



Electronics

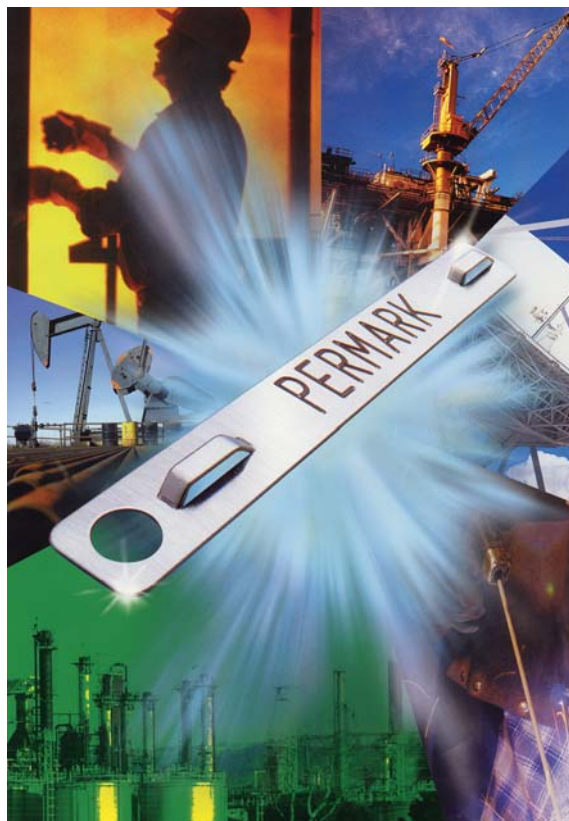
Permark®

Permark® 316

Tyco Electronics Permark® 316 stainless steel markers are recommended for marking in hostile environments. Using state-of-the-art technology and no inks, the marking process produces a permanent, deep surface mark with a darkened character in high contrast to the background. Permark® markers are produced to individual customer requirements on a fast turn-around basis with the flexible and easy-to-use Permark® software that allows electronic or manual data entry. Completed markers are supplied in customer defined kits for ease of installation. We recommend installation with 316 stainless steel cable ties.

Features and benefits

- Pre-marked to customer requirements.
 - Customer-defined kits for ease of installation.
 - Excellent character legibility.
 - One-piece, 316 stainless steel construction.
 - Variety of fixing methods.
 - Mark will endure the lifetime of a Permark® S/S marker.
 - Excellent resistance to weather extremes and high levels of UV light.
 - Resistant to corrosive marine and industrial atmospheres.
 - Excellent resistance to a variety of hydrocarbons, organic chemicals, acids, alkalis and inorganic salts.
- For resistance to a specific chemical, contact your local Tyco Electronics representative.



Temperature rating

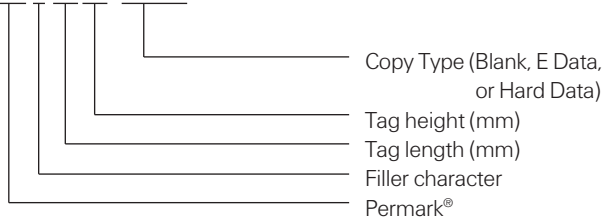
Operating temperature range -80°C to +500°C -112°F to +932°F

Printer information

Pre-printed per customer requirements.

Part numbering system

PM 0 7507- E Data



Available sizes and formats

Ordering description	Product description	Size (L x H)		Printable area (L x H)	
		mm	inches	mm	inches
PM09512-Blank	Blank 316 S/S marker	95 x 12	3.74 x 0.47	55 x 10	2.16 x 0.40
* PM09512-E Data	Pre-marked 316 S/S marker	95 x 12	3.74 x 0.47	55 x 10	2.16 x 0.40
** PM09512-Hard Data	Pre-marked 316 S/S marker	95 x 12	3.74 x 0.47	55 x 10	2.16 x 0.40

* Data supplied electronically

** Data supplied in hard copy

Options

Fonts	Various available	
Lines per marker	One, two or three (Determined by selected font height. Minimum 1 mm / 0.04" spacing between lines.)	
Saddle fixings	13 mm L x 2.4 mm H (0.51" L x 0.09" H)	
Hole fixings	7 mm (0.28")	
Standard colors	Metallic	
Font heights	Characters per line	
	Standard	Condensed
2.5 mm (0.10")	30	N/A
3.0 mm (0.12")	25	N/A
4.0 mm (0.16")	20	30
5.0 mm (0.20")	15	25
6.0 mm (0.24")	15	25
8.0 mm (0.31")	10	20
10.0 mm (0.40")	10	15

Available sizes and formats

Ordering description	Product description	Size (L x H)		Printable area (L x H)	
		mm	inches	mm	inches
PM07507-Blank	Blank 316 S/S marker	75 x 7	2.95 x 0.28	50 x 5	1.6 x 0.20
PM07507-E Data	Pre-marked 316 S/S marker	75 x 7	2.95 x 0.28	50 x 5	1.6 x 0.20
PM07507-Hard Data	Pre-marked 316 S/S marker	75 x 7	2.95 x 0.28	50 x 5	1.6 x 0.20

* Data supplied electronically

** Data supplied in hard copy

Options

Fonts	Various available	
Lines per marker	One only	
Saddle fixings	9.5 mm L x 2.4 mm H (0.37" L x 0.09" H)	
Hole fixings	None	
Standard colors	Metallic	
Font heights	Characters per line	
	Standard	Condensed
4.0 mm (0.16")	15	25
5.0 mm (0.20")	10	20



Electronics

Rail-Signal Products

HPTM Adhesive rail terminal tags for dot matrix printing

Tyco Electronics HPTM is a specially formulated heavy gauge fabric material with a high tack permanent acrylic adhesive, designed for applications in control panel backboards for rail signal circuit identification.

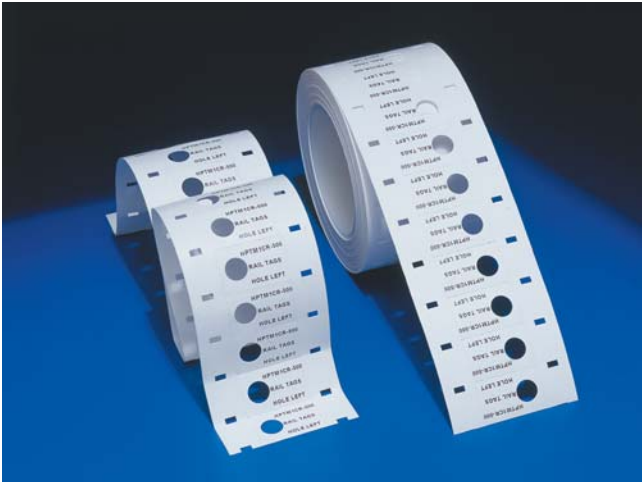
The standard 1.0" hole pitch design meets AAR terminal post specifications and makes installation fast and convenient.

HPTM adheres to most smooth surfaces including bare and painted metal, as well as painted plywood used for rail signal terminal boards. It is resistant to common fluids, lubricants and solvents.

For reliable print performance and durability, use with Tyco Electronics's RI Quick-Dry series ribbon.

Features and benefits

- Specially formulated fabric material with exceptional tear strength.
- Dot matrix printable.
- Performance exceeds military specifications.
- High-performance acrylic adhesive.



Temperature rating

Operating temperature range	-40°C to +80°C	-40°F to +176°F
Minimum application temperature	+10°C	+50°F

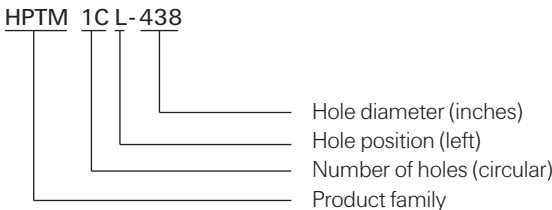
Specifications/approvals

Military	SAE AS81531 4.6.2 MIL-STD-202F method 215J
Industry	AAR Terminal Post

Printer information

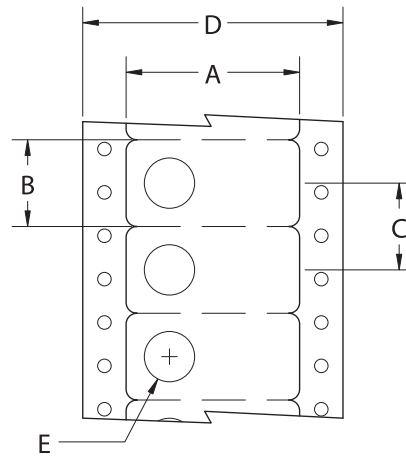
Tyco Electronics printer	AM6310 (dot matrix)
Tyco Electronics ribbon	1892BK04 (dot matrix) 1892BK03 (dot matrix – high performance)

Part numbering system



HPTM Adhesive rail terminal tags for dot matrix printing (Cont'd)

Ordering information



Available sizes and formats

Ordering description	Hole position	(A) Tag width		(B) Tag height		(C) Vertical repeat		(D) Web width		(E) Hole diameter	
		mm	<i>inches</i>	mm	<i>inches</i>	mm	<i>inches</i>	mm	<i>inches</i>	mm	<i>inches</i>
HPTM1CL-312	Left	38.10	<i>1.500</i>	25.40	<i>1.000</i>	25.40	<i>1.000</i>	76.20	<i>3.000</i>	7.90	<i>0.312</i>
HPTM1CR-312	Right	38.10	<i>1.500</i>	25.40	<i>1.000</i>	25.40	<i>1.000</i>	76.20	<i>3.000</i>	7.90	<i>0.312</i>
HPTM1CL-438	Left	38.10	<i>1.500</i>	25.40	<i>1.000</i>	25.40	<i>1.000</i>	76.20	<i>3.000</i>	11.10	<i>0.438</i>
HPTM1CR-438	Right	38.10	<i>1.500</i>	25.40	<i>1.000</i>	25.40	<i>1.000</i>	76.20	<i>3.000</i>	11.10	<i>0.438</i>
HPTM1CL-500	Left	38.10	<i>1.500</i>	25.40	<i>1.000</i>	25.40	<i>1.000</i>	76.20	<i>3.000</i>	12.70	<i>0.500</i>
HPTM1CR-500	Right	38.10	<i>1.500</i>	25.40	<i>1.000</i>	25.40	<i>1.000</i>	76.20	<i>3.000</i>	12.70	<i>0.500</i>

Options

Package sizes	Standard	1000 piece pack
Colors	Standard	White



Electronics

Rail-Signal Products

HPKTM Adhesive-backed polypropylene tags for thermal transfer printing

Tyco Electronics HPKTM is a semi-rigid polypropylene film with a permanent acrylic adhesive that is designed for application to control panel backboards for rail signal circuit identification. The standard 1.0" hole pitch design meets AAR terminal post specifications and makes installation fast and convenient. HPKTM adheres to most smooth surfaces including bare and painted metal, as well as painted plywood used for rail signal terminal boards. It is resistant to common fluids, lubricants and solvents. For reliable print performance and durability, use with Tyco Electronics's RHD series ribbon.

Features and benefits

- Self-adhesive backing for quick and easy fixing.
- Thermal transfer printable.
- Recommended for indoor use.
- Resistant to common fluids, lubricants and solvents.



Temperature rating

Operating temperature range -29°C to +80°C -24°F to +176°F

Specifications/approvals

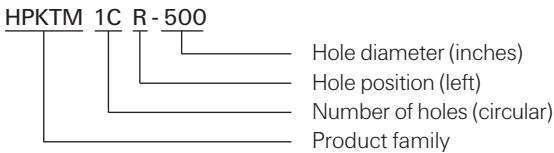
Industry AAR Terminal Post

Printer information

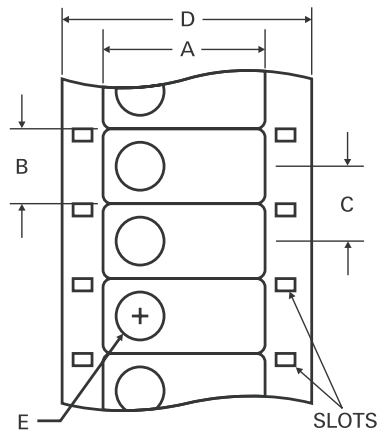
Tyco Electronics printer T308S* (thermal transfer)
Tyco Electronics ribbon 1330-0607-10* (thermal transfer)

**Alternative printers and ribbons are available for special applications. Contact Tyco Electronics Identification for more information.*

Part numbering system



Ordering information



Available sizes and formats

Ordering description	Hole position	(A) Tag width		(B) Tag height		(C) Vertical repeat		(D) Web width		(E) Hole diameter	
		mm	inches	mm	inches	mm	inches	mm	inches	mm	inches
HPKTM1CL-312	Left	38.10	1.500	25.40	1.000	25.40	1.000	76.20	3.000	7.90	0.312
HPKTM1CR-312	Right	38.10	1.500	25.40	1.000	25.40	1.000	76.20	3.000	7.90	0.312
HPKTM1CL-438	Left	38.10	1.500	25.40	1.000	25.40	1.000	76.20	3.000	11.10	0.438
HPKTM1CR-438	Right	38.10	1.500	25.40	1.000	25.40	1.000	76.20	3.000	11.10	0.438
HPKTM1CL-500	Left	38.10	1.500	25.40	1.000	25.40	1.000	76.20	3.000	12.70	0.500
HPKTM1CR-500	Right	38.10	1.500	25.40	1.000	25.40	1.000	76.20	3.000	12.70	0.500

Additional sizes and formats available by custom quotation.

Options

Package size	1,000 piece pack	
Colors	Standard	White

HLTM-FB / HXTM-FB Non-adhesive-backed polyolefin tags for thermal or dot matrix printing

Tyco Electronics HLTM-FB/HXTM-FB is a semi-rigid, heavy gauge crosslinked polyolefin material without an adhesive backing, designed for use in a variety of applications including terminal post and terminal board signal circuit identification. The heavy gauge thickness is ideal for applications requiring exceptional durability. Mark permanence exceeds military requirements. They are resistant to common fluids, lubricants, solvents and abrasion. For reliable print performance and durability, use with Tyco Electronics approved printers and ribbons.

Features and benefits

- Specially formulated polyolefin material.
- Flame retarded.
- Resistant to common fluids, lubricants and solvents.
- Dot matrix (HLTM-FB) or thermal transfer (HXTM-FB) printable.
- Print performance exceeds military standards.



Temperature rating

Operating temperature range		
HLTM-FB	-55°C to +135°C	-67°F to +275°F
HXTM-FB	-30°C to +105°C	-22°F to +221°F

Specifications/approvals

Military	SAE AS81531 4.6.2 MIL-STD-202F Method 215J
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Printer information

Tyco Electronics printer		
HLTM-FB	AM6310* (dot matrix)	
HXTM-FB	T312M (thermal transfer)	
Tyco Electronics ribbon		
HLTM-FB	1892BK04* (dot matrix)	
HXTM-FB	1966-RIBBON (thermal transfer)	

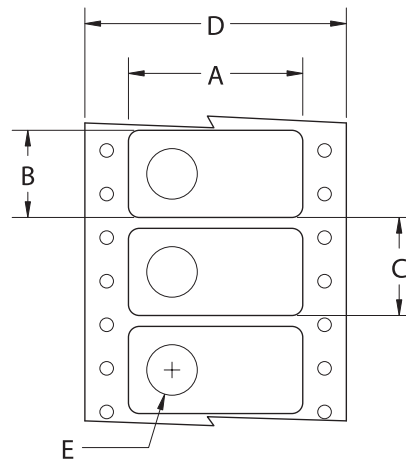
*Alternative printers and ribbons are available for special applications. Contact Tyco Electronics Identification for more information.

Part numbering system

HLTM1FBWE-312



Ordering information



Available sizes and formats

Ordering description	Hole position	(A) Tag width		(B) Tag height		(C) Vertical repeat		(D) Web width		(E) Hole diameter	
		mm	inches	mm	inches	mm	inches	mm	inches	mm	inches
H<format>TM1FB<color>-312	Left*	38.10	1.500	22.20	0.875	25.40	1.000	127.00	5.000	7.90	0.312
H<format>TM1FB<color>-438	Left*	38.10	1.500	22.90	0.900	25.40	1.000	127.00	5.000	11.00	0.438
H<format>TM1FB<color>-500	Left*	38.10	1.500	22.20	0.875	25.40	1.000	127.00	5.000	12.70	0.500
H<format>TM1FB<color>-625**	Left*	38.10	1.500	25.40	1.000	50.80	2.000	127.00	5.000	15.90	0.625

* Hole position is versatile (left or right) on HLTM-FB series tags.
Additional sizes and formats available by custom quotation.

Options

Package sizes	Standard	550 piece pack	**300 piece pack (HLTM1FB625/HXTM1FB625)
Colors	Standard	White	Yellow
	Code	WE	YW
Format	L	For dot matrix printable	
	X	For thermal transfer printable	

Ordering example: HLTM1FBWE-312

tyco**Electronics**

Tube and Pipe ID Labels

TP Tape High Performance color-coded cost saving system for tube identification

The system is designed for use as a thermal transfer printable, self-laminating identification for the various types of tubes in the aerospace, defense and marine industry. Made from polyester with a permanent acrylic adhesive, this cost saving system allows you to print on a unique range of pre color-coded labels on demand and eliminates the use and maintenance of paints, stencils, hot-stamps and etching tools. The system even does the job in a fraction of the time compared to similar technologies.

Features and benefits

- Continuous operating temperature of -40°C to $+163^{\circ}\text{C}$ (-40°F to $+325^{\circ}\text{F}$).
- Resists exposure to water, oil, conventional cleaning agents, oil-based solvents and other fluids commonly associated with commercial and military aircraft.
- Color coded to meet MIL-STD-595B requirements.
- Meets MIL-STD-1247 standards for hydraulic lines, fuel lines, oxygen lines, inerting fluid lines, etc.
- Performance tested to RW 2068, a punishing standard for aggressive fluid and temperature resistance in military and commercial aircraft.
- Available in die-cut or continuous formats to cover all ranges of tube diameters.
- Die-cut version available in white or yellow printable area.
- Continuous version available in white* or clear printable area.

**To be used only with TP-CLEAR-CONT over-laminating product*

**Temperature rating**

Operating temperature range	-40°C to $+163^{\circ}\text{C}$	-40°F to $+325^{\circ}\text{F}$
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Specifications/approvals

Tyco Electronics	RW 2526
Military	MIL-T-9906C (except initial peel)
	MIL-STD-595B
	MIL-STD-1247
	MIL-STD-101B

Printer information

Tyco Electronics printer	T308S* (thermal transfer)
Tyco Electronics ribbon	1330-0607-10 (thermal transfer)

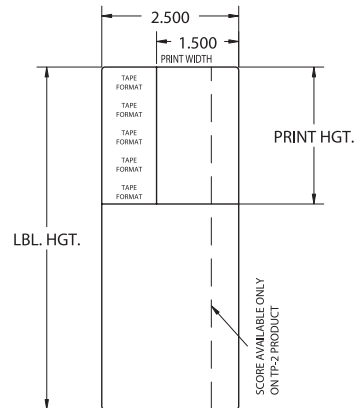
**Alternative printers and ribbons are available for special applications. Contact Tyco Electronics Identification for more information.*

**Part numbering system**

TP3 - PNEU - 1.250

Size (1.250: for tube with OD of 1.250")
Tube type (PNEU: for pneumatic lines)
Product type (TP3: TP Tape type 3, 1.1 turns of printable legend around tube)

Ordering information



Available sizes and formats

Order description	Printer type	Label width		Fits tube diameter		Labels per pack
		mm	inches	mm	inches	
TP<format>-(XXXX)-0.188	Thermal	63.50	2.500	4.77	0.188	2500
TP<format>-(XXXX)-0.250	Thermal	63.50	2.500	6.35	0.250	2000
TP<format>-(XXXX)-0.312	Thermal	63.50	2.500	7.92	0.312	2000
TP<format>-(XXXX)-0.375	Thermal	63.50	2.500	9.52	0.375	1500
TP<format>-(XXXX)-0.500	Thermal	63.50	2.500	12.70	0.500	1500
TP<format>-(XXXX)-0.625	Thermal	63.50	2.500	15.88	0.625	1000
TP<format>-(XXXX)-0.750	Thermal	63.50	2.500	19.05	0.750	1000
TP<format>-(XXXX)-0.875	Thermal	63.50	2.500	22.21	0.875	750
TP<format>-(XXXX)-1.000	Thermal	63.50	2.500	25.40	1.000	750
TP<format>-(XXXX)-1.125	Thermal	63.50	2.500	28.58	1.125	500
TP<format>-(XXXX)-1.250	Thermal	63.50	2.500	31.75	1.250	500
TP<format>-(XXXX)-1.375	Thermal	63.50	2.500	34.93	1.375	500
TP<format>-(XXXX)-1.500	Thermal	63.50	2.500	38.10	1.500	500
TP<format>-(XXXX)-1.625	Thermal	63.50	2.500	41.28	1.625	400
TP<format>-(XXXX)-1.750	Thermal	63.50	2.500	44.45	1.750	400
TP<format>-(XXXX)-CONT	Thermal	63.50	2.500	50.80+	2.000+	100 ft continuous

Options

Format	None	Standard TP Tape
2		For a slit at 2 inches from the left edge (total width 2" instead of 2.5")
3		For 1.1 turns of color-coded label around the pipe instead of 1.5 turns
4		For white printable area instead of yellow
WE		For white/slit product for European markets, use order description: TP-WE(XXXX)ST-(size)

Identification code (XXXX)

AIRCON	Air conditioning	HYDRO	Hydraulic	PYRO	Pyrotechnic
BATACT	Battery activator	INAIR	Instrument air	RAIN	Rain repellent
COMGAS	Compressed gas	INERT	Inert fluid	RCAT	Rocket catalyst
COOL	Coolant	LUBE	Lubrication	RFUEL	Rocket fuel
DEICE	Deicing fluid	MC	Miscellaneous	ROXI	Rocket oxidizer
ELECT	Electrical conduit	MONO	Mono propellant	SOLV	Solvent
FIRE	Fire protection	OXYGEN	Breathing oxygen	VAC	Vacuum
FUEL	Fuel	PNEU	Pneumatic	WATER	Water injection



Electronics

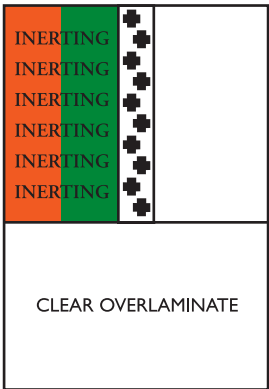
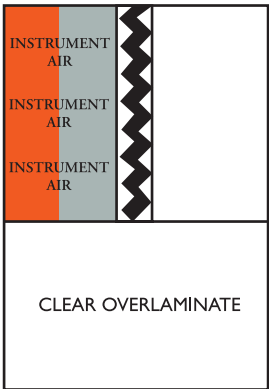
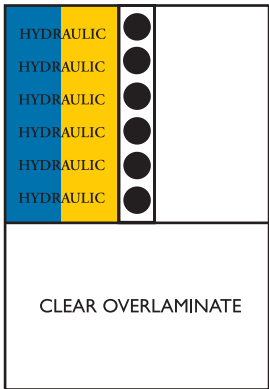
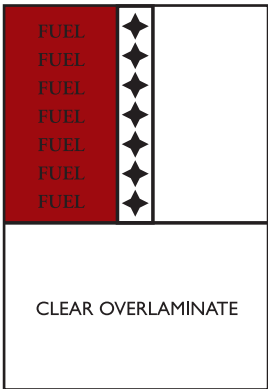
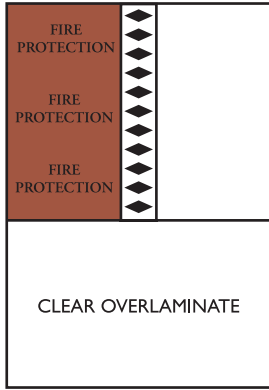
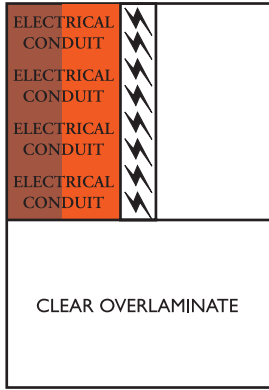
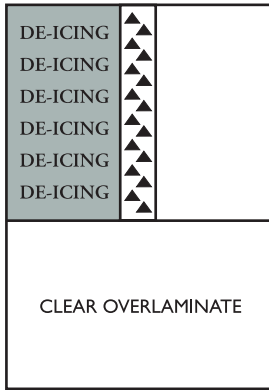
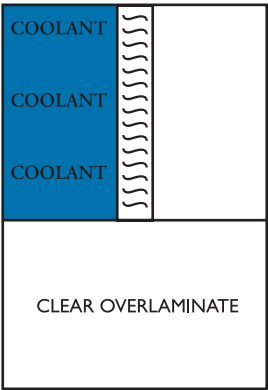
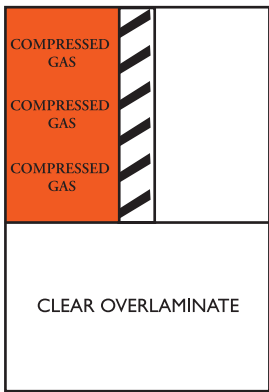
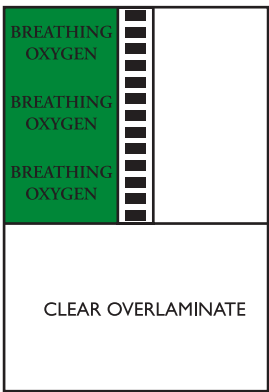
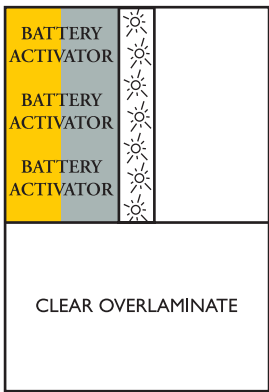
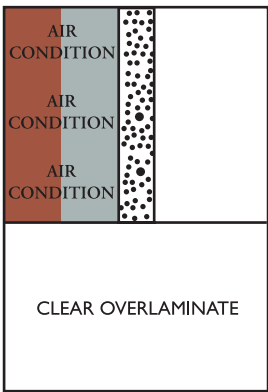
Tube and Pipe ID Labels

TP Tape High Performance color-coded cost saving system for tube identification (Cont'd)

Colors	Brown	Red	Orange	Yellow	Green
Code	10076	11136	12197	13655	14187

Colors conform to Federal Standard FED-STD-595B

Continuous format TP Tape is supplied with respective legends imprinted, as shown below. Die cut formats are not printed. For example, TP3AIRCON-CONT will have AIR CONDITION printed on each label. TP3AIRCON-0.625 will not.



TP Tape High Performance color-coded cost saving system for tube identification (Cont'd)

Colors	Blue	Grey	Black	White	Pink	Light Green
Code	15102	16473	17038	17925	21668	24664

Colors conform to Federal Standard FED-STD-595B

Continuous format TP Tape is supplied with respective legends imprinted, as shown below. Die cut formats are not printed. For example, TP3AIRCON-CONT will have AIR CONDITION printed on each label. TP3AIRCON-0.625 will not.

