

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 polyethelene (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 polyethelene) 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.



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Steppers/ Servos

Motor Controls

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Flexible Cord – Material Specifications

Flexible Cord Material Specifications		
Type	W	SJE00W SE00W
Specification	CPE Rubber	TPE
General Specifications		
<i>UV and Ozone Resistance</i>	Good	Good
<i>Temperature</i>	-40°C to 90°C (-40°F to 194°F)	-50°C to 105°C (-58°F to 221°F)
<i>Cold Bend Test</i>	-40°C	-40°C
<i>Abrasion and Cut-through Resistance</i>	Good	Good
<i>Flexing (# of cycles)</i>	15,000	15,000
<i>Tensile Strength (psi) @ 200% elongation</i>	1,200	800
<i>Burn Resistance</i>	Good	Good
<i>Oxidation Resistance</i>	Good	Good
<i>Water Resistance</i>	Good	Good
<i>Weld Slag (Burn) Resistance</i>	Good	Good
Flame Test		
<i>UL Test Standards</i>	FT1 and FT2	FT1 and FT2
<i>CSA Test Standards</i>	FT5	FT2
Chemical Resistance		
<i>Acids</i>	Good	Good
<i>Alkalines</i>	Good	Good
<i>Alcohols</i>	Good	Good
<i>Most Solvents</i>	Good	Good
<i>Oils</i>	Good	Good
<i>Gasoline</i>	Good	Good
<i>Greases</i>	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			
<i>0.169 [4.3] and smaller</i>	4 [101.6]	5 [127.0]	6 [152.4]
<i>0.170 [4.32] and larger</i>	5 [127.0]	6 [152.4]	7 [177.8]
<i>Note: Dimensions are in inches. 1 inch = 1,000 mils.</i>			

Flexible Cord – Type SJE00W



Features

- TPE cord, 105°C (221°F), (thermoplastic-elastomer) 300 VAC maximum
- Rated as hard-usage service cord
- Approved for outdoor use
- May be completely immersed in water
- Premium oil resistance and flexibility

Conductors

Extra flexible, fully annealed, stranded, Class K copper per ASTM B-174

Insulation

Premium-grade, oil-resistant, color-coded TPE (thermoplastic-elastomer)

Jacket

Premium grade, oil-resistant, black TPE
Temperature range:
-50°C to 105°C (-58°F to 221°F)

Approvals

- UL Standard 62 for Flexible Cords File No. E46194
- CSA standard 22.2 No. 49 for Flexible Cords CSA File No. 224650 Meets CSA FT-2
- MIL Spec: JC 580B
- Meets Mine Safety and Health Admin (MSHA) flame resistance for mining applications
- OSHA
- RoHS compliant



Type SJE00W 300 Volt Flexible Cord									
Part Number	AWG/ # of Conductors	Conductor Stranding (#/AWG)	Nominal Insulation Thickness in. [mm]	Nominal Overall Diameter in. [mm]	Ampacity	Spool/Coil Length ft.	Approximate Weight (lbs)	Price	
SJE00W-18-2BK250	18/2	16 X 30	0.03 [0.76]	0.290 [7.36]	10	250	11.0	<--->	
SJE00W-18-3BK250	18/3	16 X 30	0.03 [0.76]	0.310 [7.87]	10		13.8	<--->	
SJE00W-18-4BK250	18/4	16 X 30	0.03 [0.76]	0.335 [8.5]	7		16.5	<--->	
SJE00W-16-2BK250	16/2	26 X 30	0.03 [0.76]	0.315 [8.0]	13		13.5	<--->	
SJE00W-16-3BK250	16/3	26 X 30	0.03 [0.76]	0.330 [8.32]	13		16.8	<--->	
SJE00W-16-4BK250	16/4	26 X 30	0.03 [0.76]	0.360 [9.14]	10		19.5	<--->	
SJE00W-14-2BK250	14/2	41 X 30	0.03 [0.76]	0.345 [8.76]	18		17.0	<--->	
SJE00W-14-3BK250	14/3	41 X 30	0.03 [0.76]	0.370 [9.14]	18		21.0	<--->	
SJE00W-14-4BK250	14/4	41 X 30	0.045 [1.14]	0.400 [10.16]	15		26.0	<--->	
SJE00W-12-2BK250	12/2	65 X 30	0.045 [1.14]	0.415 [10.54]	25		24.3	<--->	
SJE00W-12-3BK250	12/3	65 X 30	0.045 [1.14]	0.430 [10.92]	25		30.8	<--->	
SJE00W-12-4BK20	12/4	65 X 30	0.045 [1.14]	0.475 [12.06]	20		20	3.2	<--->
SJE00W-12-4BK50	12/4	65 X 30	0.045 [1.14]	0.475 [12.06]	20		50	8.0	<--->
SJE00W-12-4BK250	12/4	65 X 30	0.045 [1.14]	0.475 [12.06]	20		250	39.3	<--->
SJE00W-10-2BK250	10/2	104 X 30	0.045 [1.14]	0.549 [13.94]	30	41.5		<--->	
SJE00W-10-3BK250	10/3	104 X 30	0.045 [1.14]	0.580 [14.73]	30	54.0		<--->	
SJE00W-10-4BK20	10/4	104 X 30	0.045 [1.14]	0.640 [16.256]	25	20		5.3	<--->
SJE00W-10-4BK50	10/4	104 X 30	0.045 [1.14]	0.640 [16.256]	25	50	13.2	<--->	
SJE00W-10-4BK250	10/4	104 X 30	0.045 [1.14]	0.640 [16.256]	25	250	69.0	<--->	

Ampacity values are based on NEC Table 400-5(A).

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
2	White, Black
3	White, Black, Green
4	White, Black, Green, Red

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