

3M™ Grafoplast™ TRASP System



# Durable Custom Identification



**3M**

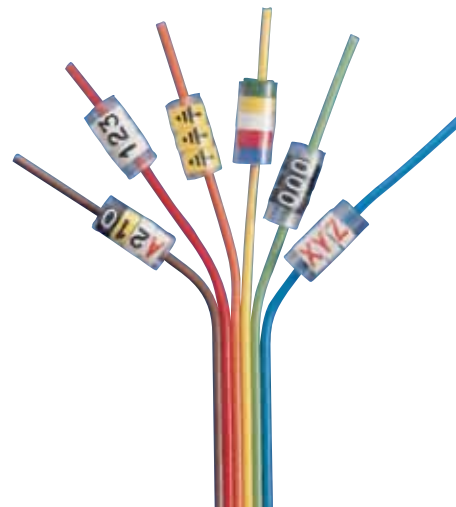


For years, 3M has provided a variety of reliable solutions for wire marking and identification. Now 3M is introducing a new manual marking and identification system – from Grafoplast, a 3M company – for creating custom labels for components inside and outside of electrical control equipment and data communication equipment.

The 3M™ Grafoplast™ TRASP System is a complete solution for marking and identification that does not require a printer or computer equipment. It consists of pre-printed alphanumeric character elements that are loaded into transparent sleeves of various types and sizes. These sleeves can then be attached to wire, cable, cable assemblies or other devices inside of panels.

**The advantages of the TRASP system:**

- One system for multiple applications
- Quick and easy installation
- Custom labels created on the spot
- Flexibility to change labels over time
- Ability to mark before or after termination
- Durable PVC sleeves protect character elements from wear and degradation

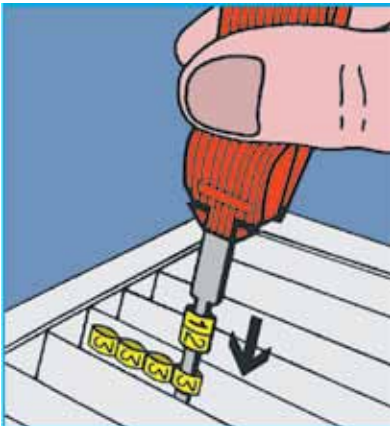


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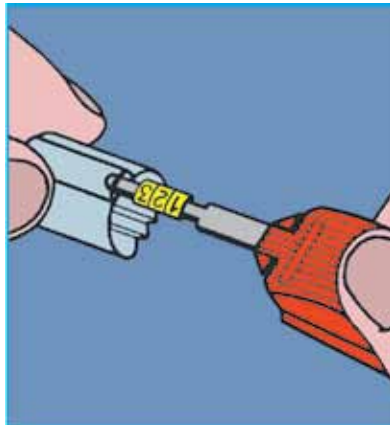
# Easy as 1 - 2 - 3

1.



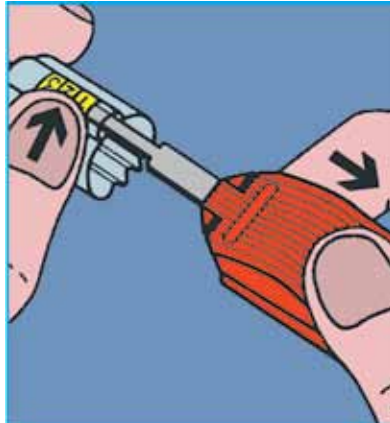
Collect the elements on the marking tool

2.



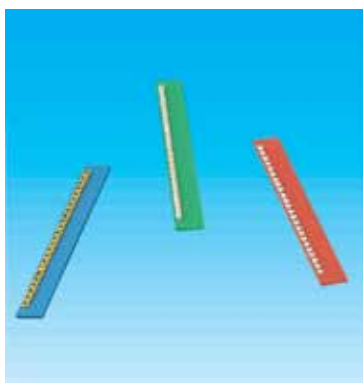
Insert elements into the sleeve

3.



Apply slight pressure to the sleeve with thumb and remove the marking tool

**Note:** If changes need to be made, characters can easily be added or removed using the removal hook and the process can be repeated.



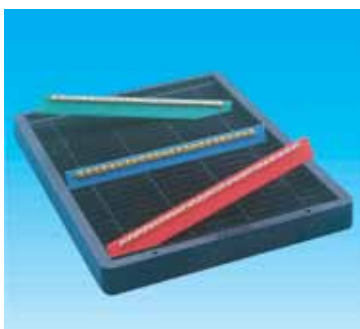
## 3M™ Grafoplast™ Alphanumeric Strips 117

The TRASP system includes a variety of alphanumeric strips that allow users to mix and match characters and colors to create custom labels. The strips hold 24 equally marked elements attached vertically on a plastic holder.

The elements available include the 26 letters of the alphabet (uppercase), numbers (from 0 to 9), 5 commonly used symbols, and 7 background colors. Specifications: These strips meet UL-94 Class V0 standards and can be used in temperatures ranging from -58°F to 176°F (-50°C to 80°C)

| Part Number | Element Width |     | Quantity per Box<br>Strips (Elements) |
|-------------|---------------|-----|---------------------------------------|
|             | in.           | mm  |                                       |
| BL117M      | 0.09          | 2.3 | 10 (240)                              |

| Part Number | UPC<br>(013166-) | Character<br>(Black) | Background<br>Color | Part Number | UPC<br>(013166-) | Character<br>(Black) | Background<br>Color |
|-------------|------------------|----------------------|---------------------|-------------|------------------|----------------------|---------------------|
| BL117M00BW  | 25570            | 0                    | White               | BL117MJJBW  | 26485            | J                    | White               |
| BL117M01BW  | 25594            | 1                    | White               | BL117MKKBW  | 26497            | K                    | White               |
| BL117M02BW  | 25618            | 2                    | White               | BL117MLLBW  | 26512            | L                    | White               |
| BL117M03BW  | 25639            | 3                    | White               | BL117MMMBW  | 26527            | M                    | White               |
| BL117M04BW  | 25663            | 4                    | White               | BL117MNNBW  | 26542            | N                    | White               |
| BL117M05BW  | 25687            | 5                    | White               | BL117M00BW  | 26560            | O                    | White               |
| BL117M06BW  | 25708            | 6                    | White               | BL117MPPBW  | 26575            | P                    | White               |
| BL117M07BW  | 25726            | 7                    | White               | BL117MQQBW  | 26593            | Q                    | White               |
| BL117M08BW  | 25753            | 8                    | White               | BL117MRRBW  | 26611            | R                    | White               |
| BL117M09BW  | 25774            | 9                    | White               | BL117MSSBW  | 26629            | S                    | White               |
| BL117M10BW  | 26026            | +                    | White               | BL117MTTBW  | 26644            | T                    | White               |
| BL117M11BW  | 26050            | -                    | White               | BL117MUUBW  | 26662            | U                    | White               |
| BL117M12BW  | 26065            | ±                    | White               | BL117MVVBW  | 26677            | V                    | White               |
| BL117M13BW  | 26077            | /                    | White               | BL117MWWBW  | 26692            | W                    | White               |
| BL117M33BW  | 26224            | :                    | White               | BL117MXXBW  | 26707            | X                    | White               |
| BL117MAABW  | 26314            | A                    | White               | BL117MYYBW  | 26722            | Y                    | White               |
| BL117MBBBW  | 26335            | B                    | White               | BL117MZZBW  | 26737            | Z                    | White               |
| BL117MCCBW  | 26353            | C                    | White               | BL117M999B  | 26278            | Blank                | Black               |
| BL117MDDBW  | 26374            | D                    | White               | BL117M999G  | 26284            | Blank                | Green               |
| BL117MEEBW  | 26392            | E                    | White               | BL117M999O  | 26290            | Blank                | Orange              |
| BL117MFFBW  | 26410            | F                    | White               | BL117M999R  | 26296            | Blank                | Red                 |
| BL117MGGBW  | 26428            | G                    | White               | BL117M999U  | 26299            | Blank                | Blue                |
| BL117MHHBW  | 26446            | H                    | White               | BL117M999W  | 26305            | Blank                | White               |
| BL117MIIBW  | 26464            | I                    | White               | BL117M999Y  | 26308            | Blank                | Yellow              |



## 3M™ Grafoplast™ Strip Tray 118

The strip tray is an essential component for the correct use of the TRASP system. Alphanumeric strips are loaded into the angled slots of the strip tray to allow easy extraction of the marking elements. The strip tray holds 25 strips of any type of character (letters, numbers, symbols, or colors).

| Part Number | UPC (013166-) | Material      | Length<br>in.      | Length<br>mm   | Color | Qty. |
|-------------|---------------|---------------|--------------------|----------------|-------|------|
| 118         | 18380         | Polypropylene | 5.79 x 7.48 x 0.71 | 147 x 190 x 18 | Black | 1    |



## 3M Grafoplast Marking Tools 119M

The marking tool is used to select elements from the strip tray and insert them into the plastic sleeves. Two sizes are available: the 15 mm (holds 6 elements) and the 30 mm (holds 13 elements).

| Part Number | UPC (013166-) | Material                          | Length<br>in. | Length<br>mm | Color  | Qty. |
|-------------|---------------|-----------------------------------|---------------|--------------|--------|------|
| 119 M/15    | 18405         | Stainless Steel/<br>Polypropylene | 0.59          | 15           | Orange | 1    |
| 119 M/30    | 18415         | Stainless Steel/<br>Polypropylene | 1.18          | 30           | Orange | 1    |



## 3M Grafoplast Removal Hook 120

The removal hook allows users to easily remove and replace elements in seconds, providing the flexibility needed to make quick changes on site.

| Part Number | UPC (013166-) | Material        | Color | Qty. |
|-------------|---------------|-----------------|-------|------|
| 120         | 18425         | Stainless Steel | Metal | 5    |



## 3M Grafoplast Sleeves for Fine Wire 190

This transparent PVC sleeve is designed for marking fine wires in a clear and legible manner. Specifications: Meets UL-94 Class V0 standards and can be used in temperatures ranging from -58°F to 176°F (-50°C to 80°C)

Refer to pages 17-19 for a quick reference guide by wire type and conductor size.

| Part Number | UPC (013166-) | Min. OD<br>in. | Min. OD<br>mm | Max. OD<br>in. | Max. OD<br>mm | Length<br>in. | Length<br>mm | No. of<br>Elements | Qty.  |
|-------------|---------------|----------------|---------------|----------------|---------------|---------------|--------------|--------------------|-------|
| 190/10      | 19385         | 0.024          | 0.6           | 0.047          | 1.2           | 0.39          | 10           | 4                  | 1,000 |
| 190/15      | 19390         | 0.024          | 0.6           | 0.047          | 1.2           | 0.59          | 15           | 6                  | 1,000 |



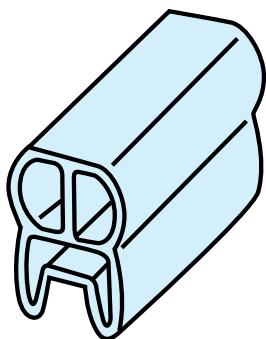


## 3M™ Grafoplast™ Standard Sleeves 200 Series

These standard transparent PVC sleeves are designed to cater to a wider range of cables and wires and are particularly useful for jobs that encounter a variety of diameter ranges. They are more pliable than the 100 series to cover a broader diameter range. Specifications: Meets UL-94 Class V0 standards and can be used in temperatures ranging from -58°F to 176°F (-50°C to 80°C)

Refer to pages 17-19 for a quick reference guide by wire type and conductor size.

| Part Number | UPC (013166-) | Min. OD |      | Max. OD |      | Length |    | No. of Elements | Qty.  |
|-------------|---------------|---------|------|---------|------|--------|----|-----------------|-------|
|             |               | in.     | mm   | in.     | mm   | in.    | mm |                 |       |
| 201/10      | 19505         | 0.059   | 1.5  | 0.098   | 2.5  | 0.39   | 10 | 4               | 1,000 |
| 201/15      | 19510         | 0.059   | 1.5  | 0.098   | 2.5  | 0.59   | 15 | 6               | 1,000 |
| 201/23      | 19535         | 0.059   | 1.5  | 0.098   | 2.5  | 0.91   | 23 | 10              | 1,000 |
| 201/30      | 19545         | 0.059   | 1.5  | 0.098   | 2.5  | 1.18   | 30 | 13              | 500   |
| 202/10      | 19590         | 0.079   | 2.0  | 0.157   | 4.0  | 0.39   | 10 | 4               | 1,000 |
| 202/15      | 19600         | 0.079   | 2.0  | 0.157   | 4.0  | 0.59   | 15 | 6               | 1,000 |
| 202/23      | 19630         | 0.079   | 2.0  | 0.157   | 4.0  | 0.91   | 23 | 10              | 500   |
| 202/30      | 19655         | 0.079   | 2.0  | 0.157   | 4.0  | 1.18   | 30 | 13              | 500   |
| 203/10      | 19700         | 0.157   | 4.0  | 0.276   | 7.0  | 0.39   | 10 | 4               | 500   |
| 203/15      | 19710         | 0.157   | 4.0  | 0.276   | 7.0  | 0.59   | 15 | 6               | 500   |
| 203/23      | 19740         | 0.157   | 4.0  | 0.276   | 7.0  | 0.91   | 23 | 10              | 500   |
| 203/30      | 19760         | 0.157   | 4.0  | 0.276   | 7.0  | 1.18   | 30 | 13              | 200   |
| 204/10      | 19800         | 0.236   | 6.0  | 0.394   | 10.0 | 0.39   | 10 | 4               | 500   |
| 204/15      | 19805         | 0.236   | 6.0  | 0.394   | 10.0 | 0.59   | 15 | 6               | 500   |
| 204/23      | 19825         | 0.236   | 6.0  | 0.394   | 10.0 | 0.91   | 23 | 10              | 200   |
| 204/30      | 19835         | 0.236   | 6.0  | 0.394   | 10.0 | 1.18   | 30 | 13              | 200   |
| 205/10      | 19875         | 0.394   | 10.0 | 0.551   | 14.0 | 0.39   | 10 | 4               | 200   |
| 205/15      | 19880         | 0.394   | 10.0 | 0.551   | 14.0 | 0.59   | 15 | 6               | 200   |
| 205/23      | 19900         | 0.394   | 10.0 | 0.551   | 14.0 | 0.91   | 23 | 10              | 200   |
| 205/30      | 19910         | 0.394   | 10.0 | 0.551   | 14.0 | 1.18   | 30 | 13              | 200   |
| 206/10      | 19950         | 0.551   | 14.0 | 0.866   | 22.0 | 0.39   | 10 | 4               | 200   |
| 206/15      | 19955         | 0.551   | 14.0 | 0.866   | 22.0 | 0.59   | 15 | 6               | 200   |
| 206/23      | 19975         | 0.551   | 14.0 | 0.866   | 22.0 | 0.91   | 23 | 10              | 100   |
| 206/30      | 19985         | 0.551   | 14.0 | 0.866   | 22.0 | 1.18   | 30 | 13              | 100   |
| 207/10      | 20025         | 0.866   | 22.0 | 1.181   | 30.0 | 0.39   | 10 | 4               | 50    |
| 207/15      | 20030         | 0.866   | 22.0 | 1.181   | 30.0 | 0.59   | 15 | 6               | 50    |
| 207/23      | 20045         | 0.866   | 22.0 | 1.181   | 30.0 | 0.91   | 23 | 10              | 50    |
| 207/30      | 20055         | 0.866   | 22.0 | 1.181   | 30.0 | 1.18   | 30 | 13              | 50    |
| 208/10      | 20090         | 1.181   | 30.0 | 1.378   | 35.0 | 0.39   | 10 | 4               | 50    |
| 208/15      | 20095         | 1.181   | 30.0 | 1.378   | 35.0 | 0.59   | 15 | 6               | 50    |
| 208/23      | 20105         | 1.181   | 30.0 | 1.378   | 35.0 | 0.91   | 23 | 10              | 50    |
| 208/30      | 20115         | 1.181   | 30.0 | 1.378   | 35.0 | 1.18   | 30 | 13              | 50    |
| 209/10      | 20150         | 1.378   | 35.0 | 1.575   | 40.0 | 0.39   | 10 | 4               | 50    |
| 209/15      | 20155         | 1.378   | 35.0 | 1.575   | 40.0 | 0.59   | 15 | 6               | 50    |
| 209/23      | 20165         | 1.378   | 35.0 | 1.575   | 40.0 | 0.91   | 23 | 10              | 50    |
| 209/30      | 20175         | 1.378   | 35.0 | 1.575   | 40.0 | 1.18   | 30 | 13              | 50    |



## 3M™ Grafoplast™ Vertical Dual Sleeves 802

The vertical dual transparent PVC sleeve has two rows that are vertically stacked side-by-side making it possible to read markers clearly from either side of the cable.

Specifications: Meets UL-94 Class V0 standards and can be used in temperatures ranging from -58°F to 176°F (-50°C to 80°C)

| Part Number | UPC (013166-) | Min. OD |     | Max. OD |     | Length |    | No. of Elements per Row | Qty. |
|-------------|---------------|---------|-----|---------|-----|--------|----|-------------------------|------|
|             |               | in.     | mm  | in.     | mm  | in.    | mm |                         |      |
| 802/15      | 22240         | 0.079   | 2.0 | 0.157   | 4.0 | 0.59   | 15 | 6                       | 500  |
| 802/30      | 22260         | 0.079   | 2.0 | 0.157   | 4.0 | 1.18   | 30 | 13                      | 200  |

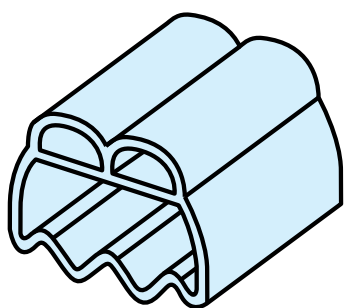


## 3M Grafoplast Standard Dual Sleeves 808-811

The standard dual transparent PVC sleeve has two rows for elements and is particularly useful for source and destination marking.

Specifications: Meets UL-94 Class V0 standards and can be used in temperatures ranging from -58°F to 176°F (-50°C to 80°C)

| Part Number | UPC (013166-) | Min. OD |      | Max. OD |      | Length |    | No. of Elements per Row | Qty. |
|-------------|---------------|---------|------|---------|------|--------|----|-------------------------|------|
|             |               | in.     | mm   | in.     | mm   | in.    | mm |                         |      |
| 808/10      | 22270         | 0.315   | 8.0  | 0.394   | 10.0 | 0.39   | 10 | 4                       | 100  |
| 808/15      | 22275         | 0.315   | 8.0  | 0.394   | 10.0 | 0.59   | 15 | 6                       | 100  |
| 808/23      | 22280         | 0.315   | 8.0  | 0.394   | 10.0 | 0.91   | 23 | 10                      | 50   |
| 808/30      | 22285         | 0.315   | 8.0  | 0.394   | 10.0 | 1.18   | 30 | 13                      | 50   |
| 809/10      | 22295         | 0.394   | 10.0 | 0.472   | 12.0 | 0.39   | 10 | 4                       | 100  |
| 809/15      | 22300         | 0.394   | 10.0 | 0.472   | 12.0 | 0.59   | 15 | 6                       | 100  |
| 809/23      | 22305         | 0.394   | 10.0 | 0.472   | 12.0 | 0.91   | 23 | 10                      | 50   |
| 809/30      | 22310         | 0.394   | 10.0 | 0.472   | 12.0 | 1.18   | 30 | 13                      | 50   |
| 810/10      | 22320         | 0.472   | 12.0 | 0.551   | 14.0 | 0.39   | 10 | 4                       | 100  |
| 810/15      | 22325         | 0.472   | 12.0 | 0.551   | 14.0 | 0.59   | 15 | 6                       | 100  |
| 810/23      | 22330         | 0.472   | 12.0 | 0.551   | 14.0 | 0.91   | 23 | 10                      | 50   |
| 810/30      | 22335         | 0.472   | 12.0 | 0.551   | 14.0 | 1.18   | 30 | 13                      | 50   |
| 811/10      | 22345         | 0.551   | 14.0 | 0.630   | 16.0 | 0.39   | 10 | 4                       | 50   |
| 811/15      | 22350         | 0.551   | 14.0 | 0.630   | 16.0 | 0.59   | 15 | 6                       | 50   |
| 811/23      | 22355         | 0.551   | 14.0 | 0.630   | 16.0 | 0.91   | 23 | 10                      | 20   |
| 811/30      | 22360         | 0.551   | 14.0 | 0.630   | 16.0 | 1.18   | 30 | 13                      | 20   |



Refer to pages 17-19 for a quick reference guide by wire type and conductor size.





## 3M™ Grafoplast™ Halogen-Free\* Sleeves 901-903 HF

The halogen free transparent sleeve is ideal for high risk installations.

Specifications: Meets UL-94 Class V0 standards and can be used in temperatures ranging from -40°F to 176°F (-40°C to 80°C)

| Part Number | UPC (013166-) | Min. OD in. | mm  | Max. OD in. | mm   | Length in. | mm | No. of Elements | Qty.  |
|-------------|---------------|-------------|-----|-------------|------|------------|----|-----------------|-------|
| 901 HF/15   | 22450         | 0.035       | 0.9 | 0.063       | 1.6  | 0.59       | 15 | 6               | 1,000 |
| 901 HF/30   | 22460         | 0.035       | 0.9 | 0.063       | 1.6  | 1.18       | 30 | 13              | 500   |
| 902 HF/15   | 22470         | 0.055       | 1.4 | 0.197       | 5.0  | 0.59       | 15 | 6               | 1,000 |
| 902 HF/30   | 22480         | 0.055       | 1.4 | 0.197       | 5.0  | 1.18       | 30 | 13              | 500   |
| 903 HF/15   | 22490         | 0.197       | 5.0 | 0.433       | 11.0 | 0.59       | 15 | 6               | 500   |
| 903 HF/30   | 22500         | 0.197       | 5.0 | 0.433       | 11.0 | 1.18       | 30 | 13              | 200   |



## 3M Grafoplast Snap-on Sleeves 301-304

The snap-on sleeve is ideal for marking cable after the electrical connection has already been made. The bottom of the snap-on sleeve is made of a rigid base that snaps onto the cable and the top of the sleeve is made of a soft, transparent PVC sleeve that is designed to hold marking elements.

Specifications: Meets UL-94 Class V0 standards and can be used in temperatures ranging from -58°F to 176°F (-50°C to 80°C)

| Part Number | UPC (013166-) | Min. OD in. | mm  | Max. OD in. | mm   | Length in. | mm | No. of Elements | Qty.  |
|-------------|---------------|-------------|-----|-------------|------|------------|----|-----------------|-------|
| 301/10      | 21765         | 0.079       | 2.0 | 0.138       | 3.5  | 0.39       | 10 | 4               | 1,000 |
| 301/15      | 21770         | 0.079       | 2.0 | 0.138       | 3.5  | 0.59       | 15 | 6               | 1,000 |
| 301/23      | 21790         | 0.079       | 2.0 | 0.138       | 3.5  | 0.91       | 23 | 10              | 500   |
| 301/30      | 21795         | 0.079       | 2.0 | 0.138       | 3.5  | 1.18       | 30 | 13              | 500   |
| 302/10      | 21805         | 0.110       | 2.8 | 0.197       | 5.0  | 0.39       | 10 | 4               | 1,000 |
| 302/15      | 21810         | 0.110       | 2.8 | 0.197       | 5.0  | 0.59       | 15 | 6               | 1,000 |
| 302/23      | 21825         | 0.110       | 2.8 | 0.197       | 5.0  | 0.91       | 23 | 10              | 500   |
| 302/30      | 21830         | 0.110       | 2.8 | 0.197       | 5.0  | 1.18       | 30 | 13              | 500   |
| 303/10      | 21845         | 0.197       | 5.0 | 0.315       | 8.0  | 0.39       | 10 | 4               | 500   |
| 303/15      | 21850         | 0.197       | 5.0 | 0.315       | 8.0  | 0.59       | 15 | 6               | 500   |
| 303/23      | 21865         | 0.197       | 5.0 | 0.315       | 8.0  | 0.91       | 23 | 10              | 200   |
| 303/30      | 21870         | 0.197       | 5.0 | 0.315       | 8.0  | 1.18       | 30 | 13              | 200   |
| 304/10      | 21885         | 0.315       | 8.0 | 0.394       | 10.0 | 0.39       | 10 | 4               | 500   |
| 304/15      | 21890         | 0.315       | 8.0 | 0.394       | 10.0 | 0.59       | 15 | 6               | 500   |
| 304/23      | 21905         | 0.315       | 8.0 | 0.394       | 10.0 | 0.91       | 23 | 10              | 200   |
| 304/30      | 21910         | 0.315       | 8.0 | 0.394       | 10.0 | 1.18       | 30 | 13              | 200   |

\*Halogen Free is defined as having less than 900 ppm bromine, less than 900 ppm chlorine, and less than 1500 ppm total bromine and chlorine; other halogens are excluded from this definition. These are the levels set forth in certain industry standards, such as the International Electrotechnical Commission (IEC) 61249-2-21 standard.

Refer to pages 17-19 for a quick reference guide by wire type and conductor size.



**Note:** Cable tie not included

## 3M™ Grafoplast™ Standard Longitudinal Sleeves 130

The transparent longitudinal PVC sleeve is secured with a cable tie and creates a label with text that runs parallel to the cable. It is ideal for marking bundles of cables that require marking at regular intervals. Specifications: This sleeve meets UL-94 Class V0 standards and can be used in temperatures ranging from -58°F to 176°F (-50°C to 80°C)

| Part Number | UPC<br>(013166-) | Length<br>in. | Length<br>mm | No. of<br>Elements | Qty. |
|-------------|------------------|---------------|--------------|--------------------|------|
| 130/23      | 18600            | 0.91          | 23           | 10                 | 200  |
| 130/30      | 18605            | 1.18          | 30           | 13                 | 200  |

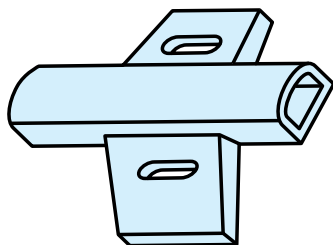


**Note:** Cable tie not included

## 3M Grafoplast Dual Longitudinal Sleeve 830

The dual transparent longitudinal sleeve has the same features as the 130 and includes dual sleeves for a second row of identification. Specifications: This sleeve meets UL-94 Class V0 standards and can be used in temperatures ranging from -58°F to 176°F (-50°C to 80°C)

| Part Number | UPC<br>(013166-) | Length<br>in. | Length<br>mm | No. of<br>Elements<br>per Row | Qty. |
|-------------|------------------|---------------|--------------|-------------------------------|------|
| 830/30      | 22370            | 1.18          | 30           | 13                            | 200  |



## 3M Grafoplast Halogen-Free\* Longitudinal Sleeve 930 HF

The halogen free transparent longitudinal sleeve is ideal for high risk installations. This sleeve must be paired with a cable tie for proper installation. Specifications: Meets UL-94 Class V0 standards and can be used in temperatures ranging from -40°F to 176°F (-40°C to 80°C)

\*Halogen Free is defined as having less than 900 ppm bromine, less than 900 ppm chlorine, and less than 1500 ppm total bromine and chlorine; other halogens are excluded from this definition. These are the levels set forth in certain industry standards, such as the International Electrotechnical Commission (IEC) 61249-2-21 standard.

| Part Number | UPC<br>(013166-) | Length<br>in. | Length<br>mm | No. of<br>Elements | Qty. |
|-------------|------------------|---------------|--------------|--------------------|------|
| 930HF/30    | 22530            | 1.18          | 30           | 13                 | 200  |



## 3M™ Grafoplast™ Polyamide Cable Ties 124

The polyamide cable tie comes with a fitted transparent PVC sleeve and is suitable for identifying cables or bundles of cables up to 1.97 in. (50 mm) in diameter. Specifications: Meet UL-94 Class V0 standards and can be used in temperatures ranging from -58°F to 176°F (-50°C to 80°C)

| Part Number | UPC (013166-) | Min.OD in. | mm   | Max. OD in. | mm   | Length in. | mm | No. of Elements | Qty. |
|-------------|---------------|------------|------|-------------|------|------------|----|-----------------|------|
| 124/15      | 18585         | 0.39       | 10.0 | 2.0         | 50.0 | 0.59       | 15 | 6               | 200  |
| 124/23      | 18595         | 0.39       | 10.0 | 2.0         | 50.0 | 0.91       | 23 | 10              | 200  |



## 3M Grafoplast Channel Sleeves 150

The channel sleeve holds the marking elements and is snapped into the channel by applying minimal pressure.

| Part Number | UPC (013166-) | Material          | Length in. | mm | No. of Elements | Qty. |
|-------------|---------------|-------------------|------------|----|-----------------|------|
| 150/15      | 18750         | Polyvinylchloride | 0.59       | 15 | 6               | 500  |
| 150/23      | 18760         | Polyvinylchloride | 0.91       | 23 | 10              | 200  |

## 3M Grafoplast Adhesive Channels 161/MT

The channel has an adhesive base that provides an alternative method for labeling non-traditional surfaces and is paired with a channel sleeve.

Specifications: Meets UL-94 Class V0 standards and can be used in temperatures ranging from -58°F to 176°F (-50°C to 80°C)

| Part Number | UPC (013166-) | Material                               | Length in. | mm   | Color | Qty. |
|-------------|---------------|----------------------------------------|------------|------|-------|------|
| 161/MT      | 19180         | Polyvinylchloride/<br>Adhesive Acrylic | 19.69      | 500  | Gray  | 20   |
| 161/MT1     | 19185         | Polyvinylchloride/<br>Adhesive Acrylic | 39.37      | 1000 | Gray  | 10   |



## 3M™ Grafoplast™ Pin Terminals 710 & 711

The crimpable pin terminal has a swiveling transparent PVC sleeve on the end that can be turned, offering superior visibility. This piece is excellent for marking in areas where space is limited, such as PLC boxes. Specifications: Meets UL-94 Class V0 standards and can be used in temperatures ranging from -58°F to 176°F (-50°C to 80°C)

| Part Number | UPC (013166-) | Wire Conductor Size AWG | mm <sup>2</sup> | Length |    | Color   | Qty. |
|-------------|---------------|-------------------------|-----------------|--------|----|---------|------|
|             |               |                         |                 | in.    | mm |         |      |
| 710/05      | 21965         | 22-26                   | 0.50            | 0.35   | 9  | Orange  | 200  |
| 710/07      | 21970         | 20                      | 0.75            | 0.35   | 9  | Neutral | 200  |
| 710/10      | 21975         | 18                      | 1.0             | 0.35   | 9  | Yellow  | 200  |
| 710/15      | 21985         | 16                      | 1.5             | 0.35   | 9  | Red     | 200  |
| 710/25      | 21990         | 14                      | 2.5             | 0.47   | 12 | Blue    | 200  |
| 710/40      | 21995         | 12                      | 4.0             | 0.47   | 12 | Neutral | 100  |
| 710/60      | 22000         | 10                      | 6.0             | 0.47   | 12 | Green   | 100  |
| 710/100     | 21980         | 8                       | 10.0            | 0.47   | 12 | Brown   | 100  |

**710 Holder Length: 10mm, 0.39 in., holds 4 elements**

|         |       |       |      |      |    |         |     |
|---------|-------|-------|------|------|----|---------|-----|
| 711/05  | 22005 | 22-26 | 0.50 | 0.55 | 14 | Orange  | 200 |
| 711/07  | 22010 | 20    | 0.75 | 0.55 | 14 | Neutral | 200 |
| 711/10  | 22015 | 18    | 1.0  | 0.55 | 14 | Yellow  | 200 |
| 711/15  | 22025 | 16    | 1.5  | 0.55 | 14 | Red     | 200 |
| 711/25  | 22030 | 14    | 2.5  | 0.67 | 17 | Blue    | 200 |
| 711/40  | 22035 | 12    | 4.0  | 0.67 | 17 | Neutral | 100 |
| 711/60  | 22040 | 10    | 6.0  | 0.67 | 17 | Green   | 100 |
| 711/100 | 22020 | 8     | 10.0 | 0.67 | 17 | Brown   | 100 |

**711 Holder Length: 15mm, 0.59 in., holds 6 elements**



## 3M Grafoplast Crimping Tool 774

This crimping tool is used to attach the pin terminals to the wires and includes a ratchet that makes the application less tedious for the operator.

| Part Number | UPC (013166-) | Description                        | Wire Conductor Size               | Compatibility | Qty. |
|-------------|---------------|------------------------------------|-----------------------------------|---------------|------|
| 774         | 22225         | Racheted Crimper for Pin Terminals | 26-8 AWG or 0.5-16mm <sup>2</sup> | 710/711       | 1    |

## 3M Grafoplast Wire Stripper 780

| Part Number | UPC (013166-) | Description   | Wire Conductor Size              | Compatibility | Qty. |
|-------------|---------------|---------------|----------------------------------|---------------|------|
| 780         | 22215         | Wire Stripper | 10 AWG or up to 4mm <sup>2</sup> | N/A           | 1    |



## 3M™ Grafoplast™ Standard Self-Adhesive Sleeves 140

The transparent self-adhesive PVC sleeve is attached to an adhesive base that provides an alternative method for labeling non-traditional surfaces.

| Part Number | UPC<br>(013166-) | Length<br>in. | mm | No. of<br>Elements | Qty. |
|-------------|------------------|---------------|----|--------------------|------|
| 140/15      | 18665            | 0.59          | 15 | 6                  | 500  |
| 140/30      | 18690            | 1.18          | 30 | 13                 | 200  |



## 3M Grafoplast Self-Adhesive Sleeves with Holes 142

The transparent self-adhesive PVC sleeve is combined with the same adhesive base as the 140 sleeve and features holes so that it can be attached using screws or rivets.

| Part Number | UPC<br>(013166-) | Length<br>in. | mm | No. of<br>Elements | Qty. |
|-------------|------------------|---------------|----|--------------------|------|
| 142/15      | 18735            | 0.59          | 15 | 6                  | 500  |
| 142/30      | 18740            | 1.18          | 30 | 13                 | 200  |



## 3M Grafoplast Dual Self-Adhesive Sleeves 840

The dual transparent self-adhesive PVC sleeve is combined with the same adhesive base as the 140 sleeve and features dual sleeves for additional marking and identification.

| Part Number | UPC<br>(013166-) | Length<br>in. | mm | No. of<br>Elements<br>per Row | Qty. |
|-------------|------------------|---------------|----|-------------------------------|------|
| 840/10      | 22375            | 0.39          | 10 | 4                             | 200  |
| 840/15      | 22380            | 0.59          | 15 | 6                             | 200  |
| 840/23      | 22385            | 0.91          | 23 | 10                            | 100  |
| 840/30      | 22390            | 1.18          | 30 | 13                            | 100  |

Specifications: All Self-Adhesive Sleeves meet UL-94 Class V0 standards and can be used in temperatures ranging from -58°F to 176°F (-50°C to 80°C)

# 3M™ Grafolast™ TRASP Case 050C/03

The TRASP Case is a convenient, portable kit that includes the products needed to create custom labels quickly and accurately. The TRASP Case is one of the best choices for field work because it includes alphanumeric strips with letters, numbers and a variety of symbols. Dimensions: 13.78 x 3.15 x 9.84 in. (350 x 80 x 250 mm)

UPC 013166-13440



## CONTENTS:

| Part Number | Quantity | Description                         |
|-------------|----------|-------------------------------------|
| 118         | 2        | Strip Tray                          |
| 119M/15U    | 1        | Marking Applicator Tool with Handle |
| 119M/30U    | 1        | Marking Applicator Tool with Handle |
| 120         | 1        | Removal Hook                        |

## ELEMENT STRIPS INCLUDED:

| Part Number | Character | Quantity |
|-------------|-----------|----------|
| 117M00BW    | 0         | 4        |
| 117M01BW    | 1         | 4        |
| 117M02BW    | 2         | 4        |
| 117M03BW    | 3         | 2        |
| 117M04BW    | 4         | 2        |
| 117M05BW    | 5         | 2        |
| 117M06BW    | 6         | 2        |
| 117M07BW    | 7         | 2        |
| 117M08BW    | 8         | 2        |
| 117M09BW    | 9         | 2        |
| 117MAABW    | A         | 2        |
| 117MBBBW    | B         | 2        |
| 117MCCBW    | C         | 2        |
| 117MDDBW    | D         | 2        |
| 117MEEBW    | E         | 2        |
| 117MFFBW    | F         | 2        |
| 117MGGBW    | G         | 2        |
| 117MHBBW    | H         | 2        |
| 117MIIBW    | I         | 2        |
| 117MJJBW    | J         | 2        |
| 117MKKBW    | K         | 2        |

| Part Number | Character | Quantity |
|-------------|-----------|----------|
| 117MLLBW    | L         | 2        |
| 117MMMBW    | M         | 2        |
| 117MNNBW    | N         | 2        |
| 117MO0BW    | O         | 2        |
| 117MPPBW    | P         | 2        |
| 117MQQBW    | Q         | 2        |
| 117MRRBW    | R         | 2        |
| 117MSSBW    | S         | 2        |
| 117MTTBW    | T         | 2        |
| 117MUUBW    | U         | 2        |
| 117MVVBW    | V         | 2        |
| 117MWVBW    | W         | 2        |
| 117MXXBW    | X         | 2        |
| 117MYJBW    | Y         | 2        |
| 117MZZBW    | Z         | 2        |
| 117M10BW    | +         | 2        |
| 117M11BW    | -         | 2        |
| 117M12BW    | ±         | 2        |
| 117M13BW    | /         | 2        |
| 117M14BW    | .         | 1        |
| 117M29BW    | ∅         | 2        |
| 117M33BW    | :         | 1        |
| 117M999B    | Blank     | 2        |
| 117M999G    | Blank     | 2        |
| 117M999O    | Blank     | 1        |
| 117M999R    | Blank     | 2        |
| 117M999U    | Blank     | 2        |
| 117M999W    | Blank     | 2        |
| 117M999Y    | Blank     | 2        |

## SLEEVES INCLUDED

| Part Number | Quantity |
|-------------|----------|
| 101/15*     | 160      |
| 102/15*     | 80       |
| 103/15*     | 90       |
| 108/15*     | 40       |
| 121/23*     | 2        |
| 122/30*     | 2        |
| 124/15      | 2        |
| 140/15      | 20       |
| 140/30      | 20       |
| 160/25*     | 1        |
| 161/25*     | 1        |
| 190/05      | 50       |
| 190/10      | 30       |
| 190/15      | 30       |
| 301/15      | 30       |
| 302/15      | 30       |
| 303/30      | 15       |
| 304/30      | 15       |
| 710/07      | 50       |
| 710/15      | 50       |
| 710/25      | 50       |

\*Special order parts. For refills, allow additional shipping time.





## 3M™ Grafoplast™ TRASP Box 012C/03

The TRASP Box is a convenient, portable kit that includes a complete set of numeric strips and a sample of letters and symbols. An accessory for wall mounting is also included for easy storage and accessibility.

Dimensions: 9.21 x 7.07 x 3.54 in. (234 x 180 x 90mm)

**UPC 013166-13475**

### CONTENTS:

| Part Number | Quantity | Description             |
|-------------|----------|-------------------------|
| 118         | 1        | Strip Tray              |
| 119/15U     | 1        | Marking Applicator Tool |
| 119/30U     | 1        | Marking Applicator Tool |
| 120         | 1        | Removal Hook            |

### ELEMENT STRIPS INCLUDED:

| Part Number | Character | Quantity |
|-------------|-----------|----------|
| 117M00BW    | 0         | 3        |
| 117M01BW    | 1         | 3        |
| 117M02BW    | 2         | 3        |
| 117M03BW    | 3         | 2        |
| 117M04BW    | 4         | 2        |
| 117M05BW    | 5         | 1        |
| 117M06BW    | 6         | 1        |
| 117M07BW    | 7         | 1        |
| 117M08BW    | 8         | 1        |
| 117M09BW    | 9         | 1        |
| 117M10BW    | +         | 1        |
| 117M11BW    | -         | 1        |
| 117M13BW    | /         | 1        |
| 117MAABW    | A         | 1        |
| 117MBBBW    | B         | 1        |
| 117MCCBW    | C         | 1        |
| 117MDDBW    | D         | 1        |

### SLEEVES INCLUDED:

| Part Number | Quantity |
|-------------|----------|
| 101/15*     | 70       |
| 101/30*     | 25       |
| 102/15*     | 70       |
| 102/30*     | 30       |
| 103/15*     | 60       |
| 103/30*     | 30       |
| 104/15*     | 60       |
| 104/30*     | 30       |
| 140/15      | 1        |
| 140/30      | 1        |
| 142/15      | 1        |
| 142/30      | 1        |
| 175L/15*    | 3        |
| 301/15      | 10       |
| 302/15      | 10       |
| 303/30      | 5        |
| 304/30      | 5        |
| 840/15      | 1        |
| 840/30      | 1        |

\*Special order parts. For refills, allow additional shipping time.



## 3M™ Grafoplast™ Starter Kit 001SK/02

The Starter Kit includes the tools and sleeves needed to start using the TRASP System. Dimensions: 11.02 x 12.60 x 6.69 in. (280 x 320 x 170 mm)

**UPC** 013166-13315

### CONTENTS:

| Part Number | Quantity | Description             |
|-------------|----------|-------------------------|
| 118         | 1        | Strip Tray              |
| 119M/15U    | 1        | Marking Applicator Tool |
| 119M/30U    | 1        | Marking Applicator Tool |
| 120         | 1        | Removal Hook            |

### ELEMENT STRIPS INCLUDED:

| Part Number | Character | Quantity |
|-------------|-----------|----------|
| 117M00BW    | 0         | 10       |
| 117M01BW    | 1         | 10       |
| 117M02BW    | 2         | 10       |
| 117M03BW    | 3         | 10       |
| 117M04BW    | 4         | 10       |
| 117M05BW    | 5         | 10       |
| 117M06BW    | 6         | 10       |
| 117M07BW    | 7         | 10       |
| 117M08BW    | 8         | 10       |
| 117M09BW    | 9         | 10       |
| 117MAABW    | A         | 10       |
| 117MBBBW    | B         | 10       |
| 117MCCBW    | C         | 10       |
| 117MDDBW    | D         | 10       |
| 117MEEBW    | E         | 10       |
| 117MFFBW    | F         | 10       |
| 117MGGBW    | G         | 10       |
| 117MHHBW    | H         | 10       |
| 117MIIBW    | I         | 10       |
| 117MJJBW    | J         | 10       |
| 117MKKBW    | K         | 10       |
| 117MLLBW    | L         | 10       |
| 117MMMBW    | M         | 10       |
| 117MNNBW    | N         | 10       |
| 117MO0BW    | O         | 10       |

| Part Number | Character | Quantity |
|-------------|-----------|----------|
| 117MPPBW    | P         | 10       |
| 117MQQBW    | Q         | 10       |
| 117MRRBW    | R         | 10       |
| 117MSSBW    | S         | 10       |
| 117MTTBW    | T         | 10       |
| 117MUUBW    | U         | 10       |
| 117MVBW     | V         | 10       |
| 117MWWBW    | W         | 10       |
| 117MXXBW    | X         | 10       |
| 117MYBW     | Y         | 10       |
| 117MZZBW    | Z         | 10       |
| 117M10BW    | +         | 10       |
| 117M11BW    | -         | 10       |
| 117M12BW    | ±         | 10       |
| 117M13BW    | /         | 10       |
| 117M999B    | Blank     | 10       |
| 117M999R    | Blank     | 10       |
| 117M999G    | Blank     | 10       |
| 117M999Y    | Blank     | 10       |
| 117M999U    | Blank     | 10       |

### SLEEVES INCLUDED:

| Part Number | Quantity |
|-------------|----------|
| 202/15      | 1,000    |

## Quick Reference Guide for 3M™ Grafoplast™ Sleeve Selection

| size<br>AWG<br>MCM | Types of Wire<br>RFH-2, RH, RHH***<br>SF-2, RHW*** |       |                    | Types of Wire<br>TF, THW*, TW |       |                         |
|--------------------|----------------------------------------------------|-------|--------------------|-------------------------------|-------|-------------------------|
|                    | Outside Diameter                                   |       | 3M Sleeve<br>size  | Outside Diameter              |       | 3M Sleeve<br>size       |
|                    | in.                                                | mm    |                    | in.                           | mm    |                         |
|                    | in.                                                | mm    | size               | in.                           | mm    | size                    |
| 18                 | .146                                               | 3.71  | 202, 302, 802, 902 | .106                          | 2.69  | 202, 301, 802, 902      |
| 16                 | .158                                               | 4.01  | 203, 302, 902      | .118                          | 3.00  | 202, 301, 302, 802, 902 |
| 14                 | .171                                               | 4.34  | 203, 302, 902      | .131                          | 3.33  | 202, 301, 302, 802, 902 |
| 14                 | .204*                                              | 5.18  | 203, 303, 903      | -                             | -     | -                       |
| 14                 | -                                                  | -     | -                  | .162*                         | 4.11  | 203, 302, 902           |
| 12                 | .188                                               | 4.78  | 203, 302, 902      | .148                          | 3.76  | 202, 302, 802, 902      |
| 12                 | .221*                                              | 5.61  | 203, 303, 903      | -                             | -     | -                       |
| 12                 | -                                                  | -     | -                  | .179*                         | 4.55  | 203, 302, 902           |
| 10                 | .242                                               | 6.15  | 203, 204, 303, 903 | .168                          | 4.27  | 203, 302, 902           |
| 10                 | -                                                  | -     | -                  | .199*                         | 5.05  | 203, 303, 903           |
| 8                  | .328                                               | 8.33  | 204, 304, 808, 903 | .245                          | 6.22  | 203, 204, 303, 903      |
| 8                  | -                                                  | -     | -                  | .276*                         | 7.01  | 204, 303, 903           |
| 6                  | .397                                               | 10.08 | 205, 809, 903      | .323                          | 8.20  | 204, 304, 808, 903      |
| 4                  | .452                                               | 11.48 | 205, 809           | .372                          | 9.45  | 204, 304, 808, 903      |
| 3                  | .481                                               | 12.22 | 205, 810           | .401                          | 10.19 | 205, 809, 903           |
| 2                  | .513                                               | 13.03 | 205, 810           | .433                          | 11.00 | 205, 809, 903           |
| 1                  | .588                                               | 14.94 | 206, 811           | .508                          | 12.90 | 205, 810                |
| 1/0                | .629                                               | 15.98 | 206                | .549                          | 13.94 | 205, 810                |
| 2/0                | .675                                               | 17.14 | 206                | .595                          | 15.11 | 206, 811                |
| 3/0                | .727                                               | 18.67 | 206                | .647                          | 16.43 | 206                     |
| 4/0                | .785                                               | 19.94 | 206                | .705                          | 17.91 | 206                     |
| 250                | .868                                               | 22.05 | 207                | .788                          | 20.02 | 206                     |
| 300                | .933                                               | 23.7  | 207                | .843                          | 21.41 | 206                     |
| 350                | .985                                               | 25.02 | 207                | .895                          | 22.73 | 207                     |
| 400                | 1.032                                              | 26.21 | 207                | .942                          | 23.93 | 207                     |
| 500                | 1.119                                              | 28.42 | 207                | 1.029                         | 26.14 | 207                     |
| 600                | 1.233                                              | 31.32 | 208                | 1.143                         | 29.03 | 207                     |
| 700                | 1.304                                              | 33.12 | 208                | 1.214                         | 30.84 | 208                     |
| 750                | 1.339                                              | 34.01 | 208                | 1.249                         | 31.72 | 208                     |
| 800                | 1.372                                              | 34.85 | 208                | 1.282                         | 32.56 | 208                     |
| 900                | 1.435                                              | 36.45 | 209                | 1.345                         | 34.16 | 208                     |
| 1000               | 1.494                                              | 37.95 | 209                | 1.404                         | 35.66 | 209                     |

\*The dimensions of types RHH and RHW.

\*Dimensions of THW in sizes No. 14 - No. 8. No. 6 THW and larger are same dimension as TW.

\*\*\*Dimensions of RHH and RHW without outer covering are same as THW No. 18 - No. 10, Solid; No. 8 and larger stranded.

## Quick Reference Guide for 3M™ Grafoplast™ Sleeve Selection

| size<br>AWG<br>MCM | Types of Wire<br>TFN, THHN, THWN |       |                         | Types of Wire<br>XHHW, ZW** |       |                         |
|--------------------|----------------------------------|-------|-------------------------|-----------------------------|-------|-------------------------|
|                    | Outside Diameter                 |       | 3M Sleeve<br>size       | Outside Diameter            |       | 3M Sleeve<br>size       |
|                    | in.                              | mm    |                         | in.                         | mm    |                         |
| 18                 | .089                             | 2.26  | 201, 202, 301, 802, 902 |                             |       |                         |
| 16                 | .100                             | 2.54  | 202, 301, 802, 902      |                             |       |                         |
| 14                 | .105                             | 2.67  | 202, 301, 802, 902      | .129                        | 3.28  | 202, 301, 302, 802, 902 |
| 14                 | -                                | -     | -                       |                             |       |                         |
| 14                 | -                                | -     | -                       |                             |       |                         |
| 12                 | .122                             | 3.10  | 202, 301, 302, 802, 902 | .146                        | 3.71  | 202, 302, 802, 902      |
| 12                 | -                                | -     | -                       |                             |       |                         |
| 12                 | -                                | -     | -                       |                             |       |                         |
| 10                 | .153                             | 3.89  | 202, 302, 802, 902      | .166                        | 4.22  | 203, 302, 902           |
| 10                 | -                                | -     | -                       |                             |       |                         |
| 8                  | .218                             | 5.54  | 203, 303, 903           | .241                        | 6.12  | 203, 204, 303, 903      |
| 8                  | -                                | -     | -                       |                             |       |                         |
| 6                  | .257                             | 6.53  | 204, 303, 903           | .282                        | 7.16  | 204, 303, 903           |
| 4                  | .328                             | 8.33  | 204, 304, 808, 903      | .328                        | 8.33  | 204, 304, 808, 903      |
| 3                  | .356                             | 9.04  | 204, 304, 808, 903      | .356                        | 9.04  | 204, 304, 808, 903      |
| 2                  | .388                             | 9.86  | 204, 304, 808, 903      | .388                        | 9.86  | 204, 304, 808, 903      |
| 1                  | .450                             | 11.43 | 205, 809                | .450                        | 11.43 | 205, 809                |
| 1/0                | .491                             | 12.47 | 205, 810                | .491                        | 12.47 | 205, 810                |
| 2/0                | .537                             | 13.64 | 205, 810                | .537                        | 13.64 | 205, 810                |
| 3/0                | .588                             | 14.94 | 206, 811                | .588                        | 14.94 | 206, 811                |
| 4/0                | .646                             | 16.41 | 206                     | .646                        | 16.41 | 206                     |
| 250                | .716                             | 18.19 | 206                     | .716                        | 18.19 | 206                     |
| 300                | .771                             | 19.58 | 206                     | .771                        | 19.58 | 206                     |
| 350                | .822                             | 20.88 | 206                     | .822                        | 20.88 | 206                     |
| 400                | .869                             | 22.07 | 207                     | .869                        | 22.07 | 207                     |
| 500                | .955                             | 24.26 | 207                     | .955                        | 24.26 | 207                     |
| 600                | 1.038                            | 26.87 | 207                     | 1.073                       | 27.25 | 207                     |
| 700                | 1.129                            | 28.68 | 207                     | 1.145                       | 29.08 | 207                     |
| 750                | 1.163                            | 29.54 | 207                     | 1.180                       | 29.97 | 207                     |
| 800                | 1.196                            | 30.38 | 208                     | 1.210                       | 30.73 | 208                     |
| 900                | 1.259                            | 31.98 | 208                     | 1.270                       | 32.26 | 208                     |
| 1000               | 1.317                            | 33.45 | 208                     | 1.330                       | 33.78 | 208                     |
| 1250               | -                                | -     | -                       | 1.500                       | 38.10 | 209                     |

\*\* No. 14 - No. 2.

## Quick Reference Guide for 3M™ Grafoplast™ Sleeve Selection

| size<br>AWG<br>MCM | Types of Wire<br>FEP, FEPB, FEPW, TFE, PF, PFA<br>PFAH, PGF, PTF, Z, ZF, ZFF |         |                         | Types of Wire<br>KF-1, KF-2, KFF-1, KFF-2 |      |                         |
|--------------------|------------------------------------------------------------------------------|---------|-------------------------|-------------------------------------------|------|-------------------------|
|                    | Outside Diameter                                                             |         | 3M Sleeve<br>size       | Outside Diameter                          |      | 3M Sleeve<br>size       |
|                    | in.                                                                          | mm      |                         | in.                                       | mm   |                         |
| 18                 | .081                                                                         | 2.06    | 201, 202, 301, 802, 902 | .065                                      | 1.65 | 201, 902                |
| 16                 | .092                                                                         | 2.34    | 201, 202, 301, 802, 902 | .070                                      | 1.78 | 201, 902                |
| 14                 | .105                                                                         | 2.67    | 202, 301, 802, 902      | .083                                      | 2.11 | 201, 202, 301, 802, 902 |
| 12                 | .121                                                                         | 3.07    | 202, 301, 302, 802, 902 | .102                                      | 2.59 | 202, 301, 802, 902      |
| 10                 | .142                                                                         | 3.61    | 202, 302, 802, 902      | .124                                      | 3.15 | 202, 301, 302, 802, 902 |
| 8                  | .206                                                                         | 5.23    | 203, 303, 903           |                                           |      |                         |
|                    | (.186)                                                                       | (4.72)  | (203, 302, 902)         |                                           |      |                         |
| 6                  | .244                                                                         | 6.20    | 203, 204, 303, 903      |                                           |      |                         |
|                    | (.302)                                                                       | (7.67)  | (204, 303, 903)         |                                           |      |                         |
| 4                  | .292                                                                         | 7.42    | 204, 303, 903           |                                           |      |                         |
|                    | (.350)                                                                       | (8.89)  | (204, 304, 808, 903)    |                                           |      |                         |
| 3                  | .320                                                                         | 8.13    | 204, 304, 808, 903      |                                           |      |                         |
|                    | (.378)                                                                       | (9.60)  | (204, 304, 808, 903)    |                                           |      |                         |
| 2                  | .352                                                                         | 8.94    | 204, 304, 808, 903      |                                           |      |                         |
|                    | (.410)                                                                       | (10.41) | (205, 809, 903)         |                                           |      |                         |
| 1                  | .420                                                                         | 10.67   | 205, 809, 903           |                                           |      |                         |
| 1/0                | .462                                                                         | 11.73   | 205, 809                |                                           |      |                         |
| 2/0                | .498                                                                         | 12.65   | 205, 810                |                                           |      |                         |
| 3/0                | .560                                                                         | 14.22   | 206, 811                |                                           |      |                         |
| 4/0                | .618                                                                         | 15.70   | 206, 811                |                                           |      |                         |

( ) The values in parenthesis are for FEPB, Z, ZF and ZFF only.

## Ask about these additional identification systems from 3M.



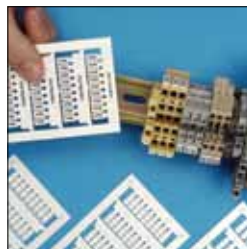
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Dispensers



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3M™ Grafoplast™ Si2K Identification System



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#### Electrical Markets Division

6801 River Place Blvd.  
Austin, TX 78726-9000  
800 676 8381  
FAX 800 828 9329  
[www.3M.com/electrical](http://www.3M.com/electrical)

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### Офис по работе с юридическими лицами:

105318, г.Москва, ул.Щербаковская д.3, офис 1107, 1118, ДЦ «Щербаковский»

Телефон: +7 495 668-12-70 (многоканальный)

Факс: +7 495 668-12-70 (доб.304)

E-mail: [info@moschip.ru](mailto:info@moschip.ru)

Skype отдела продаж:

moschip.ru

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