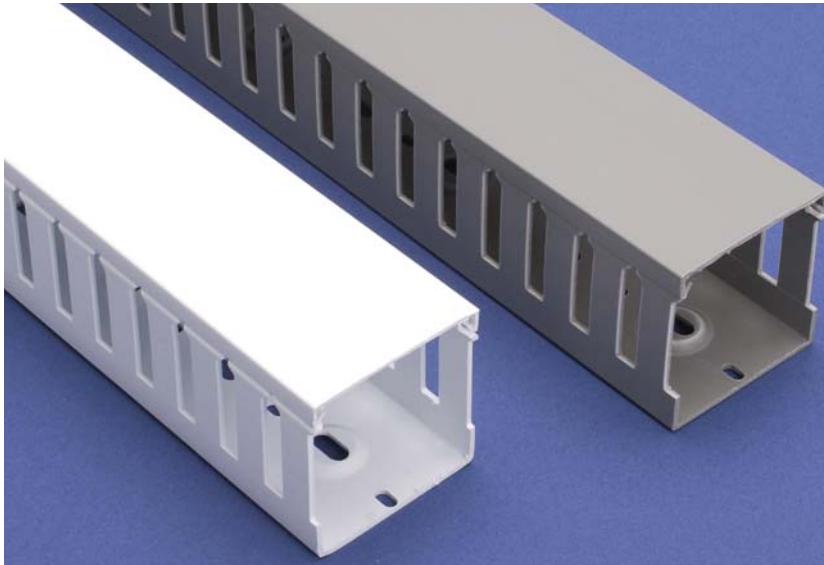


# WIRING DUCT – T1 SERIES



## Overview

Rugged wiring duct made of rigid PVC carries a UL 94V-0 flammability rating for your wire containment needs. All our wiring duct comes complete with cover. Replacement duct covers can be purchased separately.

## Features

- Provided with standard mounting holes
- Wide finger design provides greater rigidity and larger slot width
- Rounded, burr-free edges will not cut installers' hands or wiring insulation
- Non-slip cover
- Flush cover design holds 10 - 12 percent more wires than traditional designs
- Lead-free material
- Restricted slot design retains wires in slot for fast, easy wire installation or removal
- Two predetermined break lines, one for breaking off and removal of sidewall finger segments only, and another for removal of sidewall finger and base segments
- Patented recess boss for rapid mounting of components

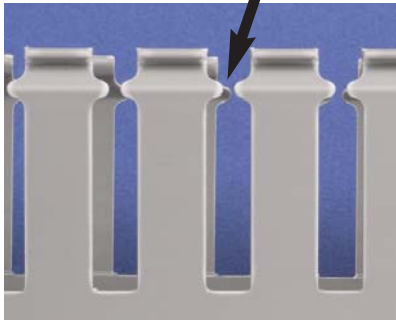
Note: All T1 duct comes in 6' (2m) lengths.

| Grey Open Slot Rigid PVC (including cover) |                  |                                 |
|--|------------------|---------------------------------|
| Catalog Number Standard Carton             | Package Quantity | Catalog Number Single Piece Pkg |
| T1-0506G                                   | 20               | T1-0506G-1                      |
| T1-0510G                                   | 20               | T1-0510G-1                      |
| T1-1010G                                   | 18               | T1-1010G-1                      |
| T1-1015G                                   | 18               | T1-1015G-1                      |
| T1-1022G                                   | 24               | T1-1022G-1                      |
| T1-1030G                                   | 24               | T1-1030G-1                      |
| T1-1040G                                   | 8                | T1-1040G-1                      |
| T1-1515G                                   | 20               | T1-1515G-1                      |
| T1-1522G                                   | 18               | T1-1522G-1                      |
| T1-1530G                                   | 16               | T1-1530G-1                      |
| T1-1540G                                   | 8                | T1-1540G-1                      |
| T1-2215G                                   | 12               | T1-2215G-1                      |
| T1-2222G                                   | 12               | T1-2222G-1                      |
| T1-2230G                                   | 12               | T1-2230G-1                      |
| T1-2240G                                   | 4                | T1-2240G-1                      |
| T1-3015G                                   | 12               | T1-3015G-1                      |
| T1-3022G                                   | 12               | T1-3022G-1                      |
| T1-3030G                                   | 12               | T1-3030G-1                      |
| T1-3040G                                   | 4                | T1-3040G-1                      |
| T1-3050G                                   | 6                | T1-3050G-1                      |
| T1-4015G                                   | 8                | T1-4015G-1                      |
| T1-4022G                                   | 8                | T1-4022G-1                      |
| T1-4030G                                   | 8                | T1-4030G-1                      |
| T1-4040G                                   | 4                | T1-4040G-1                      |
| T1-4050G                                   | 4                | T1-4050G-1                      |
| T1-6040G                                   | 4                | T1-6040G-1                      |

| White Open Slot Rigid PVC (including cover) |                  |                                 |
|---|------------------|---------------------------------|
| Catalog Number Standard Carton              | Package Quantity | Catalog Number Single Piece Pkg |
| T1-1010W                                    | 18               | T1-1010W-1                      |
| T1-1015W                                    | 18               | T1-1015W-1                      |
| T1-1022W                                    | 24               | T1-1022W-1                      |
| T1-1030W                                    | 24               | T1-1030W-1                      |
| T1-1040W                                    | 8                | T1-1040W-1                      |
| T1-1515W                                    | 20               | T1-1515W-1                      |
| T1-1522W                                    | 18               | T1-1522W-1                      |
| T1-1530W                                    | 16               | T1-1530W-1                      |
| T1-1540W                                    | 8                | T1-1540W-1                      |
| T1-2222W                                    | 12               | T1-2222W-1                      |
| T1-2230W                                    | 12               | T1-2230W-1                      |
| T1-2240W                                    | 4                | T1-2240W-1                      |
| T1-3022W                                    | 12               | T1-3022W-1                      |
| T1-3030W                                    | 12               | T1-3030W-1                      |
| T1-3040W                                    | 4                | T1-3040W-1                      |
| T1-3050W                                    | 6                | T1-3050W-1                      |
| T1-4022W                                    | 8                | T1-4022W-1                      |
| T1-4030W                                    | 8                | T1-4030W-1                      |
| T1-4040W                                    | 4                | T1-4040W-1                      |
| T1-4050W                                    | 4                | T1-4050W-1                      |
| T1-6040W                                    | 4                | T1-6040W-1                      |

# WIRING DUCT – T1 SERIES

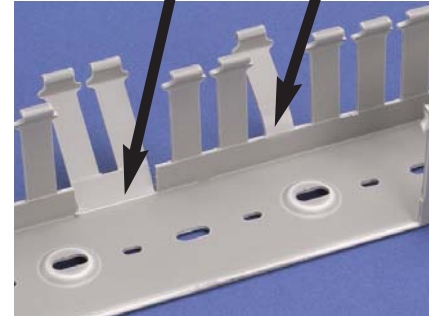
Restricted slot opening for wire retaining



Recess boss for rapid mounting of components

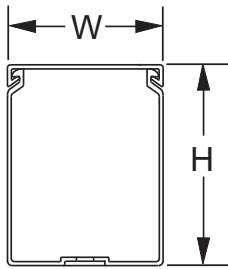


Two pre-determined breaklines

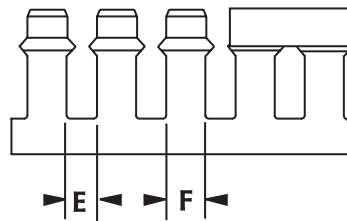


Burr-free edges

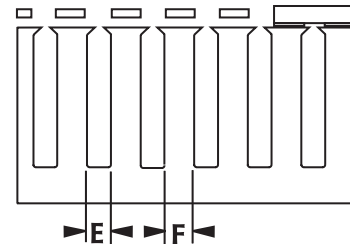
## Dimensions



Nominal 5/8" - 1"



Nominal 1 1/2" - 2 1/4" - 3" - 4"



| Open Slot Rigid PVC (including cover) Dimensions |                     |                               |                         |                         |
|--|---------------------|-------------------------------|-------------------------|-------------------------|
| Nominal Size (WxH) inches (mm)                   | Catalog Part Number | Actual Size (WxH) inches (mm) | Dimension E inches (mm) | Dimension F inches (mm) |
| .50 x .625 (12.7 x 15.88)                        | <b>T1-0506G</b>     | .60 x .7 (15 x 18)            | .20 (5.08)              | .30 (7.62)              |
| .50 x 1.00 (12.7 x 25.4)                         | <b>T1-0510G</b>     | .60 x 1.18 (15 x 30)          |                         |                         |
| 1.00 x 1.00 (25.4 x 25.4)                        | <b>T1-1010*</b>     | 1.00 x 1.18 (25 x 30)         |                         |                         |
| 1.00 x 1.50 (25.4 x 38.1)                        | <b>T1-1015*</b>     | 1.00 x 1.57 (25 x 40)         |                         |                         |
| 1.00 x 2.25 (25.4 x 57.15)                       | <b>T1-1022*</b>     | 1.00 x 2.36 (25 x 60)         |                         |                         |
| 1.00 x 3.00 (25.4 x 76.2)                        | <b>T1-1030*</b>     | 1.00 x 3.15 (25 x 80)         |                         |                         |
| 1.00 x 4.00 (25.4 x 101.6)                       | <b>T1-1040*</b>     | 1.00 x 3.94 (25 x 100)        |                         |                         |
| 1.50 x 1.50 (38.1 x 38.1)                        | <b>T1-1515*</b>     | 1.57 x 1.57 (40 x 40)         |                         |                         |
| 1.50 x 2.25 (38.1 x 57.15)                       | <b>T1-1522*</b>     | 1.57 x 2.36 (40 x 60)         |                         |                         |
| 1.50 x 3.00 (38.1 x 76.2)                        | <b>T1-1530*</b>     | 1.57 x 3.15 (40 x 80)         |                         |                         |
| 1.50 x 4.00 (38.1 x 101.6)                       | <b>T1-1540*</b>     | 1.57 x 3.94 (40 x 100)        |                         |                         |
| 2.25 x 1.50 (57.15 x 38.1)                       | <b>T1-2215G</b>     | 2.36 x 1.57 (60 x 40)         | .31 (7.87)              | .47 (11.94)             |
| 2.25 x 2.25 (57.15 x 57.15)                      | <b>T1-2222*</b>     | 2.36 x 2.36 (60 x 60)         |                         |                         |
| 2.25 x 3.00 (57.15 x 76.2)                       | <b>T1-2230*</b>     | 2.36 x 3.15 (60 x 80)         |                         |                         |
| 2.25 x 4.00 (57.15 x 101.6)                      | <b>T1-2240*</b>     | 2.36 x 3.94 (60 x 100)        |                         |                         |
| 3.00 x 1.50 (76.2 x 38.1)                        | <b>T1-3015G</b>     | 3.15 x 1.57 (80 x 40)         |                         |                         |
| 3.00 x 2.25 (76.2 x 57.15)                       | <b>T1-3022*</b>     | 3.15 x 2.36 (80 x 60)         |                         |                         |
| 3.00 x 3.00 (76.2 x 76.2)                        | <b>T1-3030*</b>     | 3.15 x 3.15 (80 x 80)         |                         |                         |
| 3.00 x 4.00 (76.2 x 101.6)                       | <b>T1-3040*</b>     | 3.15 x 3.94 (80 x 100)        |                         |                         |
| 3.00 x 5.00 (76.2 x 127)                         | <b>T1-3050*</b>     | 3.15 x 4.92 (75 x 125)        |                         |                         |
| 4.00 x 1.50 (101.6 x 38.1)                       | <b>T1-4015G</b>     | 3.94 x 1.57 (100 x 40)        |                         |                         |
| 4.00 x 2.25 (101.6 x 57.15)                      | <b>T1-4022*</b>     | 3.94 x 2.36 (100 x 60)        |                         |                         |
| 4.00 x 3.00 (101.6 x 76.2)                       | <b>T1-4030*</b>     | 3.94 x 3.15 (100 x 80)        |                         |                         |
| 4.00 x 4.00 (101.6 x 101.6)                      | <b>T1-4040*</b>     | 3.94 x 3.94 (100 x 100)       |                         |                         |
| 4.00 x 5.00 (101.6 x 127)                        | <b>T1-4050*</b>     | 3.94 x 4.92 (100 x 125)       |                         |                         |
| 6.00 x 4.00 (152.4 x 101.6)                      | <b>T1-6040*</b>     | 5.91 x 3.94 (150 x 100)       |                         |                         |

Note: All T1 duct comes in 6' (2m) lengths

\*Color: add suffix "G" for light Grey  
add suffix "W" for White

Package: add "-1" for single piece package

# WIRING DUCT – T1 SERIES WIRE FILL CAPACITY

| Wire Fill Capacity   |                      |         |         |         |         |         |
|--|----------------------|---------|---------|---------|---------|---------|
| Nominal Duct Size  | 12 AWG               | 14 AWG  | 16AWG   | 18 AWG  | 22 AWG  |         |
|  | Insulation Thickness |         |         |         |         |         |
|  | 1/32                 | 3/64    | 1/32    | 1/32    | 1/32    | 1/64    |
|  | OD-.158              | OD-.165 | OD-.139 | OD-.125 | OD-.113 | OD-.065 |
| Recommended Maximum Number of Wires per Wiring Duct (based on 60% fill capacity) |                      |         |         |         |         |         |
| 1/2 x5/8   | 7                    | 6       | 9       | 11      | 14      | 43      |
| 1/2 x1   | 12                   | 11      | 16      | 20      | 24      | 74      |
| 1 x 1  | 22                   | 21      | 29      | 36      | 44      | 134     |
| 1 x 1 1/2  | 31                   | 28      | 39      | 48      | 59      | 180     |
| 1 x 2 1/4  | 45                   | 40      | 57      | 71      | 85      | 261     |
| 1 x 3  | 59                   | 53      | 75      | 92      | 113     | 341     |
| 1 x 4  | 72                   | 66      | 93      | 115     | 141     | 426     |
| 1 1/2 x 1 1/2  | 51                   | 46      | 65      | 81      | 99      | 299     |
| 1 1/2 x 2 1/4  | 77                   | 70      | 98      | 121     | 148     | 449     |
| 1 1/2 x 3  | 102                  | 92      | 130     | 160     | 196     | 593     |
| 1 1/2 x 4  | 125                  | 113     | 159     | 197     | 241     | 729     |
| 2 1/4 x 1 1/2  | 78                   | 70      | 99      | 123     | 150     | 453     |
| 2 1/4 x 2 1/4  | 114                  | 103     | 146     | 180     | 221     | 667     |
| 2 1/4 x 3  | 156                  | 141     | 199     | 246     | 302     | 912     |
| 2 1/4 x 4  | 194                  | 176     | 247     | 306     | 375     | 1132    |
| 3 x 1 1/2  | 105                  | 95      | 134     | 165     | 203     | 612     |
| 3 x 2 1/4  | 159                  | 144     | 203     | 251     | 307     | 928     |
| 3 x 3  | 214                  | 193     | 272     | 337     | 412     | 1246    |
| 3 x 4  | 267                  | 242     | 341     | 421     | 515     | 1558    |
| 3 x 5  | 309                  | 283     | 399     | 493     | 604     | 1826    |
| 4 x 1 1/2  | 132                  | 120     | 169     | 208     | 255     | 771     |
| 4 x 2 1/4  | 201                  | 182     | 256     | 316     | 387     | 1171    |
| 4 x 3  | 270                  | 244     | 344     | 425     | 520     | 1573    |
| 4 x 4  | 336                  | 305     | 429     | 531     | 650     | 1963    |
| 4 x 5  | 415                  | 381     | 536     | 663     | 812     | 2455    |
| 6 x 4  | 512                  | 464     | 653     | 807     | 988     | 2987    |

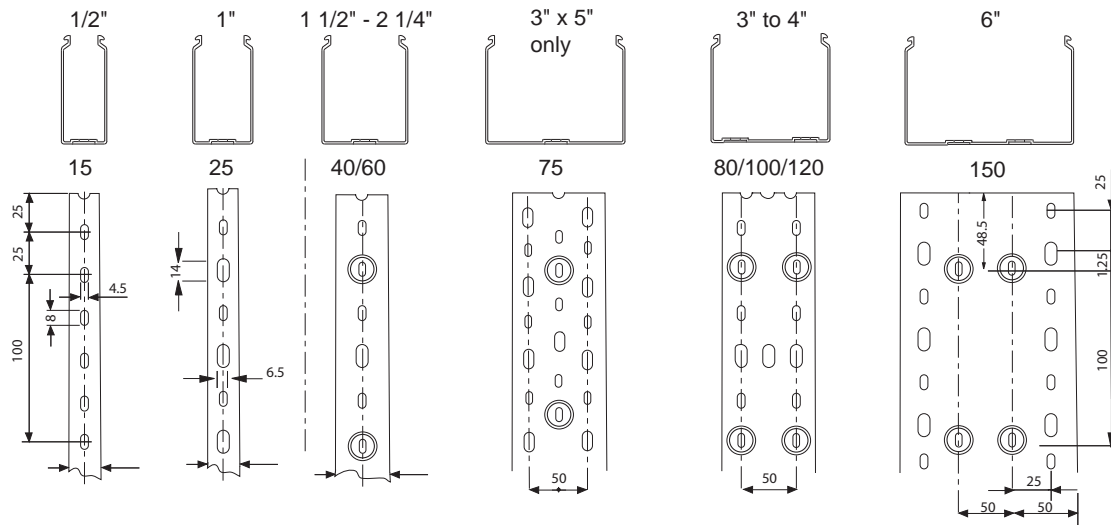
## Overview

The base perforation of the T1 series wiring duct allows mounting on the panel with DUCTFIX R6 or R4 or on DIN rails.

The recess bosses in the base permit rapid mounting of wire retainers (CL series), inserts (ZP2), and separators (SEP series) inside the wiring duct.

*Note: Duct base perforation according to DIN 43659 and DIN VDE 0660 TEIL 506.*

All dimensions shown are in millimeters. For conversion to inches see below. (25.4 millimeters = 1 inch)



| Millimeters to Inches Conversion |       |
|----------------------------------|-------|
| 4.5                              | .177  |
| 6.5                              | .256  |
| 8                                | .315  |
| 14                               | .551  |
| 15                               | .591  |
| 25                               | .984  |
| 40                               | 1.575 |
| 50                               | 1.969 |
| 60                               | 2.363 |
| 80                               | 3.150 |
| 100                              | 3.93  |

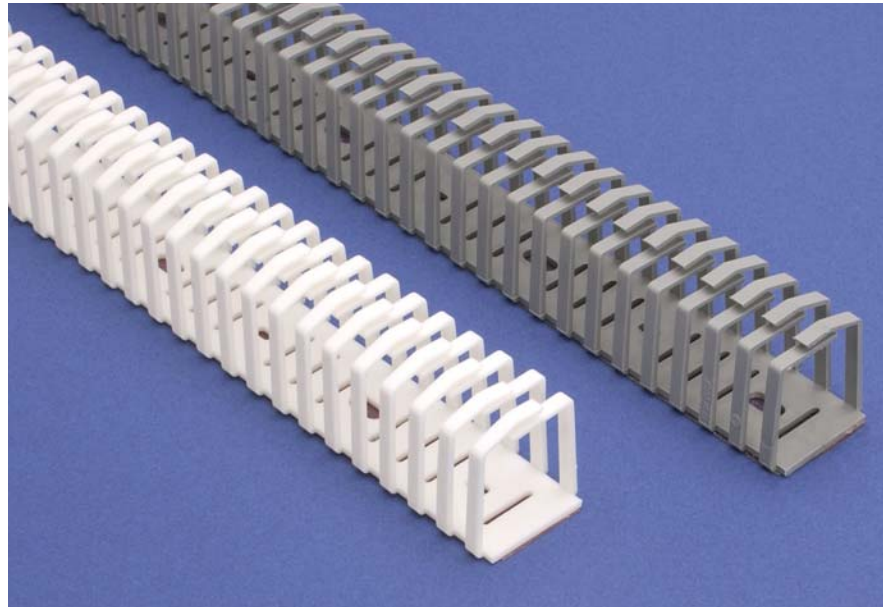
# DINOSAUR FLEXIBLE WIRING DUCT

## Overview

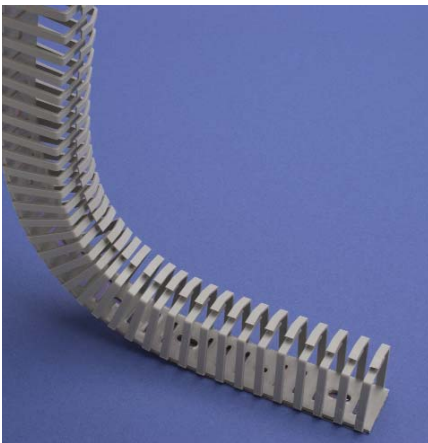
Dinosaur self-adhesive flexible duct is ideal for wiring to cabinet doors, from control panels, for that part of the cable run that leans against the side of the control cabinet and for electronic equipment. It is resilient and can be bent and twisted without breaking. Manufactured from low-smoke, halogen-free polypropylene material, it carries a UL 94V-0 flammability rating and CSA approval.

## Features

- Individual wires can easily be added or removed from total wires within the duct
- Enclose and secure wiring or cables without requiring duct cover
- Convenient for applications requiring frequent access to wiring.
- Easy addition or removal of wires after termination without special tools
- Can be used in extreme operating conditions (max temp. up to 176°F)
- Withstands mechanical stress when installed (i.e. earthquake, falling equipment)
- Can be cut to desired length using scissors or knife

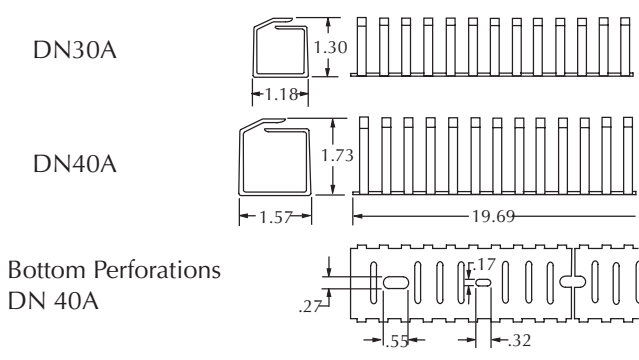
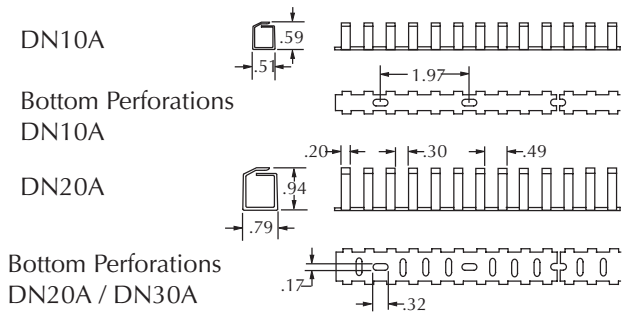


| White Flexible, Self-Adhesive Duct |                       |                |       |                 |                            |
|------------------------------------|-----------------------|----------------|-------|-----------------|----------------------------|
| Nominal Size (WxH) inches (mm)     | Length/pc inches (mm) | Catalog Number | Color | Standard Carton |                            |
|                                    |                       |                |       | Pcs/Pkg         | Total Actual Length ft (m) |
| .5 x .5 (12.7 x 12.7)              | 19.7 (500.38)         | <b>DN10AW</b>  | White | 42              | 68.95 (21)                 |
| .75 x .75 (19.05 x 19.05)          | 19.7 (500.38)         | <b>DN20AW</b>  | White | 64              | 105.06 (32)                |
| 1 x 1 (25.4 x 25.4)                | 19.7 (500.38)         | <b>DN30AW</b>  | White | 36              | 59.1 (18)                  |
| 1.5 x 1.5 (38.1 x 38.1)            | 19.7 (500.38)         | <b>DN40AW</b>  | White | 20              | 32.83 (10)                 |



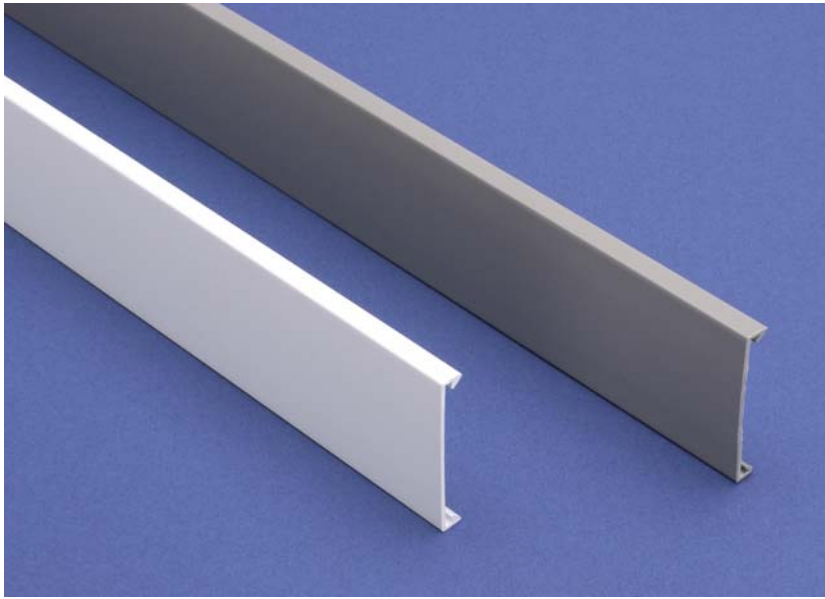
| Grey Flexible, Self-Adhesive Duct |                       |                |       |                 |                            |
|-----------------------------------|-----------------------|----------------|-------|-----------------|----------------------------|
| Nominal Size (WxH) inches (mm)    | Length/pc inches (mm) | Catalog Number | Color | Standard Carton |                            |
|                                   |                       |                |       | Pcs/Pkg         | Total Actual Length ft (m) |
| .5 x .5 (12.7 x 12.7)             | 19.7 (500.38)         | <b>DN10AG</b>  | Grey  | 42              | 68.95 (21)                 |
| .75 x .75 (19.05 x 19.05)         | 19.7 (500.38)         | <b>DN20AG</b>  | Grey  | 64              | 105.06 (32)                |
| 1 x 1 (25.4 x 25.4)               | 19.7 (500.38)         | <b>DN30AG</b>  | Grey  | 36              | 59.1 (18)                  |
| 1.5 x 1.5 (38.1 x 38.1)           | 19.7 (500.38)         | <b>DN40AG</b>  | Grey  | 20              | 32.83 (10)                 |

*Note: When applying self-adhesive wiring duct, make sure that the surface is perfectly clean and dry.*





# WIRING DUCT COVER

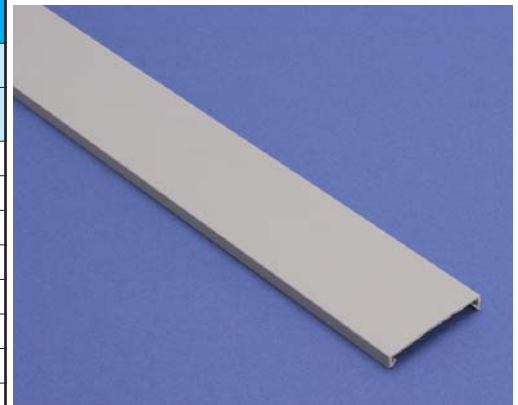


## Duct Cover

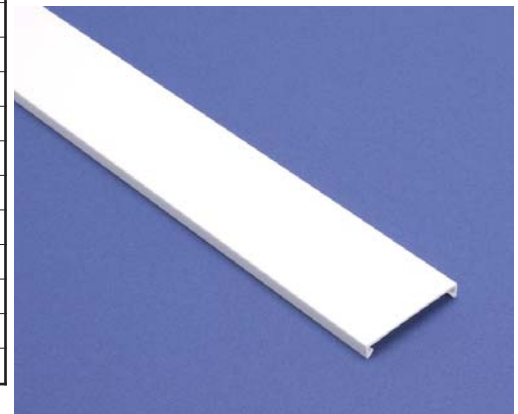
Our standard duct products are supplied complete with covers. These replacement covers are manufactured from the same rigid self-extinguishing PVC material.

**Duct Cover Specifications**

| Part Number      | Description               | Color | Standard Carton |                              |
|------------------|---------------------------|-------|-----------------|------------------------------|
|                  |                           |       | Pcs/Pkg         | Actual Total Length, ft. (m) |
| <b>COV-05G</b>   | Cover for .5" wide duct   | Grey  | 25              | 164 (50)                     |
| <b>COV-05G-1</b> | Cover for .5" wide duct   | Grey  | 1               | 6.56 (2)                     |
| <b>COV-10G</b>   | Cover for 1.0" wide duct  | Grey  | 25              | 164 (50)                     |
| <b>COV-10G-1</b> | Cover for 1.0" wide duct  | Grey  | 1               | 6.56 (2)                     |
| <b>COV-10W</b>   | Cover for 1.0" wide duct  | White | 25              | 164 (50)                     |
| <b>COV-10W-1</b> | Cover for 1.0" wide duct  | White | 1               | 6.56 (2)                     |
| <b>COV-15G</b>   | Cover for 1.5" wide duct  | Grey  | 25              | 164 (50)                     |
| <b>COV-15G-1</b> | Cover for 1.5" wide duct  | Grey  | 1               | 6.56 (2)                     |
| <b>COV-15W</b>   | Cover for 1.5" wide duct  | White | 25              | 164 (50)                     |
| <b>COV-15W-1</b> | Cover for 1.5" wide duct  | White | 1               | 6.56 (2)                     |
| <b>COV-22G</b>   | Cover for 2.25" wide duct | Grey  | 25              | 164 (50)                     |
| <b>COV-22G-1</b> | Cover for 2.25" wide duct | Grey  | 1               | 6.56 (2)                     |
| <b>COV-22W</b>   | Cover for 2.25" wide duct | White | 25              | 164 (50)                     |
| <b>COV-22W-1</b> | Cover for 2.25" wide duct | White | 1               | 6.56 (2)                     |
| <b>COV-30G</b>   | Cover for 3.0" wide duct  | Grey  | 25              | 164 (50)                     |
| <b>COV-30G-1</b> | Cover for 3.0" wide duct  | Grey  | 1               | 6.56 (2)                     |
| <b>COV-30W</b>   | Cover for 3.0" wide duct  | White | 25              | 164 (50)                     |
| <b>COV-30W-1</b> | Cover for 3.0" wide duct  | White | 1               | 6.56 (2)                     |
| <b>COV-40G</b>   | Cover for 4.0" wide duct  | Grey  | 20              | 131.2 (40)                   |
| <b>COV-40G-1</b> | Cover for 4.0" wide duct  | Grey  | 1               | 6.56 (2)                     |
| <b>COV-40W</b>   | Cover for 4.0" wide duct  | White | 20              | 131.2 (40)                   |
| <b>COV-40W-1</b> | Cover for 4.0" wide duct  | White | 1               | 6.56 (2)                     |
| <b>COV-60G</b>   | Cover for 6.0" wide duct  | Grey  | 20              | 131.2 (40)                   |
| <b>COV-60G-1</b> | Cover for 6.0" wide duct  | Grey  | 1               | 6.56 (2)                     |
| <b>COV-60W</b>   | Cover for 6.0" wide duct  | White | 20              | 131.2 (40)                   |
| <b>COV-60W-1</b> | Cover for 6.0" wide duct  | White | 1               | 6.56 (2)                     |



*Note: Standard length of covers is 6' (2m) to fit T1 duct.*



# WIRING DUCT – ACCESSORIES

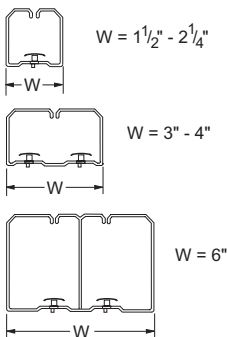
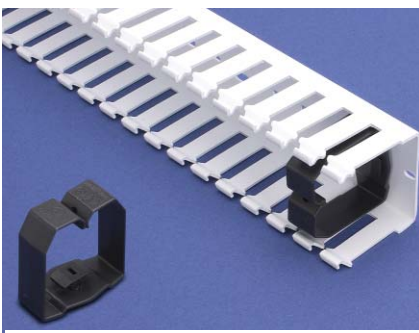
## Duct Separators

Duct separators allow the physical separation of circuits with different voltages and/or functions within a single piece of duct. The various mounting arrangements allow alternate compartmentation of duct and differing ratios of usable section.



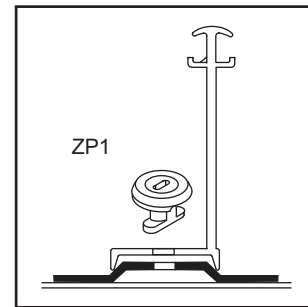
## Wire Retainers

For retaining wires during wiring operations, these retainers are essential. They allow ease of access to the interior of the wiring duct during maintenance or alterations, while assuring that wiring bundles will not fall out when the duct cover is removed. Installed with a simple rotating movement, they anchor firmly in the recess boss in the duct base.



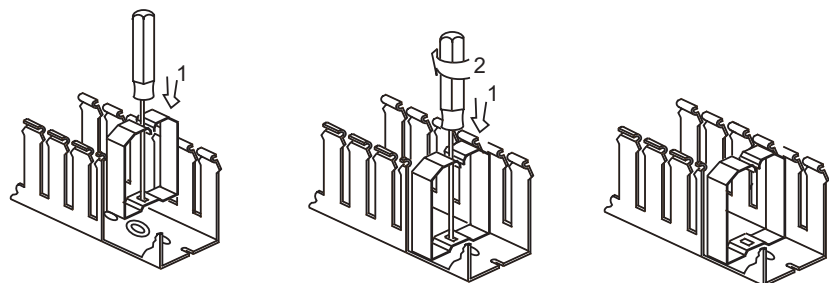
| Duct Separators |  |       |                 |                           |
|-----------------|--|-------|-----------------|---------------------------|
| Part Number     | Description                              | Color | Standard Carton |                           |
|                 |  |       | Pcs/Pkg         | Total Actual Length, ft/m |
| SEP-15E         | Separator for 1.5" high duct. Bulk pack  | Grey  | 32              | 209.92 (64)               |
| SEP-15E-1       | Separator for 1.5" high duct.            | Grey  | 1               | 6.56 (2)                  |
| SEP-22E         | Separator for 2.25" high duct. Bulk pack | Grey  | 20              | 131.20 (40)               |
| SEP-22E-1       | Separator for 2.25" high duct.           | Grey  | 1               | 6.56 (2)                  |
| SEP-30E         | Separator for 3.0" high duct. Bulk pack  | Grey  | 12              | 78.72 (24)                |
| SEP-30E-1       | Separator for 3.0" high duct.            | Grey  | 1               | 6.56 (2)                  |

Note: Length of separators is 6' (2m).



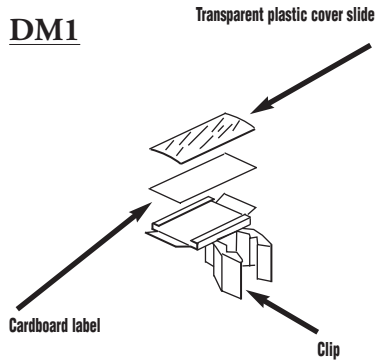
SEP-E Mounting detail

| Wire Retainers |  |       |         |
|----------------|--|-------|---------|
| Part Number    | Description                                  | Color | Pcs/Pkg |
| CL-1515        | Wire retainer fastener for 1.5" x 1.5" duct  | Grey  | 40      |
| CL-1522        | Wire retainer fastener for 1.5" x 2.5" duct  | Grey  | 40      |
| CL-1530        | Wire retainer fastener for 1.5" x 3.0" duct  | Grey  | 20      |
| CL-2215        | Wire retainer fastener for 2.25" x 1.5" duct | Grey  | 40      |
| CL-2222        | Wire retainer fastener for 2.25" x 2.5" duct | Grey  | 20      |
| CL-2230        | Wire retainer fastener for 2.25" x 3.0" duct | Grey  | 20      |
| CL-2240        | Wire retainer fastener for 2.25" x 4.0" duct | Grey  | 20      |
| CL-3015        | Wire retainer fastener for 3.0" x 1.5" duct  | Grey  | 20      |
| CL-3022        | Wire retainer fastener for 3.0" x 2.5" duct  | Grey  | 10      |
| CL-3030        | Wire retainer fastener for 3.0" x 3.0" duct  | Grey  | 10      |
| CL-3040        | Wire retainer fastener for 3.0" x 4.0" duct  | Grey  | 10      |
| CL-4015        | Wire retainer fastener for 4.0" x 1.5" duct  | Grey  | 10      |
| CL-4022        | Wire retainer fastener for 4.0" x 2.5" duct  | Grey  | 10      |
| CL-4030        | Wire retainer fastener for 4.0" x 3.0" duct  | Grey  | 10      |
| CL-4040        | Wire retainer fastener for 4.0" x 4.0" duct  | Grey  | 5       |
| CL-6040        | Wire retainer fastener for 6.0" x 4.0" duct  | Grey  | 5       |



# WIRING DUCT – ACCESSORIES

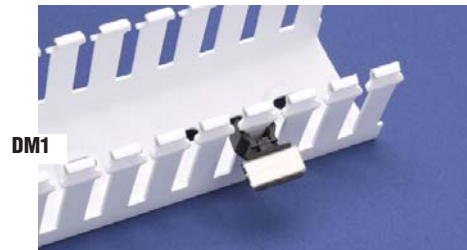
| Identification Tags |   |         |
|---------------------|---|---------|
| Part Number         | Description   | Pcs/Pkg |
| DM1                 | Single-width white cardboard identification label for wiring duct. Supplied with black plastic mounting clip and transparent plastic cover slide. | 50      |



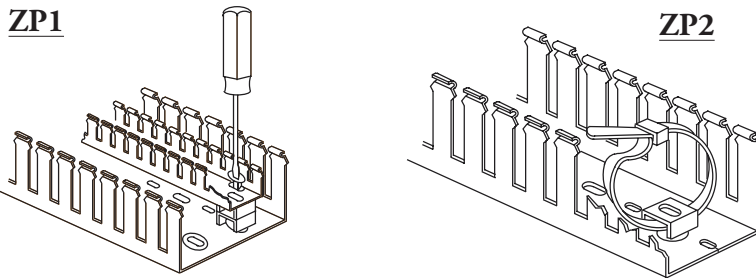
## Identification Tags

To allow easy identification of control components, these tags are mounted by snapping the clip onto the sidewall finger segments of the duct. No glueing or drilling! Removal is not necessary during maintenance or any work which involves the removal of the covers.

*Note: Take care that clip is installed above the wires coming out to the sidewall slots.*

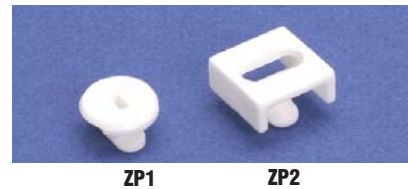


| Mounting Inserts |  |         |
|------------------|--|---------|
| Part Number      | Description  | Pcs/Pkg |
| ZP1              | Round, white polyamide 'button' used to mount components and separators inside duct. | 100     |
| ZP2              | Square white polyamide cable tie mount used to tighten a wire bundle inside duct.    | 50      |

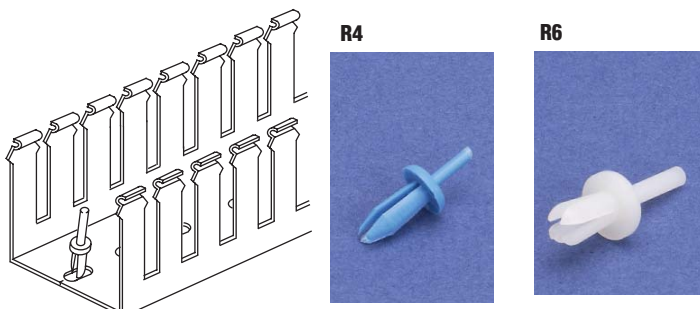


## Mounting Inserts

Use ZP1 for mounting components and SEP-E separators inside duct, or for mounting small sizes of duct inside larger sizes (thus achieving separation of circuits with different functions), and use ZP2 with a cable tie to secure a wire bundle inside the duct.



| Wiring Duct Rivets and Rivet Tools |   |         |
|------------------------------------|---|---------|
| Part Number                        | Description   | Pcs/Pkg |
| R4                                 | Blue polyamide rivet used to install all types of wiring duct with standard 5/32" (4 mm) mounting holes.      | 250     |
| B4                                 | Red polyamide rivet tool used to install R4 rivets.   | 1       |
| R6                                 | Natural polyamide rivet used to install all types of wiring duct with standard 7/32" (5.5 mm) mounting holes. | 250     |
| B6                                 | Yellow polyamide rivet tool used to install R6 rivets.  | 1       |

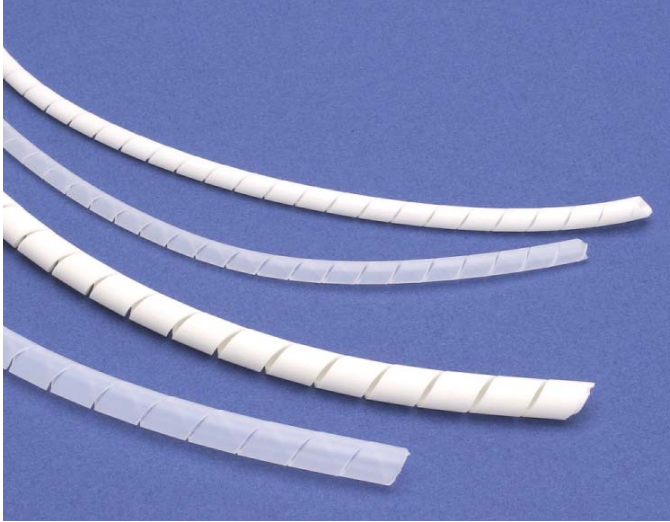


## Rivets and Rivet Tools

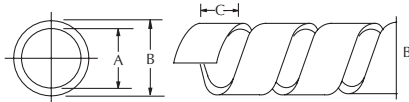
Wiring duct rivets install quickly and easily with the companion rivet tool, offering good temperature resistance and excellent mechanical properties. They can be used to install all types of wiring duct with standard mounting holes.



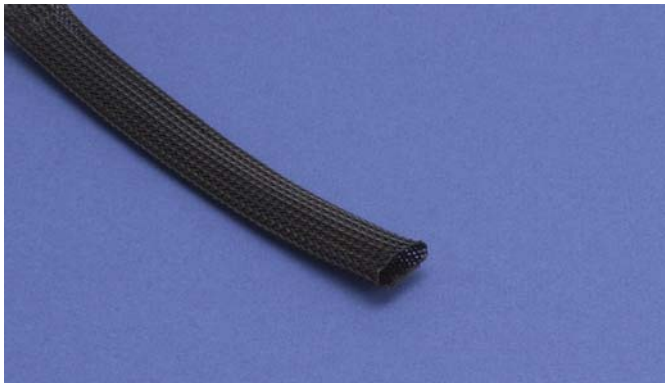
# WIRING DUCT — ACCESSORIES



## Dimensions



| Catalog Number |                              | Dimensions in Inches |     |     | Wire Bundle Size in Inches | Feet per Carton |
|----------------|------------------------------|----------------------|-----|-----|----------------------------|-----------------|
| Polyethylene   | Flame-retardant Polyethylene | A                    | B   | C   |                            |                 |
| P-1            | PA1                          | .06                  | .12 | .20 | 1/16 to 1/2                | 160             |
| P-2            | PA2                          | .16                  | .24 | .31 | ¼ to 2                     | 80              |
| P-3            | PA3                          | .31                  | .39 | .47 | 3/8 to 3                   | 80              |
| P-4            | PA4                          | .35                  | .47 | .47 | ½ to 4                     | 65              |



## Braided Expandable Sleeving Material Specifications

|                            |                                   |
|----------------------------|-----------------------------------|
| <b>Operating Temp</b>      | -50°C to +150°C (-58°F to +302°F) |
| <b>Physical Properties</b> | Self-extinguishing for UL 94V-2   |
| <b>Maximum Elongation</b>  | 42%                               |
| <b>Diameter Expansion</b>  | 100%                              |
| <b>Other</b>               | Halogen-free                      |

## Spiral Wrap

For neatly grouping wire bundles simply and economically, spiral wrap has no equal. Strong, yet easy to install, it protects the wire bundle, keeping it flexible though tightly contained. It is easily removed and reusable for temporary wiring.

| Spiral Wrap |  |         |              |
|-------------|--|---------|--------------|
| Part Number | Description  | Color   | Length       |
| P-1         | .125" nominal o.d. Polyethylene spiral wrap used for wire bundles from 1/16 to 1/2 inch diameter.                    | Natural | 160 ft./pack |
| PA1         | .125" nominal o.d. self-extinguishing Polyethylene spiral wrap used for wire bundles from 1/16 to 1/2 inch diameter. | White   | 160 ft./pack |
| P-2         | .25" nominal o.d. Polyethylene spiral wrap used for wire bundles from 1/4 to 2 inch diameter.                        | Natural | 80 ft./pack  |
| PA2         | .25" nominal o.d. self-extinguishing Polyethylene spiral wrap used for wire bundles from 1/4 to 2 inch diameter.     | White   | 80 ft./pack  |
| P-3         | .375" nominal o.d. Polyethylene spiral wrap used for wire bundles from 3/8 to 3 inch diameter.                       | Natural | 80 ft./pack  |
| PA3         | .375" nominal o.d. self-extinguishing Polyethylene spiral wrap used for wire bundles from 3/8 to 3 inch diameter.    | White   | 80 ft./pack  |
| P-4         | .5" nominal o.d. Polyethylene spiral wrap used for wire bundles from 1/2 to 4 inch diameter.                         | Natural | 65 ft./pack  |
| PA4         | .5" nominal o.d. self-extinguishing Polyethylene spiral wrap used for wire bundles from 1/2 to 4 inch diameter.      | White   | 65 ft./pack  |

## Braided Sleeving

This lightweight, expandable, self-extinguishing polyester sleeving has an open weave to allow a maximum range of diameter expansion. It is super-flexible and easy to install, gripping objects of various shapes and sizes reliably. Abrasion-resistant, it provides extra protection against chemicals and flame.

| UL 94V-2 Expandable Sleeving |  |       |              |
|------------------------------|--|-------|--------------|
| Part Number                  | Description  | Color | Length       |
| TY-5                         | Braided expandable polyester sleeving, .197" (5mm) nominal i.d., .157" (4mm) to .472" (12mm) nominal range     | Black | 325 ft./pack |
| TY-10                        | Braided expandable polyester sleeving, .375" (10mm) nominal i.d., .315" (8mm) to .866" (22mm) nominal range    | Black | 325 ft./pack |
| TY-20                        | Braided expandable polyester sleeving, .750" (20mm) nominal i.d., .630" (16mm) to 1.378" (35mm) nominal range  | Black | 164 ft./pack |
| TY-30                        | Braided expandable polyester sleeving, 1.125" (30mm) nominal i.d., .984" (25mm) to 1.890" (48mm) nominal range | Black | 164 ft./pack |
| TY-50                        | Braided expandable polyester sleeving, 2.0" (50mm) nominal i.d., 1.575" (40mm) to 2.825" (72mm) nominal range  | Black | 164 ft./pack |



# WIRING DUCT – MATERIAL SPECIFICATIONS

| Material Specifications                  |               |                   |                    |                  |                       |                       |                     |                              |
|--|---------------|-------------------|--------------------|------------------|-----------------------|-----------------------|---------------------|------------------------------|
| Materials                                | Test Standard | Unit of Measure   | Rigid PVC          | Polypropylene    | PVC Molded Components | Polyamide 6           | Polyethylene        | Flame Retardant Polyethylene |
| <b>Chemical/Physical Properties</b>      |               |                   |                    |                  |                       |                       |                     |                              |
| <b>Specific Gravity</b>                  | ASTM D792     | g/cm <sup>3</sup> | 1.55               | 1.01             | 1.32                  | 1.14                  | 0.92                | 0.97                         |
| <b>H<sub>2</sub>O 73.4°F Absorption</b>  | ISO 62        | %                 | <0.1               | 0.02             | <0.1                  | 2.5                   | <0.1                | <0.1                         |
| <b>Formaldehyde</b>                      | –             | ppm               | absent             | absent           | absent                | absent                | absent              | absent                       |
| <b>Cadmium</b>                           | –             | ppm               | absent             | absent           | absent                | absent                | absent              | absent                       |
| <b>Mechanical Properties</b>             |               |                   |                    |                  |                       |                       |                     |                              |
| <b>Tensile Stress at Break</b>           | ASTM D638     | MPa               | 39                 | 28               | 30                    | 45                    | 17                  | 15                           |
| <b>Traction Strength</b>                 | ASTM D638     | MPa               | 44                 | 27               | 27                    | 55                    | 9.5                 | 9                            |
| <b>Elongation at Break</b>               | ASTM D638     | %                 | 130                | 200              | 97                    | 250                   | 400                 | 600                          |
| <b>Modulus of Elasticity at Traction</b> | ASTM D638     | MPa               | 4400               | n/a              | –                     | 950                   | –                   | 240                          |
| <b>Modulus of Elasticity at Flexion</b>  | ASTM D790     | MPa               | 3200               | 2100             | –                     | 1100                  | 210                 | 130                          |
| <b>Thermal Properties</b>                |               |                   |                    |                  |                       |                       |                     |                              |
| <b>Temperature VICAT</b>                 | ASTM D1525    | °C                | 84                 | 95               | 70                    | 198                   | 89                  | –                            |
| <b>HDT</b>                               | ASTM D648     | °C                | 72                 | 60               | 60                    | 185                   | –                   | –                            |
| <b>Coefficient of Expansion</b>          | ASTM D696     | K <sup>-1</sup>   | 6 10 <sup>-5</sup> | 10 <sup>-5</sup> | 8 10 <sup>-5</sup>    | 8-10 10 <sup>-5</sup> | 22 10 <sup>-5</sup> | 10 <sup>-5</sup>             |
| <b>Specific Heat</b>                     | ASTM C351     | kJ/kgK            | 0.94               | n/a              | 1.24                  | 1.7                   | –                   | –                            |
| <b>Thermal Conductivity</b>              | ASTM C177     | W/mK              | 0.14               | 0.21             | 0.14                  | 0.29                  | 0.32                | 0.32                         |
| <b>Electrical Properties</b>             |               |                   |                    |                  |                       |                       |                     |                              |
| <b>Dielectric Constant</b>               | ASTM D150     | –                 | 3.2 - 4.0          | 2.5              | 3.2                   | 5.0                   | 2.4                 | 2.3                          |
| <b>Dielectric Strength</b>               | IEC 243       | kV/mm             | 70                 | 25               | 60                    | 35                    | 90                  | 90                           |
| <b>Surface Resistance</b>                | IEC 93        | Ω                 | 10 <sup>13</sup>   | 10 <sup>13</sup> | 10 <sup>13</sup>      | 5 10 <sup>11</sup>    | 10 <sup>13</sup>    | 10 <sup>13</sup>             |
| <b>Self-Extinguishing</b>                |               |                   |                    |                  |                       |                       |                     |                              |
| <b>Self-Extinguishing UL 94 1.6 mm</b>   | UL 94         | –                 | V-0                | V-0              | V-0                   | V-2                   | HB                  | V-2                          |
| <b>Self-Extinguishing UL 94 3.2 mm</b>   | UL 94         | –                 | V-0                | V-0              | V-0                   | V-2                   | HB                  | V-2                          |
| <b>Hot Wire Test (2 mm)</b>              | IEC 695-2-1   | °C                | 960                | 960              | 960                   | 650                   | 650                 | 850                          |
| <b>Oxygen Number</b>                     | ASTM D2863    | %                 | 43                 | 30               | 34                    | 25                    | –                   | 25                           |