

Flexible Cord



Type SJEOOW and SEOOOW Flexible Cord

Applications

Type SJEOOW 300 Volt and type SEOOOW 600 Volt flexible cords are permitted for use as specified by Article 400 and related articles of the National Electrical Code. Some typical applications include wiring for industrial machinery, washing machines and various other large appliances; heavy-duty tools; motors; and temporary electrical power and lighting installations for construction sites. Type SJEOOW and SEOOOW cords are suitable for use in (i) dry locations not to exceed minimum -50°C (-58°F) or maximum 105°C (221°F) or (ii) wet locations or other applicable locations. S type cords may be completely immersed in water, or when exposed to oil or coolant at temperatures not to exceed 60°C (140°F). They are ideal for flex applications in harsh environments where the highest degree of oil resistance and extended service life are essential.

CONSTRUCTION

Type SJEOOW and Type SEOOOW flexible cords are manufactured using bare flexible stranded Class K copper conductors, and heat, moisture and oil resistant **thermoplastic-elastomer (TPE)** insulation. The insulated conductors are cabled with non-wicking polypropylene fillers, with a tissue-paper separator wrapped around the assembly for easier removal. A heat, moisture and oil resistant flexible TPE jacket is extruded over the assembly to complete the construction.

Type W Flexible Cord

Applications

Type W 2000 Volt flexible cords are permitted for use as specified by Article 400 and related articles of the National Electrical Code. Some typical applications for Type W cords include industrial and light- to medium-duty mining applications; heavy-duty service as power supply cable; AC systems (grounded and ungrounded); mobile and portable electrical equipment; motor and battery leads. Four-conductor cables may be used on two- or three-phase AC systems with one conductor used for grounding. Temperature range is -40°C (-40°F) minimum to 90°C (194°F) maximum.

CONSTRUCTION

Type W flexible cords are manufactured using fully stranded bare copper conductors, premium-grade color-coded 90°C (194°F) insulation and black rubber 90°C (194°F) rated **chlorinated polyethylene (CPE)** jacket. A polyester or paper tape separates the copper conductors from the EPDM (Ethylene Propylene Diene Monomer) rubber insulation. The insulated conductors are assembled round with fillers as needed. The cable is covered with a black CPE (chlorinated polyethylene) rubber jacket. The jacket may be applied in two layers. Two-layer jackets are reinforced by a braid of synthetic material between the layers.

Flexible Cord Usage

These flexible cords can be suspended, but must be connected to devices and to fittings so that tension is not transmitted to joints or terminals (per section 400-10 of NEC codes in which strain relievers are recommended). When used to connect utilization equipment (such as power generators), to facilitate frequent interchange, that equipment must have an attached plug.

Flexible cords are not permitted to be run through walls, structural ceilings, suspended/dropped ceilings, floors, or to be attached to building surfaces.



Flexible Cord – Material Specifications

| Flexible Cord Material Specifications | | |
|---|-----------------------------------|------------------------------------|
| Type | W | SJE00W SE00W |
| Specification | CPE Rubber | TPE |
| General Specifications | | |
| UV and Ozone Resistance | Good | Good |
| Temperature | -40°C to 90°C (-40°F to 194°F) | -50°C to 105°C (-58°F to 221°F) |
| Cold Bend Test | -40°C | -40°C |
| Abrasion and Cut-through Resistance | Good | Good |
| Flexing (# of cycles) | 15,000 | 15,000 |
| Tensile Strength (psi) @ 200% elongation | 1,200 | 800 |
| Burn Resistance | Good | Good |
| Oxidation Resistance | Good | Good |
| Water Resistance | Good | Good |
| Weld Slag (Burn) Resistance | Good | Good |
| Flame Test | | |
| UL Test Standards | FT1 and FT2 | FT1 and FT2 |
| CSA Test Standards | FT5 | FT2 |
| Chemical Resistance | | |
| Acids | Good | Good |
| Alkalines | Good | Good |
| Alcohols | Good | Good |
| Most Solvents | Good | Good |
| Oils | Good | Good |
| Gasoline | Good | Good |
| Greases | Good | Good |

| Minimum Bending Radius | | | |
|---|-------------------------------------|-------------------------------|------------------------|
| Conductor Insulation Thickness (inches) | Overall Cable Diameter, inches [mm] | | |
| | 1.000 [25.4] and less | 1.001 to 2.000 [25.4 to 50.8] | 2.001 [50.82] and over |
| Minimum Bending Radius as a Multiple of Cable Diameter | | | |
| 0.169 [4.3] and smaller | 4 [101.6] | 5 [127.0] | 6 [152.4] |
| 0.170 [4.32] and larger | 5 [127.0] | 6 [152.4] | 7 [177.8] |

Note: Dimensions are in inches. 1 inch = 1,000 mils.

Flexible Cord – Type W Round



Features

- CPE cord, 90°C (194°F), (chlorinated polyethylene) 2000 VAC maximum
- Stands up to severe environmental conditions
- Excellent flexibility and impact resistance
- Resistant to exposure to oil, acid, alkalies, heat, moisture and most chemicals
- Cable core bound for superior flexibility and toughness

Conductors

Extra flexible, fully annealed, stranded, bare copper

Insulation

Premium-grade, color-coded, 90°C (194°F) EPDM (Ethylene Propylene Diene Monomer)

Jacket

Black Rubber CPE (chlorinated polyethylene), 90°C (194°F)

Temperature range:

-40°C to 90°C (-40°F to 194°F)

Approvals

- UL Type W, File No. E308664
- CSA File No. 236844. Meets FT-5 flame test
- Meets Mine Safety and Health Admin (MSHA) flame resistance for mining applications
- OSHA
- RoHS compliant



| Type W 2000 Volt Flexible Cord | | | | | | | | |
|--------------------------------|----------------------|------------------|---------------------------------------|-----------------------------------|----------|----------------------|--------------------------|-------|
| Part Number | AWG/ # of Conductors | Conductor Strand | Nominal Insulation Thickness in. [mm] | Nominal Overall Diameter in. [mm] | Ampacity | Spool/Coil Length ft | Approximate Weight (lbs) | Price |
| W-8-4BK10 | 8/4 | 133 | 0.06 [1.52] | 0.985 [25.02] | 65 | 10 | 6.0 | <---> |
| W-8-4BK20 | 8/4 | 133 | 0.06 [1.52] | 0.985 [25.02] | 65 | 20 | 12.5 | <---> |
| W-8-4BK25 | 8/4 | 133 | 0.06 [1.52] | 0.985 [25.02] | 65 | 25 | 15.5 | <---> |
| W-8-4BK50 | 8/4 | 133 | 0.06 [1.52] | 0.985 [25.02] | 65 | 50 | 30.5 | <---> |
| W-8-4BK75 | 8/4 | 133 | 0.06 [1.52] | 0.985 [25.02] | 65 | 75 | 46.0 | <---> |
| W-8-4BK100 | 8/4 | 133 | 0.06 [1.52] | 0.985 [25.02] | 65 | 100 | 119.0 | <---> |
| W-8-4BK150 | 8/4 | 133 | 0.06 [1.52] | 0.985 [25.02] | 65 | 150 | 151.0 | <---> |
| W-8-4BK250 | 8/4 | 133 | 0.06 [1.52] | 0.985 [25.02] | 65 | 250 | 229.0 | <---> |

Ampacity values are based on 90°C conductor and 30°C ambient temperature per NEC® Table 400-5(B).

Please Note: Our prices on flexible cord are closely tied to the market price for copper. This allows us to offer the best savings possible if conditions are favorable; however, it also means that our prices may increase if market conditions warrant.

| Color Code | |
|-------------------|--------------------------|
| No. of Conductors | Color Sequence |
| 4 | White, Black, Green, Red |