



**Product Number: 3PS-1000-2-WT-SC**  
**BRADY B-342 PERMASLEEVE MARKER**  
**TDS No. B-342**  
Effective Date: 18-May-2009

**GENERAL**

**Print Technology:** Thermal transfer and dot matrix

**Material Type:** Irradiated polyolefin heat shrink tubing (3:1 shrink ratio)

**APPLICATIONS**

Wire identification and insulation purposes

**RECOMMENDED RIBBONS**

Brady R5000 Series for dot matrix printing

Brady R4300 Series for thermal transfer printing

Brady R6600 Series for thermal transfer printing

Brady R4502S for thermal transfer printing silver on dark colored markers

Brady R6700 for thermal transfer printing white on dark colored markers

**SPECIAL FEATURES**

B-342 PermaSleeve™ Markers meet the material and physical property requirements of SAE AMS-DTL-23053/5C (class 1) for Insulation Sleeving and SAE AS-81531 for Marking of Electrical Insulating Materials when printed with R5000 Series dot matrix, R4300, R6600, R4502S, or R6700 Series thermal transfer ribbons.

B-342 is available in white, yellow, black, red, orange, green, blue, violet, pink, gray, and brown.

**Details:**

MARKER SIZE		RANGE OF WIRE DIAMETER (in)	RANGE OF WIRE DIAMETER (mm)
1"	PS-1000	0.450 - 0.950	11.43 - 24.13

Shrink Method: Any industrial grade heat gun may be used to shrink B-342 PermaSleeve™ Markers.

B-342 white, yellow and other colors tested/printed with R5000 Series dot matrix and R4300 and R6600 Series thermal transfer ribbons. B-342 black samples tested printed with R4502S silver and R6700 white thermal transfer ribbon. Results the same with all ribbons unless stated otherwise. White, yellow, and black data listed below, other color data available upon request.

PERFORMANCE PROPERTIES	TEST METHODS	AVERAGE RESULTS
High Service Temperatures	5 minutes at 500°F (260°C)	White: Slight tube darkening and yellowing Yellow: Moderate tube darkening.
	24 hours at 350°F (180°C)	Black: No visible effect to tubing, slight print yellowing (R6700).

	1000 hours at 267°F (130°C)	White and yellow: Slight tube darkening.  White and yellow: Moderate tube darkening.  No visible change to printing in above conditions (R4300 and R6600)
Low Service Temperature	1000 hours at -40°F (-40°C)	No visible effect
Weatherability	ASTM G155 Cycle 1 1000 hours in Xenon Arc Weatherometer	White: Slight tube yellowing Yellow: No visible effect No visible change to printing
UV Light Resistance	ASTM G155 Cycle 1 dry 1000 hours	White: Moderate tube yellowing Yellow: No visible effect No visible change to printing
Humidity Resistance	1000 hours at 100°F/95% R.H.	No visible effect
Salt Fog	1000 hours at 5% Salt Spray	Moderate print fade (R4502S on black marker). No visible effect to all other color/ribbon combinations.
Dielectric Strength	ASTM D2671 (after unrestricted shrink)	500 volts/mil minimum
Flammability	ASTM D2671, Procedure B	Self-extinguishing within 60 seconds
Print Adherence per SAE-AS81531 (Sec 3.4.2)	Samples tested after unrestricted shrink at 200°C for 3 minutes  20 eraser rubs with hard hand pressure	Print is still easily legible on sleeves printed with all ribbons.
Solvent Resistance per SAE-AS81531 (Sec 3.4.3) Solution A Solution C Solution D	Samples tested after unrestricted shrink at 200°C for 3 minutes  MIL-STD-202, Method 215K 3 cycles of 3 minute immersions in specified fluids followed by toothbrush rub after each immersion	Print still easily legible on sleeves printed with all ribbons in all three test fluids

Solution A: 1 part isopropyl alcohol, 3 parts mineral spirits

Solution B: deleted from MIL-STD-202, Method 215J

Solution C: BIOACT® EC-7R™ terpene defluxer

Solution D: 42 parts water, 1 part propylene glycol monomethyl ether, 1 part monoethanolamine at 70°C