



EDITION 5
VOLUME 1

20 TOP REASONS TO CONVERT TO SIMpull® CABLE-IN-CONDUIT (CIC)

Written by Dr. Yuhsin Hawig, VP of Applications Engineering and Erika Akins, Chief Applications Engineer



ONE-STOP SHOP

Southwire is the **only** North American supplier that manufactures a full line of wire and cable products pre-assembled in an HDPE conduit and equipped with couplers and fittings, if required.



2021 INFRASTRUCTURE BILL

Southwire's versatile SIMpull® Cable-In-Conduit (CIC) products can make a tremendous impact on many future projects covered by the 2021 Infrastructure Bill, which includes energy electrification, EV charging, airports, water systems, electrical grid upgrades, and more.



QUALITY SOURCING & MANUFACTURING

A premium grade of HDPE resin and other raw materials are sourced from quality vendors. Southwire utilizes continuous

improvement of manufacturing processes to extrude a ruggedized HDPE conduit over a single conductor or an assembly of different types of cables. Our HDPE exhibits an excellent flexural modulus, ultimate tensile strength, and slow crack growth resistance.



ENHANCED JOBSITE SAFETY

The All-in-One CIC installation method minimizes field injuries and reduces loss time.



IMPROVED SYSTEM RELIABILITY

SIMpull® CIC reduces cable damage during shipment, handling, and installation; prevents the cable jacket from being punctured, torn, or ripped during cable pulls; and protects cables from weather, wildlife, accidental dig-ins, and nearby construction projects or utility repairs or upgrades.



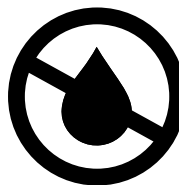
FULL QUALIFICATIONS

Mechanical properties before & after thermal aging, direct burial evaluations with crush and impact, deflection under heat and load, low temperature handling or drop, moisture penetration, and water absorption tests have been completed.



2 UL CERTIFICATIONS

Southwire's SIMpull® Cable-In-Conduit (CIC) has been tested and qualified to the applicable UL standards helping ensure that you receive UL certified cables in UL certified HDPE conduit.



HYDROPHOBIC

HDPE is hydrophobic in nature and repels water with a low moisture vapor transmission rate compared to PVC, which is much more hydrophilic and absorbs water quickly.



MULTIPLE INDUSTRY STANDARDS

Fully compliant with multiple industry standards including NFPA 70 NEC®, UL-1990, UL-651A, NEMA TC-7, ASTM D3350, ASTM D3485, ASTM F2160, and CSA C22.2 No. 327-18 for the conduit and UL 514B for the cable fittings.



100+ DESIGNS AVAILABLE

8 different trade sizes are available for HDPE conduit: 3/4", 1", 1 1/4", 1 1/2", 2", 2 1/2", 3", and 4". There are 4 outside diameter (OD) wall thicknesses to choose from: Schedule 40, Schedule 80, EPEC 11 (SDR 11), and EPEC 13.5 (SDR 13.5). More than 10 color customization options are available using a solid color or 3 extruded color stripes to create the best visual identification for unique government or utility applications.

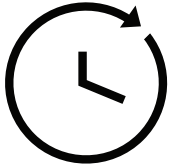




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IMPROVED JOBSITE EFFICIENCY

Pulling using a single reel saves labor and reduces installation time. Up to 25-45% time savings can be achieved. CIC can be direct buried in the ground or encased in concrete.



**REINFORCED
RESILIENT
RELIABLE**

ADVANCED ELECTRICAL MODELING

CableTechSupport™ Services provides Re3™ consultations about the custom design of reinforced cables and the support of critical infrastructure projects where resilience &

reliability are non-negotiable. Ampacity calculations and advanced electrical modeling can be conducted to validate the maximum current carrying capacity and short circuit performance of the cables under different operating or ambient conditions.



REDUCED PROJECT COSTS

Shorten outage durations, accelerate repair or upgrade efforts, extend system performance and life expectancy, and reduce cable replacement frequencies. Up to 30-50% improvement in the overall life cycle cost can be obtained.



END USER APPROVALS

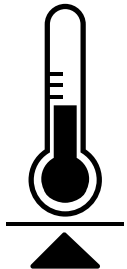
Southwire's SIMpull® CIC has been utilized by end users in various applications, including the US Department of Transportation (DOT), the US Department of Energy (DOE), commercial

constructions, EV infrastructure expansions, Utility grid-hardening efforts, airports, mass transit, renewables, petrochemical, agriculture, and data centers.



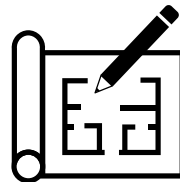
PRE-LUBRICATED

A low-friction lubricant is applied during the HDPE extrusion process to prevent the cables from adhering to the inside of the conduit wall and to ensure free cable movement.



EXCELLENT THERMAL STABILITY

Conduit is made of a high molecular weight and high-density polyethylene (HDPE) with a superior thermal resistance due to its higher melting point compared to rigid PVC pipes.



CABLE COMPATIBILITY

Any wet-rated cables, including USE-2, RHW/ RHW-2, XHHW-2, underground MV & 600V cables, power and control, grounding cables, etc., can be extruded with an HDPE conduit to create cable-in-conduit (CIC).

CIC is suitable for secondary (600V) and primary (5-46kV) undergrounding in the USA, Canada, and Central and South America.



CERTIFIED TESTING FACILITY

Qualifications were performed at Southwire's D.B. Cofer Technology Center, an ISO-17025 accredited facility and a UL and CSA certified laboratory, specializing in electrical, mechanical, thermal qualifications, and accelerated aging tests.



**RESPOND
RECTIFY
RESTORE**

FIELD & EMERGENCY SERVICES

CableTechSupport™ Services delivers Re3™ field assistance to respond to jobsite emergencies and helps to rectify or restore interruptions through cable inspections, diagnostic testing, Go vs. No-Go determinations, or hands-on cable repairs.



ENVIRONMENTAL SUSTAINABILITY

HDPE conduit is made of a simple and pure formulation with a neat polyethylene-based resin. HDPE is lead-free and naturally halogen-free with a zero-acid gas emission.

