

Teledyne Reynolds can apply the Hi/Pure™ Low Corona Discharge option to any new or existing PFA wire designs that have natural insulation, i.e., no coloring. The end products are ultra pure high voltage wires that are designed to operate in high vacuum applications requiring thousands of hours of reliability. These cables can be supplied on reels or as leads in connectorized high voltage cable assemblies. These wires are designed to meet the general requirements of specifications such as MIL-DTL-16878, MIL-W-22759, MIL-C-17, but in addition meet "higher level" performance required for low corona, high voltage applications. Unique processing and testing of these wires enables them to be used in low pressure applications such as in spacecraft or other vacuum systems.

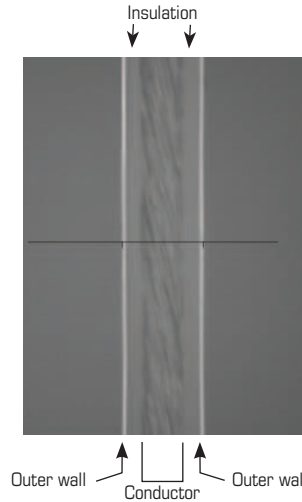
Features

Materials: The cable utilizes a High Purity (HP) Perfluoroalkoxy (PFA) insulation with less contamination within the cable insulation providing little or no internal discharges. The enhanced purity and thermal stability reduces the occurrence of voids within the insulation which are sites for the onset of corona during operation.

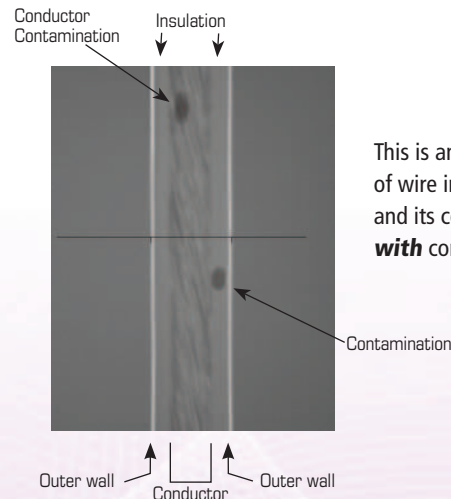
Corona Detection: Through the use of our continuous corona detection system the wire is subjected to 100% partial discharge (corona) testing at AC voltages designed to detect defects in the wire insulation. Any sections in which discharges are detected are removed before moving on to the next step, optical examination.

Optical Examination: Using our proprietary TRIVision™ visual inspection technology the final cable product is subjected to 100% reel-to-reel inspection to detect contamination as small as .001 inch (.025mm) which would otherwise produce a potential for failure under operating conditions.

TRIVision™ Visual Inspection



To the left is an example of wire insulation and its conductor **without** contamination captured by Teledyne Reynolds' proprietary visual inspection system, TRIVision™.



This is an example of wire insulation and its conductor **with** contamination.

Please note that any of our standard FEP or PFA wires can be converted to High Reliability type wires.

Applications for Hi/Pure™

- ◆ Traveling wave tubes, magnetrons and klystrons used in Space
- ◆ High voltage power supplies
- ◆ Semiconductor manufacturing equipment
- ◆ High energy physics research
- ◆ General Space use

Product numbers and specs subject to change without notice. Products listed represent only a small selection of Teledyne Reynolds' products. Please visit www.teledynereynolds.com for the most up to date product information. Contact Teledyne Reynolds' Engineering to discuss custom designs.