

# CNP 200

INSULATE  
SEAL  
PROTECT

2:1  
SHRINK RATIO



## THIN WALL CHLORINATED POLYOLEFIN

HIGH PERFORMANCE HEAT SHRINK TUBING SUITABLE FOR HARNESSING, HYDRAULIC COUPLINGS, AND APPLICATIONS REQUIRING EXCEPTIONAL FLEXIBILITY

## FEATURES AND BENEFITS

- 2:1 shrink ratio
- Very flexible and smooth surface under bend stresses at low temperatures
- Excellent chemical resistance in prolonged exposure
- Excellent abrasion resistance
- Reliable protection in extreme operating environments including exposure to flame
- Continuous operating temperature: -70°C to 121°C
- Minimum full recovery temperature: 135°C
- Standard colors: Black

## STANDARDS

- SAE AMS-DTL-23053/1A Class 1 and 2

## TYPICAL APPLICATIONS

- Insulation, strain relief and abrasion resistance for wire harnesses exposed to fluids and solvents
- Heavy duty cables or harness systems in vehicle applications
- Protection for cable-connector interfaces, terminals, and fittings

## ORDERING

- Select a dimension which will shrink snugly over the component to be covered. If recovery is restricted the resultant wall thickness will be less than specified.
- Please specify the product name and order reference number. Order Example: CNP 200, 0250, black



DIMENSIONS

Order Number	Expanded		Recovered				Lengths	
	Internal Diameter (min) D		Internal Diameter (max) d		Wall Thickness W			
	mm	in	mm	in	mm	in	m	ft
0125*	3.2	1/8	1.6	0.062	0.66 +/- 0.25	0.026 +/- 0.010	200	60
0187*	4.8	3/16	2.4	0.093	0.84 +/- 0.25	0.033 +/- 0.010	200	60
0250	6.4	1/4	3.6	0.143	0.89 +/- 0.25	0.035 +/- 0.010	200	60
0375	9.5	3/8	5.4	0.211	1.02 +/- 0.25	0.040 +/- 0.010	100	30
0500	12.7	1/2	7.3	0.286	1.22 +/- 0.38	0.048 +/- 0.015	100	30
0625	15.9	5/8	9.1	0.357	1.32 +/- 0.38	0.052 +/- 0.015	100	30
0750	19.0	3/4	10.9	0.428	1.45 +/- 0.38	0.057 +/- 0.015	100	30
0875	22.2	7/8	12.7	0.500	1.65 +/- 0.51	0.065 +/- 0.020	100	30
1000	25.4	1	14.4	0.570	1.78 +/- 0.51	0.070 +/- 0.020	50	15
1250	31.8	1-1/4	18.1	0.714	2.21 +/- 0.51	0.087 +/- 0.020	50	15
1500	38.1	1-1/2	21.8	0.857	2.41 +/- 0.51	0.095 +/- 0.020	50	15

\* These sizes are not included in 23053/1 specification

TECHNICAL DATA

PROPERTY	TEST METHOD	REQUIREMENT	TYPICAL PERFORMANCE	UNITS
<b>PHYSICAL</b>				
Tensile Strength	ASTM D412	1,500 (10.3) minimum	2,365 (16.31)	psi (MPa)
Elongation	ASTM D412	225 minimum	384	percent
Tensile stress, at 200 percent elongation	ASTM D412	1,500 (10.3) maximum	1,063 (7.33)	psi (MPa)
Low Temperature Flexibility	4 hrs at -94 °F (-70 °C)	No cracks	No cracks	
Heat Shock	4 hrs at 392 °F (200 °C)	No cracks, flowing or dripping	No cracks, flowing or dripping	
Heat resistance:	168 hrs at 250 °F (121 °C)			
Tensile strength	ASTM D412	1,200 (8.3) minimum	Class 1 - >1,200 (>8.3) Class 2 - 2617 (18.04)	psi (MPa)
Ultimate elongation	ASTM D412	Class 1 - 150 minimum Class 2 - 175 minimum	Class 1 - >150 Class 2 - 362	percent
Dielectric strength	ASTM D2671	300 (11.8) minimum	Class 1 - >302 (>11.9) Class 2 - 1,090 (43)	psi (MPa)
<b>ELECTRICAL</b>				
Dielectric Strength	ASTM D2671	300 (11.8) - up to 0.875 inch expanded ID 200 (7.8) - 1.000 inch expanded ID and above	1,650 (65)	volts/mil (Kv/mm)
Volume Resistivity	ASTM D876	1 x 10 <sup>11</sup> minimum	1.48 x 10 <sup>14</sup>	Ohm-cm
<b>CHEMICAL</b>				
Corrosion	16 hrs at 302 °F (150 °C)	No pitting or corrosion	No pitting or corrosion	
Water absorption	24 hrs at 73 °F (23 °C)	1.0 maximum	0.72	percent
Flammability	ASTM D2671, Procedure A	Self extinguishing 15 seconds; 3 inches maximum burn length	Pass	
Fluid resistance: (Hydraulic fluid (petroleum base), JP-8, Lubricating oil, 5 percent NaCl, Deicing fluid)	24 hrs immersion at 75 °F (24 °C)			
Tensile strength	ASTM D412	Class 1 - 900 (6.2) minimum Class 2 - 1,000 (6.9) minimum	Class 1 - >1,200 (>8.3) Class 2 - 2,617 (18.04)	psi (MPa)
Ultimate elongation	ASTM D412	Class 1 - 150 minimum Class 2 - 175 minimum	Class 1 - 279 Class 2 - 391	percent
Dielectric strength	ASTM D2671	Class 1 - 200 (7.9) minimum Class 2 - 250 (9.8) minimum	1,400 (55)	volt/mil (Kv/mm)
Fungus resistance	ASTM G21	No growth or Tensile higher than 1500 psi and Elongation higher than 225% after exposure	Pass	

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