



Recommendations for Qualifying or Replacing Electrical Wire and Cable Exposed to Floodwaters

Electrical wire and cables exposed to floodwaters are recommended to be replaced to assure a reliable and safe electrical installation and operation. Wire and cable components that are exposed to water or the ingress of moisture, may be damaged due to corrosion, contaminants, or mildew. This damage can result in conductor, insulation or termination failures. If the components have been subjected to saltwater during hurricanes, storm surge, or inland flooding, including where there may be high concentrations of chemicals, oils, and etc., there is a serious risk of severe damage.

Low voltage cables rated less than 2000 volts and listed for wet locations (W), such as THWN-2 and XHHW-2, may be suitable for continued use if no contaminants are present in the cable. However, there may be problems that show up later because of corrosion to the conductor or termination, which could result in overheating of the conductor. Therefore, an insulation resistance test should be conducted before the water exposed cable is energized.

If water is detected and not completely purged from medium-voltage cables rated over 2,000 volts, it could accelerate insulation deterioration (treeing), causing premature failure and reduced cable life. A partial discharge electrical test is recommended before placing these cables in service.

Wire or cable systems that have been exposed to contaminated floodwater need to be examined by qualified personnel, such as a licenced electrical contractor, to determine if the cable needs to be potentially purged and/or tested or replaced prior to being re-energized. Flood damaged cable may not fail immediately when energized, so if the cable does not fail immediately, it should not be assumed it is not damaged. Flood damaged cable may take months to fail due to the damage described above caused by floodwaters.

Reference: <http://www.nema.org/Standards/Pages/Evaluating-Water-Damaged-Electrical-Equipment.aspx>

The above is not intended to be an exhaustive list of all possible risks or concerns related to floodwater exposure. For additional questions, please refer to your product literature or contact General Cable's Inside Sales at 1.800.243.8020.