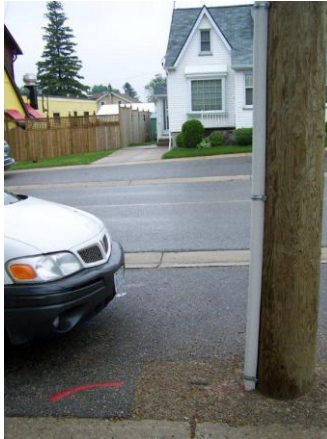


OVERVIEW

The following bulletin provides information which LDCs may find of value when they are evaluating the suitability of PVC, power cable guards for use on the distribution system in riser/dip pole applications. Conduit and u-guard are the 2 types of guards being discussed in this bulletin. PVC (Polyvinyl Chloride) power cable guards are a rigid nonmetallic conduit or u-guard that are used in some distribution systems and come in different types including schedules 40, 80, and 120. The different schedules are used to identify the PVC with different dimensions (ex. wall thickness) and strengths (ex. Resistance to crush). Many LDCs currently use only schedule 40 PVC power cable guards; however this may not be sufficient to meet the need in all instances. Items such as cars, shovels, plows, etc. may damage the power cable guard thereby risking damage to the cable.



REFERENCES OF INTEREST

1. A NEC current requirement for Rigid PVC Conduit (Article 352) states the following, as a Fine Print Note (FPN). “PVC Conduit, Type Schedule 80, is identified for areas of physical damage.” This quotation can be found under the section for PVC conduit used, exposed in areas of physical damage.
2. OESC – Rule 12-1100 Use; Rigid PVC conduit is permitted to be used for exposed and concealed work above and below ground.
3. OESC- Rule 12-1106 Mechanical protection; Rigid PVC conduit shall be protected where exposed to mechanical injury either during installation or afterwards.

ESA RECOMMENDS

ESA recommends LDCs review their current approved standard designs to ensure that suitable mechanical protection shall be installed in the field. The LDC may determine that different equipment is required in different situations, or that metallic u-guard placed over top of the PVC guard should be used in certain situations to ensure suitable mechanical protection is achieved.

In the event an LDC directs that schedule 40 rigid nonmetallic conduit underground is transitioned to a schedule 80 above ground, ESA recommends that LDCs address how staff are to deal with the ledge which is created. The internal diameter of schedule 80 will produce a ledge inside the conduit at the transition. This ledge could damage conductors during pulling and may need to be addressed.

ADDITIONAL INFORMATION

Information requests and follow-up may be directed to ESA at Utility.Regulations@ElectricalSafety.on.ca. For questions on this bulletin please be prepared to quote Bulletin “DB-06/15”.