

D E S C R I P T I O NPRODUCTS COVERED:

- \* USR and CNR pressure-sensitive Marking and Labeling Systems "MSI 3000".

GENERAL CHARACTER AND USE:

The product consists of subsurface printed clear polycarbonate face stock, coated with pressure-sensitive adhesive, which is protected by a release liner.

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This product is used as printed labels bearing information, instruction or identification.

ENGINEERING CONSIDERATIONS (NOT FOR FIELD REPRESENTATIVES USE):

USR - Indicates investigations to UL 969.

CNR - Indicates investigations to Canadian National Standard CAN/CSA-C22.2 No. 0.15-M90.

Use - For use only for labels which are not required to be nontransferable when removal is attempted and on products where the acceptability of the combination is determined by Underwriters Laboratories Inc.

When applied to GE Cycolac T ABS plastic, the MSI3000 label, with the 467MP adhesive, has a flame rating of UL 94-HB.

Conditions of Acceptability - he following are among the considerations to be made in judging the use of these systems in an end-product application.

1. Surfaces, Temperatures, and Conditions: Reference Table I for USR and Table II for CNR. The product is suitable for application to smooth flat surfaces, subject to temperatures and conditions indicated, unless otherwise specified. Application surface groupings for CNR are defined in CSA C22.2 No. 0.15 and Guide Information (PGDQ8).
2. Color Limitations for UL Required Information: The color of printing is not limited for USR or CNR.
3. Labels suitable for application to two or more plastic, painted, or powder painted surfaces are considered suitable for application to blends of those surfaces in any ratio, with Conditions of Acceptability common to the components of the blend.

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4. Labels have not been evaluated for additional printing using hand implements, such as pen or pencil.
5. Labels have not been evaluated for electrical or flammability properties.
6. Reference to painted, lacquered or enameled surfaces are on metal substrates unless otherwise specified. Labels indicated as suitable for application to a generic plastic surface are also considered suitable for application to filled or reinforced plastic of the same generic type.

MARKING:

See Section General.

TABLE I - USR  
"MSI 3000"

Application Surface	Temp (°C)		Indoor Use	Outdoor Use	Additional Conditions
	Max	Min			
Epoxy (EP)	100	-40	X	X	-
Acrylic paint (AC PT)	100	-40	X	X	-
Acrylonitrile butadiene styrene (ABS)	80	-40	X	X	-
Alkyd paint (AK PT)	80	-40	X	X	-
Aluminum (AL)	80	-40	X	X	-
Galvanized steel (GS)	80	-40	X	X	-
Nylon - polyamide (PA)	80	-40	X	X	-
Polyphenylene oxide/ether (PPOX)	80	-40	X	X	-
Epoxy powder paint (EP PDR PT)	80	-40	X	X	-
Polycarbonate (PC)	60	-40	X	X	-
Polyethylene terephthalate (PET)	40	-40	X	X	-
Polyurethane paint (PUR PT)	60	-40	X	X	-
Porcelain (PRCLN)	60	-40	X	X	-
Stainless steel (SS)	60	-40	X	X	-

X - Where exposed to high humidity or occasional exposure to water.

TABLE II - CNR  
"MSI 3000"

Application Surface	Temp (°C) Max	Indoor Use	Outdoor Use	Additional Conditions
Metals	80	X	X	-
Plastic Group II	80	X	X	-
Plastic Group V	80	X	X	-
Plastic Group VI	80	X	X	-
Plastic Group VIII	80	X	X	-
Plastic Group III	60	X	X	-
Plastic Group IV	40	X	X	-

X - Where exposed to wet locations.

CONSTRUCTION DETAILS:

General - Marking and Labeling System "MSI 3000" is constructed of the following components layered from top to bottom in the order indicated. A description of the specific materials employed for each component and the printing process follows.

Face Stock  
Printing Process and Ink  
Adhesive  
Release Liner

Face Stock - 0.0070 - 0.0200 in. (0.178 - 0.508 mm) clear polycarbonate.

Printing Process and Ink - Screen printing process using Norcote "MSK" series ink. Label system is required to be supplied with a flood coat of color (complete layer of ink below printing).

Adhesive - Recognized Component (PGGU2), 3M Co "467MP" or "9671", consisting of 0.0020 in. (0.051 mm) or 3M Co "468MP" or "9672", consisting of 0.0050 in. (0.127 mm) clear adhesive.

Release Liner - Removable component of label easily separated from the adhesive, which protects the adhesive prior to application.

Approximate Thickness, Excluding Release Liner - 0.0090 - 0.0250 in. (0.229 - 0.635 mm)