



**Product:** [8050](#)

Magnet Wire, #20 Sol BC, PUR/NYL Ins

[Request Sample](#)

**Product Description**

Magnet Wire, 20AWG (Solid) Bare Copper, PUR/NYL Insulation, J-W-1177/9 MW 28-C

**Technical Specifications**

**Product Overview**

|                        |                        |
|------------------------|------------------------|
| Suitable Applications: | solderable magnet wire |
|------------------------|------------------------|

**Physical Characteristics (Overall)**

**Conductor**

| AWG | Stranding | Material         | No. of Conductors |
|-----|-----------|------------------|-------------------|
| 20  | Solid     | BC - Bare Copper | 1                 |

|                  |   |
|------------------|---|
| Conductor Count: | 1 |
|------------------|---|

**Insulation**

| Material                         | Nominal Diameter | Nominal Wall Thickness |
|----------------------------------|------------------|------------------------|
| PUR/Nylon - Polyurethane + Nylon | 0.0339 in        | 0.001 in               |

**Outer Jacket**

| Max. Diameter |
|---------------|
| 0.0339 mm     |

**Construction and Dimensions**

|                     |          |
|---------------------|----------|
| Min Increase in OD: | 0.001 in |
|---------------------|----------|

**Electrical Characteristics**

**Conductor DCR**

| Nominal Conductor DCR |
|-----------------------|
| 10.1 Ohm/1000ft       |

**Current**

| Max. Recommended Current [A]               |
|--------------------------------------------|
| Single conductor in free air @ 30°C: 1.5 A |

**Voltage**

| Breakdown Voltage                    |
|--------------------------------------|
| 2700 V Minimum (at Room Temperature) |

**Temperature Range**

|                     |       |
|---------------------|-------|
| Non-UL Temp Rating: | 130°C |
|---------------------|-------|

**Mechanical Characteristics**

|                        |        |
|------------------------|--------|
| Approximate Length:    | 160 ft |
| Turns Per Linear Inch: | 29.9   |

|                                 |                |
|---------------------------------|----------------|
| Turns Per Square Inch:          | 894            |
| Bulk Cable Weight:              | 3.1 lbs/1000ft |
| Minimum Minor Axis Bend Radius: | 0.14 in        |

Standards

|                      |            |
|----------------------|------------|
| Military Compliance: | J-W-1177/9 |
|----------------------|------------|

Applicable Environmental and Other Programs

|                                              |                               |
|----------------------------------------------|-------------------------------|
| EU Directive 2000/53/EC (ELV):               | Yes                           |
| EU Directive 2003/96/EC (BFR):               | Yes                           |
| EU Directive 2011/65/EU (RoHS 2):            | Yes                           |
| EU Directive 2012/19/EU (WEEE):              | Yes                           |
| EU Directive 2015/863/EU (RoHS 2 amendment): | Yes                           |
| EU Directive Compliance:                     | EU Directive 2003/11/EC (BFR) |
| EU CE Mark:                                  | Yes                           |
| CA Prop 65:                                  | Yes                           |
| MII Order #39 (China RoHS):                  | Yes                           |

Flammability, LS0H, Toxicity Testing

|                    |     |
|--------------------|-----|
| UL voltage rating: | N/A |
|--------------------|-----|

Plenum/Non-Plenum

|               |    |
|---------------|----|
| Plenum (Y/N): | No |
|---------------|----|

Related Part Numbers

Variants

| Item # | Color | Put-Up Type | Length | UPC          |
|--------|-------|-------------|--------|--------------|
| 8050   | None  | Reel        | 1 ft   | 612825194460 |

History

|                      |                                                  |
|----------------------|--------------------------------------------------|
| Update and Revision: | Revision Number: 0.381 Revision Date: 02-03-2025 |
|----------------------|--------------------------------------------------|

© 2025 Belden, Inc

All Rights Reserved.

Although Belden makes every reasonable effort to ensure their accuracy at the time of this publication, information and specifications described here in are subject to error or omission and to change without notice, and the listing of such information and specifications does not ensure product availability.

Belden provides the information and specifications herein on an "ASIS" basis, with no representations or warranties, whether express, statutory or implied. In no event will Belden be liable for any damages (including consequential, indirect, incidental, special, punitive, or exemplary damages) whatsoever, even if Belden has been advised of the possibility of such damages, whether in an action under contract, negligence or any other theory, arising out of or in connection with the use, or inability to use, the information or specifications described herein.

All sales of Belden products are subject to Belden's standard terms and conditions of sale.

Belden believes this product to be in compliance with all applicable environmental programs as listed in the data sheet. The information provided is correct to the best of Belden's knowledge, information and belief at the date of its publication. This information is designed only as a general guide for the safe handling, storage, and any other operation of the product itself or the one that it becomes a part of. The Product Disclosure is not to be considered a warranty or quality specification. Regulatory information is for guidance purposes only. Product users are responsible for determining the applicability of legislation and regulations based on their individual usage of the product.