EDITION 1
VOLUME 1

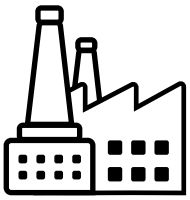
15 THINGS YOU DIDN'T KNOW ABOUT

SOUTHWIRE'S ROMEX® BRAND SIM*pull*® NM-B CABLE

MADE IN AMERICA

All raw materials, including the solid or stranded copper conductor, compounds, cable components, and the finished cables are Made in America.

Southwire's Romex® Brand SIM*pull*® NM-B cable is fully compliant with the Buy America requirements for 49 U.S.C. § 5323(j), as well as the Federal Transit Administration Buy America requirements found in 49 C.F.R. part 661 and the USMCA for North American trade.

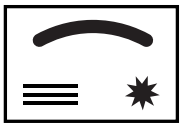


SINGLE MANUFACTURER

All aspects of production for Southwire's NM-B cable, from drawing, annealing, extruding, cabling, to jacketing, printing, testing, and packaging, take place at one of Southwire's ISO-registered facilities.

PRODUCED USING SCR® TECHNOLOGY

Southwire Continuous Rod (SCR®) Systems provide more than half of the copper rod continuous-casting capacity in the world. For Southwire's Romex® Brand SIM*pull*® NM-B cable, this copper rod is transformed into fully annealed, pure copper conductors.



GLOBAL STANDARD COMPLIANCE

Southwire's Romex® Brand SIM*pull*® NM-B Cable is UL Listed per UL-719 and is compliant with National Electrical Code (NEC) Article 334 requirements for NEC installations. Residential wiring made with copper conductors are also installed as branch circuits outside of the USA and are recognized by many global standards, including Canada (CSA), Mexico (ANCE-NOM), Germany (DE), and Europe (IEC).

OVERLOAD CURRENT TESTED

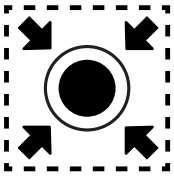
Southwire's 600V rated 14 AWG Copper NM-B has been exposed to 40 Amps of overload current for 1 hour per the flow test detailed in UL-719.

The coiled test sample passed the 5000 Volts RMS voltage test while immersed in a water bath.

ELECTRICAL CONDUCTIVITY

Pure copper yields the highest electrical conductivity and the lowest DC resistance. Higher conductivity generates a greater ampacity for a given wire size.

It is better to use pure copper conductor in residential circuits, which are classified as low frequency applications, as the AC current flows through the entire area conductor without the "skin effect".



PHYSICAL COMPACTNESS

Copper NM-B allows for the smallest conductor size to be used to carry the highest desired current rating. Installers can use the most compact electrical box size which will allow for pigtail wiring. Copper NM-B cable has established physical characteristics with consistent tensile & elongation properties.

Southwire®

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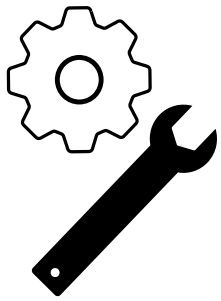
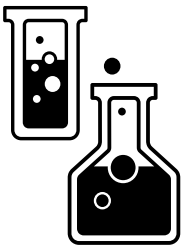


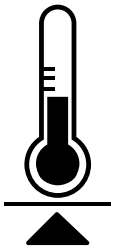
MECHANICAL DURABILITY

Romex® Brand SIM*pull*® NM-B cable experiences less damage during backstabbing of dry wall boxes, installation of receptacles, splicing, and termination. The cable has excellent resistance to metal fatigue that can occur with repeated and reverse bending. The cable's durability helps to minimize call-back frequencies and prevent rework.



CHEMICAL BENEFITS

A patented formulation is used for the lead-free PVC sheath to help reduce the coefficient of friction during installation. This SIM*pull*® technology supports a safe and efficient cable pull. The pure copper conductor also minimizes the risks for bimetallic galvanic corrosion.

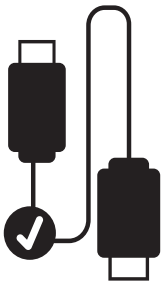


THERMAL STABILITY

Copper has an excellent stability when exposed to extreme thermal cycling. Aluminum has a lower melting point and a linear thermal expansion coefficient that is 41% higher than that of copper.

DECADES OF FIELD FEEDBACK AND BRAND RECOGNITION

Approximately 2 million feet of Southwire's copper NM-B is installed in residential branch circuits in the USA each day. Southwire's Romex® Brand is one of the most recognized & trusted brand names for electrical wires in North America.

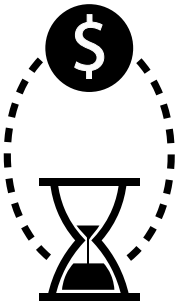


COMPATIBLE DEVICES

Many low-cost, commercially available devices are compatible with Romex® Brand SIM*pull*® NM-B cable. Installers do not need to worry about using mismatched devices or choosing the wrong twist-on wire connectors (commonly referred to as a Wire-Nut®) or screw types.

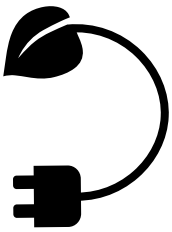
EFFICIENT STRIPPING TOOLS

Southwire offers specific stripping tools to be paired with Romex® Brand SIM*pull*® NM-B cable. Our Romex® NM-B Wire Stripper and our Romex® BOX*Jaw*™ Wire Stripper for 12/2 and 14/2 Romex® Brand wire help ensure the cables are stripped safely, efficiently, and without damage to the wire.



OVERALL PROJECT & LIFE CYCLE COST

The use of Southwire's Romex® Brand SIM*pull*® NM-B results in the lowest overall project and life cycle cost when considering materials & labor, ease of backstabbing, fewer errors during termination or splicing, use of common devices, and reduced risk of rework.



RECYCLABILITY & SUSTAINABILITY

Southwire's Romex® Brand SIM*pull*® NM-B is considered environmentally friendly due to the full recyclability of pure annealed copper. It is also considered sustainable because it is compliant with RoHS and REACH.

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A Re³™ PUBLICATION PEER-REVIEWED & APPROVED

BY SIX SUBJECT MATTER EXPERTS FROM SOUTHWIRE'S ENGINEERING COMMITTEE

WRITTEN BY

DR. YUHSIN HAWIG

VP, ENGINEERING

25 years of material science expertise with the focus on life expectancy of wire & cables, long-term electrical, thermal, mechanical, physical, and chemical properties vs. performance of metals and dielectric materials. Author of 20 technical journal publications since 2001, inventor of 5 US & international patents, and guest speaker for IEEE conferences & Southeastern Electric Exchange trade association. Writer of over 200 technical whitepapers on cable products. A diverse career path including National Institute of Standards & Technology (NIST). An active management board member for NEETRAC/Georgia Tech since 2015.

SY SHAHEEN, MBA

DIRECTOR, APPLICATIONS ENGINEERING

35 years of expertise in underground power distribution, automotive, power generations, and industrial plant projects with the emphasis on root cause & forensic analysis and operation troubleshooting. 11 years of utility transmission, sub-transmission, distribution network designs & support, as well as a specialty in safety & systems engineering for nuclear power plants.

EDWIN MARQUEZ

ENGINEERING MANAGER

15 years of designs, testing, global codes & standards compliance reviews and technical support for all products including low voltage, medium & high voltage cables. Unique cable designs for 20+ countries and in-depth knowledge of UL, ANCE, CFE, IEC, CIDEC, UNE, BASEC and VDE standards. Advanced electrical modeling and complex ampacity calculations for underground cable systems. Keynote speaker for international seminars with over 500 participants.

DAVE WATSON

PRINCIPAL ENGINEER

25 years of experience in multiple industries including Military, Aerospace, Auto-Identification, and Wire & Cable. Represents Southwire in numerous codes & standards organizations including NEC Code Making Panels 6 & 8, multiple UL and CSA standards technical panels, and NEMA and CANENA technical committees. Training instructor on "Top NEC Code Changes in 2020" and various infrastructure application seminars with over 350 participants.

MARK DULIK

CHIEF ENGINEER

36 years of hands-on electrical industry experience including residential, commercial, and industrial applications. Over 20 years of field expertise installing, maintaining and troubleshooting medium voltage cables and switchgears in industrial spaces and substations. A medium voltage cable splicer and instructor certified through NJATC with a NCSCB certificate.

CASEY SPRADLIN

CHIEF ENGINEER

18 years of cable accessories & installation experience, custom transmission and distribution cable designs & modeling, presidential award on AEIC & ICEA committee leadership, inventor for one US patent, and instructor for "Ampacity 101" with over 400 participants and trainees. Guest speaker for IEEE conferences and Southeastern Electric Exchange trade association. Field experience on conduits and cable-in-conduit (CIC) installations.

ERIKA AKINS

CHIEF ENGINEER

10 years of knowledge on codes (NEC, CEC, NESC) and standards (UL, CSA, ICEA), manufacturing quality, and end user support for wire and cable products across all markets. Training instructor on "Fundamentals of Electrical Testing" and "Renewable & Utility Applications" with over 300 participants. Winner of 2020 Wire Link Traveling Scholarship award.

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