



### Technical Bulletin

January 5, 2017

Subj: Plenum rated cables and pulling and installation practices in cold weather

'Tis the Season for the dreaded “Cold Pull”. During the winter months Liberty typically sees claims of cable jackets cracking and splitting from customers. In almost every instance the product exhibits splits and cracks every couple of feet. This is not a defective cable but is an example of incorrect installation procedure by the installer. Plenum compounds are very stiff due to the additions of chemicals to prevent flame spread and smoke generation. Cold temperatures cause this to become very brittle and when the cable is flexed – the jacket shatters and/or cracks as shown below:



These cracks can split across as shown on very round cables or longitudinally on twisted cables. Another issue is side impact cracking. A plenum cable that is in shipment or stored at or below freezing can crack when a lateral impact occurs such as reels jostling on a pallet that are not individually padded to protect the cables.

Every Liberty Wire and Cable Plenum specification sheet contains this text:

**“Special Instructions:** Plenum wire should be conditioned for 24 hours at room temperature prior to installation and never installed below 0°C ambient temperature.”

The customer should ensure the plenum rated wire is not stored in a trailer, shed, or external storage and then installed. The cable should be conditioned, that is stored, at room temperature (68°F or 20°C) and then never installed when the ambient temperature is below freezing (32°F or 0°C).

This document may be shared outside of Liberty Wire and Cable.

Ralph Parrett  
Director of Quality & Technical Services  
[rparrett@libav.com](mailto:rparrett@libav.com)