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August 11, 2020

Re: Coefficient of Friction (CoF) and Maximum Sidewall Pressure

Product: Southwire® SIMpull® Products

Southwire® SIMpull® products are designed to be installed without the use of pulling lubricant. They are the result of extensive design and testing at our Research and Development facility (Cofer Technology Center) as well as at numerous job sites. We determined the proper Coefficient of Friction (CoF) to use in pull calculations for each product type through this testing and through correlation of the results with pull calculations. We stand behind the values used in the Southwire® Cable Pull Calculator available on our website at [www.southwire.com/calculator-simpull](http://www.southwire.com/calculator-simpull).

Those values are:

- 0.14 for SIMpull® THHN/THWN(-2) and SIMpull® T90
- 0.16 for SIMpull® XHHW-2 and SIMpull® RW90
- 0.20 for Medium Voltage products utilising a SIMpull® PVC jacket.

The CoF is a dimensionless constant ratio.

These values apply for any NEC approved conduit type. For products without SIMpull® technology (i.e. USE-2/RHH/RHW-2 and PV conductors) that are installed without pulling lube, we use a CoF value of 0.35. For installations with pulling lube, please consult the lube manufacturer for CoF values.

When the 4<sup>th</sup> Edition of our Power Cable Manual was published in 2005, the recommended maximum sidewall pressure values for our products were lower than they are now. We constantly update our products and improve their characteristics whenever possible while still meeting the relevant NEC/UL/CEC/CSA/ICEA/ASTM/IEEE/... codes and standards. For Southwire® SIMpull® products in sizes 10 AWG and smaller, we currently recommend a maximum sidewall pressure of 500 lbs/ft. For all other sizes we recommend a maximum sidewall pressure of 1000 lbs/ft. These values are used in our pull calculator.

A handwritten signature in black ink, appearing to read "Dave Watson".

Dave Watson  
Principal Engineer  
Codes & Standards  
Applications Engineering  
Southwire® Company LLC