ALTEC
INDUSTRIAL IDENTIFICATION

Technical datasheet

PI376

UL94 VTM 0 MATTE WHITE POLYIMIDE LABEL

Description

Identification label for mobile phone battery pack, optical trans- receiver devices, optical fiber amplifier and wrap -around conformity.

Material	Polyimide
Finishing	Matte
Color	White
Adhesive	Permanent acrylic

Regulatory

UL: PI376 is a UL Recognized Component to UL969 Labeling and Marking Standard when printed with the R6200 and the R7961 ribbons.
See UL files MH17154, MH25991 and MH16386 for specific details. UL information can be accessed on-line at UL.com in the UL Product iQ area.

PI376 is QMFZ2 recognized and VTM- 0 rated as per UL94 standard. Refer to File# E316839 under Certifications at www.ul.com

Special features

PI376 is halogen-free in accordance to definition in IEC61249- 2- 21 and IPC- 4101B, tested using IPC-TM-650.

Details

Physical properties	Test method	Typical results
Thickness	ASTM D1000 - Substrate - Adhesive - Total (excluding liner)	 0.002 inch (0.046 mm) 0.001 inch (0.022 mm) 0.003 inch (0.068 mm)
Peel adhesion to: - Stainless steel	ASTM D1000 20 minute dwell 72 hour dwell	 29 oz/inch (32 N/100 mm) 38 oz/inch (41 N/100 mm)
- ABS	20 minute dwell 72 hour dwell	28 oz/inch (31 N/100 mm) 33 oz/inch (37 N/100 mm)
Tack	ASTM D 2979 Polyken™ Probe Tack 0.5 second dwell	30 oz (859 g)

Performance properties exhibited by PI376 in the following were based on samples printed with the R6200 ribbon. Printed samples were laminated to aluminum panels and allowed to dwell 24 hours before exposure to the indicated environment.

Properties	Test method	Typical results
Abrasion	CS-10, 25 cycles load 250g	No visible effect
High temperature resistance	100°C for 1000 hours in air oven	Slight yellowing of topcoat. Label remained functional, print is legible

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Low temperature resistance	-40˚C for 1000 hours in freezer -70˚C for 1000 hours in freezer	No visible effect No visible effect
High humidity resistance	37˚C / 95% RH for 1000 hours	No visible effect
Thermal shock resistance	-40˚C to 85˚C for 10 cycles	No visible effect
Weathering resistance	ASTM G155 1000 hours exposure in Xenon Arc Weather-Ometer®	Slight yellowing of topcoat. Label remained functional, print is legible

Test samples were printed with the R6200 ribbon. Printed samples were laminated to aluminum panels and allowed to dwell 24 hours prior to testing. Testing was conducted at room temperature and consisted of 15 minute immersion in specified test fluid. After immersion, the samples were removed from the test fluid and the printed image was rubbed 10 times with a cotton swab saturated with the test fluid. A rating scale of 1 – 5 is used in the table below to show the print quality of the samples tested upon exposure to different chemicals.

Chemical reagent	**Subjective observation of visual change**		
	Effects to material	**Effects to printed image**	
		R6200	
		Without rub	With rub
IPA	No visible effect	1	1
Mineral spirit	No visible effect	1	1
10% sulphuric acid	No visible effect	1	1

Rating scale: 1 = No visible effect / 2 = Slight print removal / 3 = Moderate print removal / 4 = Severe print removal / 5 = Complete print removal

Shelf life

Shelf life is two years from the date of receipt for this product as long as this product is stored in its original packaging in an environment below 80˚ F (27˚ C) and 60% RH. It remains the responsibility of the user to assess the risk of using this product. We encourage customers to develop testing protocols that will qualify a product's fitness for use in their actual application.

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