

To Whom It May Concern:

Conduits or ducts installed under the slab of a building should be considered a wet location. In fact, the National Electrical Code designates under slab duct a wet location and requires that electrical cables be wet rated.

- Water in a duct degrades the electrical performance of indoor LAN cables in many ways. The design of the cable takes into account that it will be surrounded by mostly air. Air is a good dielectric. Water is a poor dielectric. When the cable is surrounded by water the impedance drops resulting in the Return Loss of the cable degrading and possibly failing.
- If the water penetrates the cable jacket, it will wick throughout the cable. Again, water is a poor dielectric and caused the insertion loss to increase. If the cable runs are short, the loss may not fail the TIA limits but is still is substantially worse and in time it will fail.
- Water will be absorbed into the jacket materials. Indoor cables are usually jacketed with a PVC type material. PVC will absorb water. In time, the jacket properties will degrade and the cable will no longer be suitable for its intended use.
- Once water gets into the cable, it is impossible to get it out. The water will wick through the interior of the cable due to capillary action. The rip cord also acts as a wick. Any exposed copper will corrode and eventually fail.
- The test reports of the affected cables will generally show major Insertion Loss failures and large and irregular Return Loss failures at low frequencies.

Indoor cables that have been exposed to water in ducts or conduits must be replaced. Mohawk will not warranty the cable after exposure to water.

Mohawk recommends the use of Outside Plant Cables or Indoor/Outdoor VersaLAN style cables that are designed for wet locations. The interior of these cables is gel filled so that in the event water gets through the jacket it will not migrate through out the cable. The jacket is not PVC and is impervious to water.

It is even safe to pull the cables through a wet duct because the cable is completely filled and will not let water migrate into the core.