



RDS Wire & Cable, Inc.
225 E Gardena Blvd.
Gardena, CA 90248
PH: 310.323.7131
Email: sales@rdswire.com
www.rdswire.com

Etching of Fluoropolymer (Teflon®) Wire, Cable and Tubing Average Results of Surface Treatment

“Teflon” wire, cable and tubing can be surface treated to increase the bondability of the insulation for processes such as “potting” or sealing of a connector, or to bond an external insulation layer.

Standard Test Method ASTM D5946 is designed for Corona treated polymer films, using water contact angle measurements. Per the Standard, the following water contact angle measurements can be used as a guide for defining the level of surface treatment of polymer films such as polyolefins:

Marginal or no treatment	> 90°
Low Treatment	85° to 90°
Medium Treatment	78° to 84°
High Treatment	71° to 77°
Very High Treatment	< 71°

RDS Wire & Cable, Inc. does not have the equipment available to perform testing per ASTM D5946, however we have sent representative samples out for testing in the past, with the following results:

<u>PTFE Insulated Wire</u>	<u>Average Contact Angle</u>	<u>Dyne Test Approximation</u>
No Treatment	104°	Will not Wet
RDS Standard Etching Process	82°	30 to 32
RDS Heavy Etching Process	75°	34 to 36

RDS can perform dyne marker testing on etched product as well as epoxy potting pull testing for verification of surface treatment effectiveness. Customers may define their own standards/benchmarks or may make use of RDS’s internal standards. For those customers that require testing to ASTM D5946 or AMS 2491, an outside test lab will be needed and will require extra fees.

If you have further questions or would like to speak with our staff, please use the contact information above.