID) type fiberglass conduit, standard pipe clamps cannot be used with this type of conduit. Furthermore, IPS Type conduit has a larger inside diameter vs. tubular (ID) type conduit, allowing for more wire fill.

Under Bridge

For proper selection of conduit, please refer to the deflection charts shown on pages 58-61 in the Engineering Section of this catalog. After determining the weight of the cable and maximum allowable deflection (typically not exceeding $\frac{3}{8}$ " (16mm)), use the deflection charts for selection of conduit type and support distance.

Encased in Concrete (often referred to as EB quality)

For most cases, standard wall product is sufficient. Due to its high temperature rating, fiberglass conduit holds up very well for concrete encasement. This application does not include core boring (see below). If UL listed material is required, use standard wall for $\frac{3}{4}$ " - 4" diameter, and medium wall for 5" and 6" diameter.

Direct Buried (often referred to as DB quality)

For all direct buried applications, UL listed conduit should be selected. Use standard wall for $\frac{3}{4}$ " - 4" diameter, and medium wall for 5" and 6". For very deep trenches, special soil conditions or where high rate of compacting can be expected, an even heavier wall should be selected. Please contact Champion Fiberglass for any of the above situations.

Core Boring

Because of the possibility of high pressure caused by concrete, heavy wall conduit should be used for 4" - 6" diameter conduit. It is very important that the contractor/installer observes proper procedures when pumping the concrete into the core. If excessive pressure is applied, even heavy wall conduit may fail. Please contact Champion Fiberglass for any of the above situations.

High Impact Areas, Bullet Resistant

For special applications, XWall conduit with a thickness of .25" can be used. Many of the telephone companies use this type of conduit for protection of fiber optic cables for Above Ground installations. XWall conduit has been shown to stop a .22 caliber bullet.

Disclaimer: * It is always the responsibility of the contractor/installer and or engineer to select the proper conduit for any situation. Champion Fiberglass is under no circumstances responsible for selection of conduit. Above paragraphs are strictly suggestions only.