July 24, 2009

Electrical Markets Division

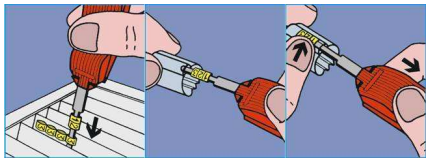
US New Product Release Summary:

3M™ Grafoplast™ TRASP System

Product Description

The 3M™ Grafoplast™ TRASP System is a complete solution for marking and identification that does not require a printer or computer system. Durable custom identification marks can be quickly made from pre-printed alphanumeric character elements that get loaded into transparent sleeves of various types. Kits and replacement components are available for both new and existing users.

This system is comprised of alphanumeric elements, transparent sleeves, trays, cases and tools for building custom marks. Custom marks can be made as easy as 1-2-3. The marking tool is used to 1) collect multiple elements off strips, 2) insert elements into the transparent sleeve and 3) leave elements in the sleeve. After this, the mark (sleeve with elements) is ready to attach to its application: wire, cable, cable assembly, device or panel.



Product Applications

There are many electrical and data-communication applications for identification of wire, cable-ties, terminals, devices and panels. These applications are made at control panel shops, data processing centers, data-communication network offices, wire harness shops, etc.

Product Features, Advantages & Benefits

Feature	Advantage	Benefit
Various Character and Color Elements	Quick custom marking & electrical symbols	Saves time & money
	Durable non-smudge characters	Long lasting for dependable reading
	Ability to mix characters & colors	Greater visual impact
Various PVC Sleeves and Straps	Marks wire, cable, cable bundles with cable tie and internal devices.	Versatile marking solutions that are compatible with Si2K system
	Flame retardant UL-94 VO; Acid, Oil, Water & Dust Resistant; Temperatures from -50 to 80°C	Reliable performance in variety of environments
Sleeve with Pin Terminal	Fewer parts for easy and quick installation	Saves money & inventory
Tools for Element Insertion & Removal	Easy and quick installation & maintenance	Saves money
Character strips & strip trays	Easy and quick installation & maintenance	Saves money

Typical Product Performance Attributes

3M™ TRASP system

Elements (medium width)

Base Color	White (typically)
Base Mat'l	PVC
Width	2.3 mm (0.09 inch)
Character Color	Black (typically)

Indelibility tested according to CEI 16-1

Sleeves

Base Color	Transparent sleeve Opaque base (300 series only)
Base Mat'l	PVC
Flame Retardance	UL-94 V0 Halogen-free (900 series only)
Adhesive	Acrylic Pressure Sensitive (140, 142, 840 & 161 only)
Operating Temp	-50° to 85°C -40° to 80°C (900 series only)

Number of Elements per Various Sleeve Lengths

Sleeve Length (mm)	# of Trasp Elements
10	4
15	6
23	10
30	13

(based on the medium width elements available in US)

Elements and Sleeves have been UV tested according to the following standards:

- ISO 4892-1:1999 (Second edition 1999-07-01);
- ISO 4892-2:2006 (Second edition 2006-02-01);
- ISO 4582:1998 (Second edition 1998-07-15).

Marking & Removal Tool

Base Material	Stainless steel
Handle Material	Polypropylene

Value Proposition

The 3M TRASP System is a fairly unique manual method for making durable custom marks for a variety of applications. Manual systems offer convenience and flexibility to make marks without printer or computer system investment. The TRASP preprinted character elements can be efficiently assembled on a marking tool and inserted into sleeves of various types for particular applications. The transparent sleeves protect the legibility of the underlying preprinted elements to make a very durable mark.

The TRASP system is part of a very broad line of identification solutions for electrical and data-communication applications. 3M provides customers in these markets a variety of wire/cable accessory solutions, in addition to strong technical support, global availability and manufacturing capability to support customers' needs and demand.

Product Positioning

TRASP systems are the premium solution among manual systems that are typically used by lower volume users in field or maintenance applications. In addition, the physical and environmental protection of the mark, under various types of sleeves, makes them better able to withstand harsh environments than standard marks. Like other manual systems, their inability to quickly make many marks from data files, prevents any significant use of manual systems in industrial fabrication shops.

Here is list of identification systems for electrical & data-communication applications from the "most basic" to the "most elaborate":

ID System	Merits	Limitations
Write-on Labels	Quick and low cost	Legibility & smudging
Single Character Tape	Convenient and low cost	Flagging, scuff marks, & tearing
Single Character Clips & Rings	Durable	Cumbersome & time consuming to install
Custom Factory Multi-character Marks	Durable	Takes more planning & gives less flexibility in the field
Field Multi-character Marks (e.g., TRASP)	Durable, fast manual system	Slow compared to automated systems
Portable Printer Marks	Flexibility for field use, legibility	Costly per mark, few printers can interface with computer database files

Industrial Plotter Marks	Variety of ink colors, printing from data files	Susceptible to smudging & not portable, plotters are slower and lower print quality than printers
Ink Jet Printer Marks	Variety of ink colors, fast printing from data files	Lack versatility of Si2K & not portable
Other Industrial Thermal Transfer Printer Marks	Durable & quality mark, fast printing from data files	Lack versatility of Si2K & not portable
Si2K Thermal Transfer Printer Marks	Durable & quality mark, fast printing from data files	Not portable

Pricing

Complete U.S. pricing information is sent as part of this release to those in U.S. 3M subsidiaries will establish pricing separately, in line with price corridor guidelines. The pricing level is supported by the performance advantages needed for demanding identification applications, such as those for control panel fabrication and installation.

Promotion Plans

U.S. Sales training for TRASP series products will be held during the week of June 22, 2009.

Internal package

- US internal launch letter
- Manual Identification Systems product presentation with application photos
- Pricing

Distributor package

- Distributor launch letter
- Pricing

Customer package

- Product data sheet

3M will spotlight our identification products and other application related products for the control system market at the annual CSIA Executive Conference in Seattle on April 29 to May 1, 2010 (see link for further information). http://www.controlsys.org/news/events.htm

Sample and Product Availability

Samples are available from two locations, depending upon where you are located.

- For United States, contact your applicable Customer Service Representative at 800-472-1190 (Specialty), 800-2453573 (C&I) or 800-676-8381 (OEM).
- For other regions, contact Grafoplast in Italy at +39-0131-71-8477.

Samples sourced from 3M Italy or U.S.

3M Product #	Description	Distr. Price
X9CVCAMP01 KE727054782	TRASP Samples	$24

Demonstration kits sourced from Italy or US.

3M Product #	Description	Sugg. Q1 Price
012C/03 KE727000546	TRASP Box	$208
050C/03 KE727000249	TRASP Case	$359

Limited inventory will be held in the U.S. for key and high running products (about half of the product line). Some of the slower running replacement kit products will be shipped from Italy only after receipt of a customer/distributor order. The expected order fulfillment is one-week for products locally stocked and three-to-four weeks for those coming from Italy.

Frequently Asked Questions:

1. **What sleeve options are there for marking wire and cable?** There are five options for marking wire and cable that cover from 30 AWG to 1250 MCM depending on the cable type using 3M™ Grafoplast™ Trasp system. The types of sleeves are general purpose, small size, halogen-free, dual row, and clip-on versions. The 200 series transparent sleeves are general purpose sleeves covering the broadest range of wire diameters from 0.060" to 1.57" (approx. 22 AWG to 1250 MCM). The 190 transparent sleeves are for very small wire with diameters from 0.024" to 0.047" (approx. 30 to 26 AWG). The 800 series dual recessed sleeves accommodate two rows of elements. The 900HF series are made with halogen-free materials. The 300 series sleeves are snap-on sleeves that do not require threading from the end of the wire to install.
2. **How can an existing panel already cabled be marked?** The snap-on sleeves (300 series) is useful for this because it is composed of one rigid part that snap onto the cabled cable and a soft part where you put the pre-printed tags.
3. **How can we mark pipes, cables or wire harnesses with diameters larger than 1.57"?** The 3M TRASP™ system with cable-tie sleeves can be used to mark these larger diameters. There are four different types of cable-tie sleeves: general purpose (130 series), halogen-free (930HF/30), dual row (830/30) and radial mark with cable tie (124 series). All sleeves require purchase of a cable-tie separately, except for the 124 series sleeve.
4. **Why would users of heat shrink wire markers be interested in switching to TRASP system?**
   The TRASP system does not require either a printer or an electrical power source. This is very desirable for some field applications. The transparent sleeve for TRASP system protects the characters from abrasion or chemical exposure that can reduce the legibility of heat shrink marks. Also, TRASP system does not require a heat source to apply to the wire, thereby reducing the installed time and exposure to potentially damaging heat.
5. **Can SI2K tags be put into the sleeves used in TRASP system?**
   Yes. The SI2K02 series tags with matching lengths can be used with these sleeves (with one exception - use 18mm length SI2K tag for 23mm long sleeves).
6. **What is the flame retardant rating of these products?**
   These materials for marks are UL94 V0 rated materials.
7. **What is the operating temperature for these products?**
   The recommended operating temperature is -50 to 80° C for most products that are made of PVC. The halogen-free material has operating temperature range from -40 to 80° C.
8. **Do these products comply with ROHS?**
   Yes. Compliance certificates are available online at www.3m.com/electrical.
9. **Who should I contact for more detailed information or questions regarding TRASP system?**

Technical: Technical Customer Care
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David Thompson (US)
512-984-5971

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Important Notice
Before using this product, you must evaluate it and determine if it is suitable for your intended application. You assume all risks and liability associated with such use.

Warranty; Limited Remedy; Limited Liability.
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3M

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