

# Cable to Cable, Rail



nVent ERICO Cadweld applications for railway properties utilize the nVent ERICO Cadweld Plus F80 and the nVent ERICO Cadweld F80 welding material alloys. nVent ERICO Cadweld exothermically welded connections are engineered to provide a permanent, molecular bond that will not loosen or corrode, enabling connection of dissimilar materials. The connections are designed to perform for the life of the conductor and/or installation. The nVent ERICO Cadweld connection has a current carrying capacity equal to or greater than that of the conductor and will withstand repeated fault currents without failing during operation. Once completed, installers can clearly ensure quality by visually inspecting the new connection.

## DIAGRAMS



## FEATURES

Forms a permanent, low resistance connection

Provides a molecular bond

nVent ERICO Cadweld Exothermic Connections are rated with the same current capacity as the conductor

Portable installation equipment with no external source of power required

Installers can be easily trained to make nVent ERICO Cadweld Exothermic Connections

Connections can be visually inspected

## SPECIFICATIONS

Table 1/5

| Catalog Number | Mold Family | Conductor 1 | Conductor 1 Outer Diameter, Nominal | Conductor 2 | Conductor 2 Outer Diameter, Nominal |
|----------------|-------------|-------------|-------------------------------------|-------------|-------------------------------------|
|                |             |             |                                     |             |                                     |

|            |    |                               |         |                               |         |
|------------|----|-------------------------------|---------|-------------------------------|---------|
| PB10PA1G1G | PA | #6 Solid                      | 4.11mm  | #6 Solid                      | 4.11mm  |
| SB02SS6    | SS | #6 Solid                      | 4.11mm  | #6 Solid                      | 4.11mm  |
| SB10SS1H1G | SS | #6 Concentric                 | 4.67mm  | #6 Solid                      | 4.11mm  |
| PB20TA2Q1H | TA | 4/0 Concentric                | 13.41mm | #6 Concentric                 | 4.67mm  |
| PB20TA2G1H | TA | 2/0 Concentric                | 10.62mm | #6 Concentric                 | 4.67mm  |
| PB10PC2C1H | PC | 1/0 Concentric                | 9.47mm  | #6 Concentric                 | 4.67mm  |
| PB10SS2Q1H | SS | 4/0 Concentric                | 13.41mm | #6 Concentric                 | 4.67mm  |
| SB10SS1V3  | SS | #2 Concentric                 | 7.42mm  | 3/16 Signal                   | 4.76mm  |
| PB20TA1L2V | TA | #4 Concentric                 | 5.89mm  | 250 kcmil Concentric          | 14.61mm |
| PB20TA2V1L | TA | 250 kcmil Concentric          | 14.61mm | #4 Concentric                 | 5.89mm  |
| PB10SS2Q1L | SS | 4/0 Concentric                | 13.41mm | #4 Concentric                 | 5.89mm  |
| PB10SS1T   | SS | #2 Solid                      | 6.53mm  | #2 Solid                      | 6.53mm  |
| PB20TA2Q1V | TA | 4/0 Concentric                | 13.41mm | #2 Concentric                 | 7.42mm  |
| SB10SS1V   | SS | #2 Concentric                 | 7.42mm  | #2 Concentric                 | 7.42mm  |
| PB10SS1Y   | SS | #1 Concentric                 | 8.43mm  | #1 Concentric                 | 8.43mm  |
| PB20PAY3Y3 | PA | 50 mm <sup>2</sup> Concentric | 8.99mm  | 50 mm <sup>2</sup> Concentric | 8.99mm  |
| PB20TAT2Y3 | TA | 10.0 mm Ground Wire           | 10mm    | 50 mm <sup>2</sup> Concentric | 8.99mm  |
| PB10SS2C   | SS | 1/0 Concentric                | 9.47mm  | 1/0 Concentric                | 9.47mm  |
| PB10SS2Q2C | SS | 4/0 Concentric                | 13.41mm | 1/0 Concentric                | 9.47mm  |
| PB20PP2CPS | PP | 1/0 Concentric                | 9.47mm  | B154A Plug                    | 12.7mm  |

Table 2/5

| Catalog Number | Mold Family | Conductor 1    | Conductor 1 Outer Diameter, Nominal | Conductor 2    | Conductor 2 Outer Diameter, Nominal |
|----------------|-------------|----------------|-------------------------------------|----------------|-------------------------------------|
| PB20TA2C2C     | TA          | 1/0 Concentric | 9.47mm                              | 1/0 Concentric | 9.47mm                              |
| PB20TA2G2G     | TA          | 2/0 Concentric | 10.62mm                             | 2/0 Concentric | 10.62mm                             |
| PB10SS2G       | SS          | 2/0 Concentric | 10.62mm                             | 2/0 Concentric | 10.62mm                             |
| PB10SS2Q2G     | SS          | 4/0 Concentric | 13.41mm                             | 2/0 Concentric | 10.62mm                             |
| PB10PT2G2G     | PT          | 2/0 Concentric | 10.62mm                             | 2/0 Concentric | 10.62mm                             |
| PB99XB2Q2G     | XB          | 4/0 Concentric | 13.41mm                             | 2/0 Concentric | 10.62mm                             |
| PB20TA2Q2G     | TA          | 4/0 Concentric | 13.41mm                             | 2/0 Concentric | 10.62mm                             |
| PB20PG2G2G     | PG          | 2/0 Concentric | 10.62mm                             | 2/0 Concentric | 10.62mm                             |
| PB20PP2GPS     | PP          | 2/0 Concentric | 10.62mm                             | B154A Plug     | 12.7mm                              |

| Catalog Number | Mold Family | Conductor 1          | Conductor 1 Outer Diameter, Nominal | Conductor 2      | Conductor 2 Outer Diameter, Nominal |
|----------------|-------------|----------------------|-------------------------------------|------------------|-------------------------------------|
| PB10SS2J       | SS          | 2/0 Ropelay          | 12.19mm                             | 2/0 Ropelay      | 12.19mm                             |
| PB20PPS6PS     | PP          | 3/0 Composite        | 14.53mm                             | B154A Plug       | 12.7mm                              |
| PB10PC2Q2S     | PC          | 4/0 Concentric       | 13.41mm                             | 4/0 Ropelay      | 15.49mm                             |
| PB20TAS5S5     | TA          | 2/0 Composite        | 13.36mm                             | 2/0 Composite    | 13.36mm                             |
| PB20TA2Q2Q     | TA          | 4/0 Concentric       | 13.41mm                             | 4/0 Concentric   | 13.41mm                             |
| PB10SS2Q       | SS          | 4/0 Concentric       | 13.41mm                             | 4/0 Concentric   | 13.41mm                             |
| PB20TA2Q4R     | TA          | 4/0 Concentric       | 13.41mm                             | 1100/#24 Ropelay | 22.4mm                              |
| PB99XB2Q2Q     | XB          | 4/0 Concentric       | 13.41mm                             | 4/0 Concentric   | 13.41mm                             |
| PB13SV2Q       | SV          | 4/0 Concentric       | 13.41mm                             | 4/0 Concentric   | 13.41mm                             |
| PB10SS2V2Q     | SS          | 250 kcmil Concentric | 14.61mm                             | 4/0 Concentric   | 13.41mm                             |
| PB10SS2S2Q     | SS          | 4/0 Ropelay          | 15.49mm                             | 4/0 Concentric   | 13.41mm                             |

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| Catalog Number | Mold Family | Conductor 1          | Conductor 1 Outer Diameter, Nominal | Conductor 2          | Conductor 2 Outer Diameter, Nominal |
|----------------|-------------|----------------------|-------------------------------------|----------------------|-------------------------------------|
| PB10SS2V       | SS          | 250 kcmil Concentric | 14.61mm                             | 250 kcmil Concentric | 14.61mm                             |
| PB20TA2V2V     | TA          | 250 kcmil Concentric | 14.61mm                             | 250 kcmil Concentric | 14.61mm                             |
| PB10SSS6       | SS          | 3/0 Composite        | 14.53mm                             | 3/0 Composite        | 14.53mm                             |
| PB99XB2V2V     | XB          | 250 kcmil Concentric | 14.61mm                             | 250 kcmil Concentric | 14.61mm                             |
| PB10PTS6S6     | PT          | 3/0 Composite        | 14.53mm                             | 3/0 Composite        | 14.53mm                             |
| PB99XB2V2VM    | XB          | 250 kcmil Concentric | 14.61mm                             | 250 kcmil Concentric | 14.61mm                             |
| PB10SS2W2V     | SS          | 250 kcmil Ropelay    | 19.05mm                             | 250 kcmil Concentric | 14.61mm                             |
| PB10SS2S       | SS          | 4/0 Ropelay          | 15.49mm                             | 4/0 Ropelay          | 15.49mm                             |
| PB10SS2W3DC    | SS          | 250 kcmil Ropelay    | 19.05mm                             | 350 kcmil Compact    | 15.88mm                             |
| PB10SSS7       | SS          | 4/0 Composite        | 16.66mm                             | 4/0 Composite        | 16.66mm                             |
| PB10SS3SS7     | SS          | 500 kcmil Ropelay    | 26.42mm                             | 4/0 Composite        | 16.66mm                             |
| PB10SS4K2W     | SS          | 650/#24 Ropelay      | 16.92mm                             | 250 kcmil Ropelay    | 19.05mm                             |
| PB10SS3S3D     | SS          | 500 kcmil Ropelay    | 26.42mm                             | 350 kcmil Concentric | 17.3mm                              |

| Catalog Number | Mold Family | Conductor 1          | Conductor 1 Outer Diameter, Nominal | Conductor 2          | Conductor 2 Outer Diameter, Nominal |
|----------------|-------------|----------------------|-------------------------------------|----------------------|-------------------------------------|
| PB10SS3Q3D     | SS          | 500 kcmil Concentric | 20.65mm                             | 350 kcmil Concentric | 17.3mm                              |
| PB10SS3D       | SS          | 350 kcmil Concentric | 17.3mm                              | 350 kcmil Concentric | 17.3mm                              |
| PB10SS3S3QC    | SS          | 500 kcmil Ropelay    | 26.42mm                             | 500 kcmil Compact    | 18.62mm                             |
| PB20TA3QC3QC   | TA          | 500 kcmil Compact    | 18.62mm                             | 500 kcmil Compact    | 18.62mm                             |
| PB10SS3QC3S    | SS          | 500 kcmil Compact    | 18.62mm                             | 500 kcmil Ropelay    | 26.42mm                             |
| PB50PC3S2W     | PC          | 500 kcmil Ropelay    | 26.42mm                             | 250 kcmil Ropelay    | 19.05mm                             |
| PB50PC5A2W     | PC          | 1000 kcmil Ropelay   | 33.78mm                             | 250 kcmil Ropelay    | 19.05mm                             |

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| Catalog Number | Mold Family | Conductor 1           | Conductor 1 Outer Diameter, Nominal | Conductor 2           | Conductor 2 Outer Diameter, Nominal |
|----------------|-------------|-----------------------|-------------------------------------|-----------------------|-------------------------------------|
| PB20TA2W3S     | TA          | 250 kcmil Ropelay     | 19.05mm                             | 500 kcmil Ropelay     | 26.42mm                             |
| PB10SS2W       | SS          | 250 kcmil Ropelay     | 19.05mm                             | 250 kcmil Ropelay     | 19.05mm                             |
| PB50SS5A2W     | SS          | 1000 kcmil Ropelay    | 33.78mm                             | 250 kcmil Ropelay     | 19.05mm                             |
| PB10SS2W3S     | SS          | 250 kcmil Ropelay     | 19.05mm                             | 500 kcmil Ropelay     | 26.42mm                             |
| PB10SS3S4M     | SS          | 500 kcmil Ropelay     | 26.42mm                             | 775 kcmil/#24 Ropelay | 19.02mm                             |
| PB10SS3B3S     | SS          | 300 kcmil Ropelay     | 20.32mm                             | 500 kcmil Ropelay     | 26.42mm                             |
| PB20TA3Q3Q     | TA          | 500 kcmil Concentric  | 20.65mm                             | 500 kcmil Concentric  | 20.65mm                             |
| PB63TA6H3Q     | TA          | 2000 kcmil Concentric | 40.94mm                             | 500 kcmil Concentric  | 20.65mm                             |
| PB80PG5T3Q     | PG          | 1500 kcmil Concentric | 35.86mm                             | 500 kcmil Concentric  | 20.65mm                             |
| PB10SS3Q       | SS          | 500 kcmil Concentric  | 20.65mm                             | 500 kcmil Concentric  | 20.65mm                             |
| PB60TA4Y3Q     | TA          | 1000 kcmil Concentric | 29.26mm                             | 500 kcmil Concentric  | 20.65mm                             |
| PB10SS3S3Q     | SS          | 500 kcmil Ropelay     | 26.42mm                             | 500 kcmil Concentric  | 20.65mm                             |
| PB60TA3Q4Y     | TA          | 500 kcmil Concentric  | 20.65mm                             | 1000 kcmil Concentric | 29.26mm                             |

| Catalog Number | Mold Family | Conductor 1          | Conductor 1 Outer Diameter, Nominal | Conductor 2       | Conductor 2 Outer Diameter, Nominal |
|----------------|-------------|----------------------|-------------------------------------|-------------------|-------------------------------------|
| PB10SS4R       | SS          | 1100/#24 Ropelay     | 22.4mm                              | 1100/#24 Ropelay  | 22.4mm                              |
| PB20TA4R4R     | TA          | 1100/#24 Ropelay     | 22.4mm                              | 1100/#24 Ropelay  | 22.4mm                              |
| PB10SS3S3F     | SS          | 500 kcmil Ropelay    | 26.42mm                             | 350 kcmil Ropelay | 22.35mm                             |
| PB50SS4L4T     | SS          | 750 kcmil Concentric | 25.35mm                             | 1325/#24 Ropelay  | 24.94mm                             |
| PB10SS3S4T     | SS          | 500 kcmil Ropelay    | 26.42mm                             | 1325/#24 Ropelay  | 24.94mm                             |
| PB31TA4T4T     | TA          | 1325/#24 Ropelay     | 24.94mm                             | 1325/#24 Ropelay  | 24.94mm                             |
| PB50SS4L3S     | SS          | 750 kcmil Concentric | 25.35mm                             | 500 kcmil Ropelay | 26.42mm                             |

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| Catalog Number | Mold Family | Conductor 1           | Conductor 1 Outer Diameter, Nominal | Conductor 2           | Conductor 2 Outer Diameter, Nominal |
|----------------|-------------|-----------------------|-------------------------------------|-----------------------|-------------------------------------|
| PB10SS4L       | SS          | 750 kcmil Concentric  | 25.35mm                             | 750 kcmil Concentric  | 25.35mm                             |
| PB80PA5T4L     | PA          | 1500 kcmil Concentric | 35.86mm                             | 750 kcmil Concentric  | 25.35mm                             |
| PB20TA3S3S     | TA          | 500 kcmil Ropelay     | 26.42mm                             | 500 kcmil Ropelay     | 26.42mm                             |
| PB10SS3S       | SS          | 500 kcmil Ropelay     | 26.42mm                             | 500 kcmil Ropelay     | 26.42mm                             |
| PB50SS3S4N     | SS          | 500 kcmil Ropelay     | 26.42mm                             | 750 kcmil Ropelay     | 29.34mm                             |
| PB10SS3S4X     | SS          | 500 kcmil Ropelay     | 26.42mm                             | 1600/#24 Ropelay      | 27.18mm                             |
| PB60TA4N3S     | TA          | 750 kcmil Ropelay     | 29.34mm                             | 500 kcmil Ropelay     | 26.42mm                             |
| PB50PC3S5A     | PC          | 500 kcmil Ropelay     | 26.42mm                             | 1000 kcmil Ropelay    | 33.78mm                             |
| PB50SS3S5A     | SS          | 500 kcmil Ropelay     | 26.42mm                             | 1000 kcmil Ropelay    | 33.78mm                             |
| PB50SS3S4Y     | SS          | 500 kcmil Ropelay     | 26.42mm                             | 1000 kcmil Concentric | 29.26mm                             |
| PB60TA4X4X     | TA          | 1600/#24 Ropelay      | 27.18mm                             | 1600/#24 Ropelay      | 27.18mm                             |
| PB50SS4Y       | SS          | 1000 kcmil Concentric | 29.26mm                             | 1000 kcmil Concentric | 29.26mm                             |
| PB50SS4N       | SS          | 750 kcmil Ropelay     | 29.34mm                             | 750 kcmil Ropelay     | 29.34mm                             |
| PB50PC5A5A     | PC          | 1000 kcmil Ropelay    | 33.78mm                             | 1000 kcmil Ropelay    | 33.78mm                             |
| PB50SS5A       | SS          | 1000 kcmil Ropelay    | 33.78mm                             | 1000 kcmil Ropelay    | 33.78mm                             |
| PB53SS6H       | SS          | 2000 kcmil Concentric | 40.94mm                             | 2000 kcmil Concentric | 40.94mm                             |

## ADDITIONAL PRODUCT DETAILS

For applications such as computer room, tunnel or other low-ventilation areas, specify a smokeless nVent ERICO Cadweld Exolon mold. Add an XL prefix to the standard mold part number when ordering (for example, a PB10GR162G becomes XLPB10GR162G). Similarly, nVent ERICO Cadweld Exolon welding material is also designated by the XL prefix (for example, PB90 becomes XLPB90).

A gap between conductors may be required. See mold tag for more information.

| XXXX-XX-XX-XX-L-M-W |                  |   |
|---------------------|------------------|---|
| XXXX                | Price Key        |   |
| XX                  | Mold Family      |   |
| XX                  | Conductor Code 1 |   |
| XX                  | Conductor Code 2 |   |
| L*                  | Split Crucible   | Crucible section is split on molds designed with horizontal opening for easier cleaning |
| M*                  | Mold Only        |   |
| W*                  | Wear Plates      | Reduce mechanical abrasion of molds at cable entry points                               |

\* Empty if none

## WARNING

nVent products shall be installed and used only as indicated in nVent's product instruction sheets and training materials. Instruction sheets are available at [www.nvent.com](http://www.nvent.com) and from your nVent customer service representative. Improper installation, misuse, misapplication or other failure to completely follow nVent's instructions and warnings may cause product malfunction, property damage, serious bodily injury and death and/or void your warranty.

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