

## Building Wire and Cable Designations by Technical Support

### Technical Information & Technical Bulletins

- THW-2:** Thermoplastic Insulation (usually PVC), **H**eat Resistant (90°C rating), suitable for **W**et locations.
- THWN-2:** Same as THW except **N**ylon jacket over reduced insulation thickness. Also rated THHN.
- THHN:** Thermoplastic Insulation (usually PVC), **H**igh **H**eat Resistant (90°C rating), dry locations only, **N**ylon jacket. Also rated THWN.
- TFFN:** Thermoplastic Insulation (usually PVC), **F**lexible **F**ixture wire, **N**ylon jacket. Also rated MTW and AWM.
- TFN:** Thermoplastic Insulation (usually PVC), **F**ixture wire, **N**ylon jacket. Also rated AWM.
- XHHW-2:** Cross-linked Polyethylene Insulation (**X**) **H**igh **H**eat Resistant (90°C rating) for **W**et and dry locations.
- RHH:** **R**ubber Insulation (we actually use cross-linked polyethylene because it qualifies for rubber), **H**igh **H**eat Resistant (90°C rating) for dry locations only.
- RHW-2:** **R**ubber Insulation (again, cross-linked polyethylene is used by most manufacturers), **H**eat Resistant (90°C), Suitable for **W**et locations.
- USE-2:** **U**nderground **S**ervice **E**ntrance. Most utilize cross-linked polyethylene insulation rated for 90°C in direct burial applications. Product is usually triple rated RHH—RHW—2-USE-2.
- MTW:** **M**achine **T**ool **W**ire. Usually thermoplastic insulation (PVC) or thermoplastic insulation with nylon jacket. Most MTW is rated 60°C. Southwire's copper type THHN is also rated MTW.
- AWM:** **A**ppliance **W**iring **M**aterial. Usually thermoplastic insulation (PVC) or thermoplastic insulation with nylon jacket. Southwire's stranded copper type THHN in AWG sizes 14 through 6 is also rated AWM. As AWM, the product carries a 105°C rating.
- NM-B:** **N**on**m**etallic-Sheathed Cable. The "B" denotes that individual conductor insulation is rated 90°C; however, ampacity is limited to that for a 60°C conductor (see NEC Section 336-26, 1999 edition). Thermoplastic (PVC) conductor insulation-nylon jacketed, with overall PVC cable jacket.
- UF-B:** **U**nderground **F**eeder. The "B" denotes that individual conductor insulation is rated 90°C; however, ampacity is limited to that for a 60°C conductor (see NEC Section 339-3(a)(4), 1999 edition.) Thermoplastic (PVC) conductor insulation-nylon jacketed, with overall PVC cable jacket.

**SEU:**        **S**ervice **E**ntrance Cable, **U**narmored. Usually type XHHW insulated conductors with overall PVC jacket. As such, the cable is rated for 90°C dry, 75°C wet locations. Another school of thought is the "U" in the designation denotes the shape of the cable (if you look at the end, it resembles a closed "U" shape).

**SER:**        **S**ervice **E**ntrance Cable, **R**ound. Same construction material-wise as SEU, but round construction affords use of more than 3 conductors to which SEU is limited.