

## CPR: SELF REGULATING HEAT TRACE

### DESCRIPTION

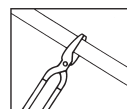
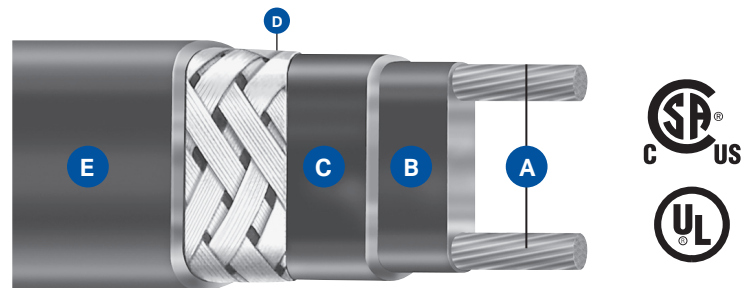
MIFAB's CPR Cable is a multi-purpose heating cable designed for commercial pipe tracing, roof & gutter deicing, embedded floor warming, and frost heave prevention. Chromalox's CPR Cable is constructed of a self-regulating polymer core that varies its heat output based on sensed temperature along its entire length. It can be easily cut to length, spliced, tee to more easily follow piping networks. In addition to insulated surfaces, Chromalox's CPR Heating Cable can be used on roofs and in gutters to prevent Ice Dams and provide a path for the melt water to excavate the roof surface.

- Self-Regulating, energy efficient
- Process temperature maintenance to 150F (65 C) (Power On)
- CPR Commercial Applications
- Pipe Freeze Protection
  - Potable & Non-Potable Piping
  - Sanitary & Storm Piping
  - Fire Sprinkler Piping
- Flow Maintenance
  - Greasy Waste Piping
  - Diesel Fuel Piping
- Root & Gutter De-icing
- Freezer Frost Heave Prevention
- Floor Warming
- TPR or TPE Overjackets
- Circuit Lengths, Up to 660 ft.
- 3, 5, 8, 10 and 15 w/ft.
- 120, 208-277 Volt From Stock
- Approximate Size: 3/8" (W) x 1/8" (H)
- Minimum Bend Radius 1-1/8"
- For use on metal pipes, plastic pipes, roofs and gutters.

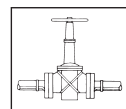
### CONSTRUCTION

- A TWIN NICKEL PLATED 16 AWG COPPER BUSS WIRES:**  
Provide high electrical current capability.
- B SEMI CONDUCTIVE POLYMER CORE MATRIX:**  
It's electrical resistance varies with temperature. As process temperature drops, the core's heat output increases; conversely, as process temperature rises, the heat output decreases.
- C POLYOLEFIN JACKET:**  
Flame retardant, electrically insulates the matrix and buss wires. Also provides resistance to water and some inorganic chemical solutions.
- D TINNED COPPER BRAID:**  
The braid covering the jacket provides additional mechanical protection in any environment and a positive ground path.
- E HIGH TEMPERATURE FLUOROPOLYMER OR TPR OVERJACKET:**  
Corrosion resistant, flame retardant overjacket is highly effective in many environments. TPR coatings protect against certain inorganic chemical solutions. Fluoropolymer coatings are used for exposure to organic or corrosive solutions. These coatings also protect against abrasion and impact damage..

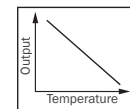
#### \*FREEZE PROTECTION



CUT TO LENGTH



CAN BE OVERLAPPED



SELF REGULATING OUTPUT

### FEATURES

- Energy efficient, self-regulating CPR uses less energy when less heat is required.
- Easy to install, CPR can be cut to any length (up to max. circuit length) in the field.
- Field splices can be performed easily in minutes with no scrap or wasted cold sections.
- CPR can be overlapped without burnout, which simplifies heat tracing of inline process equipment such as valves, elbows and pumps.
- Because CPR is self-regulating, overtemperature conditions are minimized.
- Chromalox termination, splice, tee and seal kits reduce installation time.

### APPROVALS

Ordinary areas, roof and gutter, fire suppression system piping and grease waste flow maintenance.

**WARNING:** A ground fault protection device IS required by NEC to minimize the danger of fire if the heating cable is damaged or improperly installed. A minimum trip level of 30mA is recommended to minimize nuisance tripping.

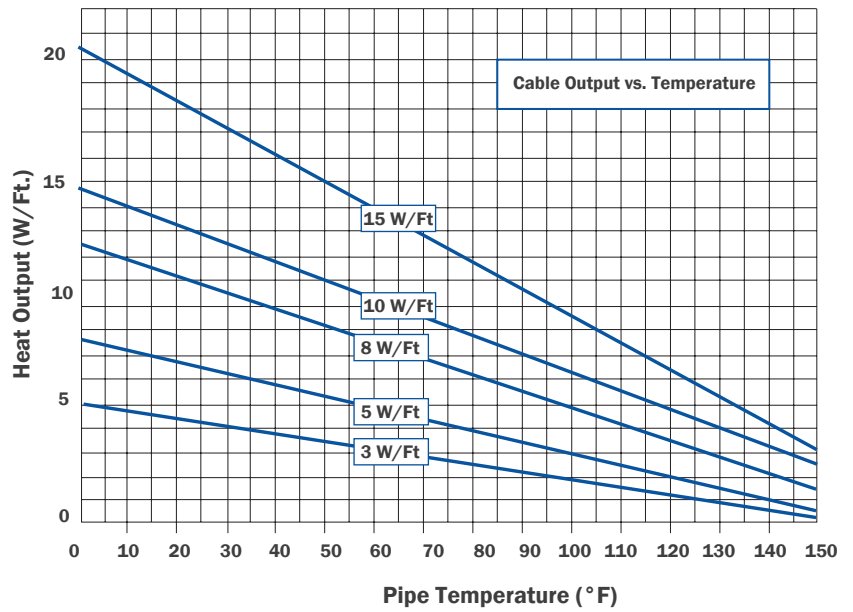
Per IEEE 515.1 for Commercial Heating Device installation Type A, B, C or D including on insulated surfaces, outdoor exposed areas, installation with embedded trace heating and installation with trace heater inside conduit or piping.

# CPR

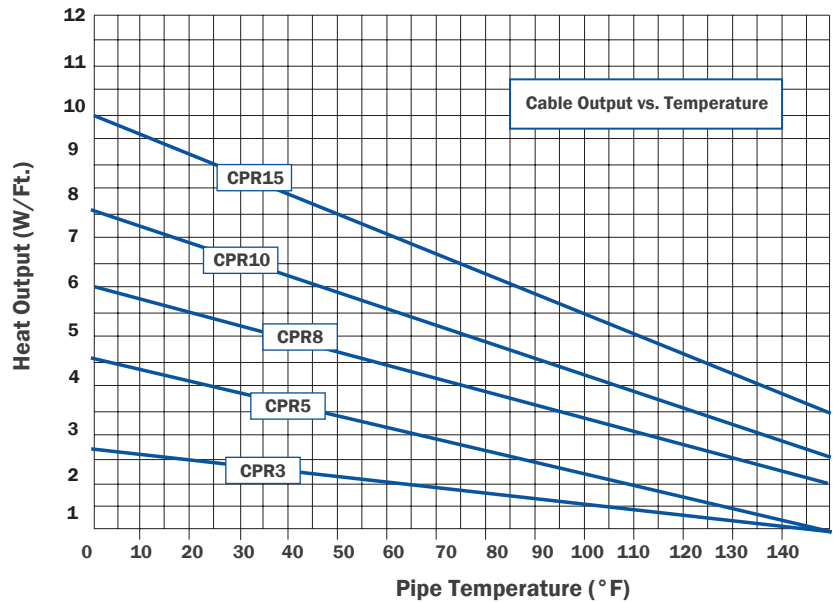
## Self-Regulating Heat Trace



### THERMAL OUTPUT RATINGS ON INSULATED METAL PIPE



### THERMAL OUTPUT RATINGS ON PLASTIC PIPE WITH ALUMINUM TAPE



#### CPR HEATING CABLE - OUTPUT W/FT & HEATING CABLE IN ALUMINUM PANEL - OUTPUT W/FT

Cable Model	Rated @ 50 °F in Air			Rated @ 32 °F in Snow & Ice		
	208V	240V	277V	208V	240V	277V
CPR5-2	4.10	5.00	5.60	7.57	8.80	11.50
CPR8-2	6.88	8.00	8.96	15.65	18.20	21.90
CPR10-2	8.70	10.00	11.10	20.88	24.00	28.00
CPR15-2	13.20	15.00	16.20	28.42	32.30	36.10

#### OUTPUT WATTAGE AT ALTERNATE VOLTAGES (W/Ft.)

Model	208V	% Change In Output	220V	% Change In Output	277V	% Change In Output
CPR 3	2.4	-20	2.6	-13	3.4	+15
CPR 5	4.1	-18	4.5	-10	5.6	+13
CPR 8	6.88	-14	7.28	-9	8.96	+12
CPR 10	8.7	-13	9.2	-8	11.1	+10
CPR 15	13.2	-12	13.95	-7	16.2	+8

## ORDERING INFORMATION

Cable Rating	65 ° F Start-up (Ft.)				50 ° F Start-up (Ft.)				GREASE FLOW MAINTENANCE
	15 Amp	20 Amp	30 Amp	40 Amp	15 Amp	20 Amp	30 Amp	40 Amp	
CPR3-1	350	440	440	440	305	360	360	360	
CPR3-2	680	800	825	825	600	660	660	660	
CPR5-1	205	270	300	300	185	250	270	270	
CPR5-2	410	550	620	620	375	505	540	540	
CPR8-1	165	220	240	240	150	200	215	215	
CPR8-2	310	425	480	480	285	375	420	420	
CPR10-1	105	140	190	190	95	130	180	180	
CPR10-2	210	230	345	420	160	210	315	360	
CPR15-1	70	90	145	190	65	85	130	175	
CPR15-2	105	150	220	280	100	140	210	265	

Cable Rating	40 ° F Start-up (Ft.)				20 ° F Start-up (Ft.)				0 ° F Start-up (Ft.)				-40 ° F Start-up (Ft.)				PIPE FREEZE PROTECTION
	15 Amp	20 Amp	30 Amp	40 Amp	15 Amp	20 Amp	30 Amp	40 Amp	15 Amp	20 Amp	30 Amp	40 Amp	15 Amp	20 Amp	30 Amp	40 Amp	
CPR3-1	265	350	360	360	220	290	360	360	200	270	360	360	160	210	320	340	
CPR3-2	525	660	660	660	440	585	660	660	415	555	660	660	320	445	595	625	
CPR5-1	170	230	270	270	150	200	270	270	135	180	270	270	105	145	215	225	
CPR5-2	340	450	540	540	300	400	540	540	270	360	540	540	215	290	440	510	
CPR8-1	135	180	215	215	115	155	215	215	110	145	215	215	85	115	175	195	
CPR8-2	270	330	420	420	235	310	420	420	200	265	395	420	175	210	315	400	
CPR10-1	90	120	180	180	85	115	170	180	80	90	135	180	65	85	125	170	
CPR10-2	150	200	300	360	140	185	280	360	125	170	255	340	110	145	215	300	
CPR15-1	60	80	120	165	55	75	110	150	53	70	105	140	45	60	90	120	
CPR15-2	95	125	200	250	90	110	180	230	75	100	160	210	65	90	135	175	

Cable Rating	40 ° F Start-up (Ft.)				0 ° F Start-up (Ft.)				-20 ° F Start-up (Ft.)				ROOF & GUTTER DE-ICING
	15 Amp	20 Amp	30 Amp	40 Amp	15 Amp	20 Amp	30 Amp	40 Amp	15 Amp	20 Amp	30 Amp	40 Amp	
CPR3-1	265	350	360	360	200	270	360	360	180	240	360	360	
CPR3-2	525	660	660	660	415	555	660	660	360	480	660	660	
CPR5-1	170	230	270	270	135	180	270	270	120	160	240	270	
CPR5-2	340	450	540	540	270	360	540	540	225	300	450	540	
CPR8-1	135	180	215	215	110	145	215	215	95	130	195	215	
CPR8-2	270	330	420	420	200	265	395	420	185	245	365	420	
CPR10-1	90	105	160	210	80	90	135	180	70	95	140	180	
CPR10-2	185	210	315	420	125	185	275	365	110	150	225	275	

Cable Rating	0 ° F Start-up (Ft.)				-20 ° F Start-up (Ft.)				FROST HEAVE PREVENTION
	15 Amp	20 Amp	30 Amp	40 Amp	15 Amp	20 Amp	30 Amp	40 Amp	
CPR3-1	200	270	360	360	180	240	360	360	
CPR3-2	415	555	660	660	360	480	660	660	
CPR5-1	135	180	270	270	120	160	240	270	
CPR5-2	270	360	540	540	225	300	450	540	
CPR8-1	110	145	215	215	95	130	195	215	
CPR8-2	200	265	395	420	185	245	365	420	
CPR10-1	80	90	135	180	70	95	140	180	
CPR10-2	125	185	275	365	110	150	225	275	

## ORDERING INFORMATION

Output (W/Ft.)	Volts	Model	Stock	PCN	Wt./1000' (Lbs.)
3 @ 50°F	120	CPR 3-1CT	S	512209	66
		CPR 3-1CR	S	512102	64
	208-277	CPR 3-2CT	S	512217	66
		CPR 3-2CR	S	512110	64
5 @ 50°F	120	CPR 5-1CT	S	512225	66
		CPR 5-1CR	S	512129	64
	208-277	CPR 5-2CT	S	512233	66
		CPR 5-2CR	S	512137	64
8 @ 50°F	120	CPR 8-1CT	S	512241	66
		CPR 8-1CR	S	512145	64
	208-277	CPR 8-2CT	S	512250	66
		CPR 8-2CR	S	512153	64
10 @ 50°F	120	CPR 10-1CT	S	512268	66
		CPR 10-1CR	S	512161	64
	208-277	CPR 10-2CT	S	512276	66
		CPR 10-2CR	S	512170	64
15 @ 50°F	120	CPR 15-1CT	S	512284	66
		CPR 15-1CR	S	512188	64
	208-277	CPR 15-2CT	S	512292	66
		CPR 15-2CR	S	512196	64

To Order - Specify length, model, PCN and Installation accessories

## ACCESSORIES

Accessories		DL	EL
Power Connection	Heat trace to electrical service connection	RTPC	SSK/HSK-PC
Splice & Tee		RTST	RT-RST
End Seal	For terminating cable	RTES	RT-RES
Thermostat	Ambient air sensing thermostat	RTAS	TPR
	Line sensing mechanical thermostat	RTBC	TPR

General Application & Installation Accessories such as tape, pipe straps, warning labels, etc., refer to the Heat Trace Accessories page at the end of this section.

## HOW TO ORDER

**To Order:** Complete the model number using the matrix:

Model	Self-Regulating Freeze Protection		
CPR	Self-Regulating, Commercial Pipe and Roof Heating Cable		
	Code	Output (Nominal W/Ft.)	
	3	Three	
	5	Five	
	8	Eight	
	10	Ten	
	15	Fifteen	
	Code	Voltage	
	1	120	
	2	208 - 277	
	Code	Overjacket Options	
	CR	TPR overjacket over braid for protection against certain inorganic chemical solutions	
	CT	TPE overjacket over braid for hostile/corrosive environments	
CPR	<input type="checkbox"/>	-	<input type="checkbox"/> <input type="checkbox"/> Model Number