GHTR PA Matt White 50 / 150E / 65DWG

High Temperature Resistant Labelstock

Product Data Sheet

Issued: April 2004

Description:

GHTR High temperature resistant labelstock is recommended for thermal transfer imaged labelstock applications where a high durability and superb resistance against highest application temperature is required.

The acrylic based film is resistant to outdoor weathering, UV-light and many solvents as well as being dimensionally stable.

The matte white facestock provides a very good contrast which leads to a high first readability rate; even of high density BARCODES.

#150E adhesive bonds well to a wide variety of substrates including metals, high surface energy (HSE) plastics and low surface energy (LSE) plastics.

Optimized adhesive coat weight and liner release value facilitate excellent roll conversion and automatic dispensing properties.

Physical Properties
Not for specification purposes
(Calipers are nominal values)

Film	50 µm White matte cast acrylic film
Adhesive	20 µm # 150E Crosslinked acrylate adhesive
Liner	57 micron 63g/m² double sided siliconized, white glassine
Shelf Life	24 months from date of manufacture by 3M when properly stored at 22°C & 50 % Relative Humidity

Physical Properties
Not for specification purposes

Minimum Application Temperature	+15°C
Elongation	5% - 15%
Tensile Strength	> 30N/25mm (Test conditions: DIN50014 on tensile tester according to DIN51221/DIN51220; 300mm/min, 100mm Film length)
Dimensional Stability (DIN30646)	< 0.2 %
Temperature Resistance	High temperature resistance *300°C (60 sec) No change *200°C (60 min) No change *80°C (14 days) No change
	A slight yellow tinge may occur after times listed. The temperatures have no impact on the form stability of the film.
	Low Temperature Resistance -40°C (7 days) No change
Weather Resistance	Accelerated weathering in Xenon tester (in accordance with DIN 30646) 2000 hours : No Change

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Adhesion

FINAT FTM 2 72 hrs dwell time, 300mm/min. Pullback 90° Angle.	Substrate	N/10mm
	PCB solder mask	2.5
	Afera Steel	5.4
	Aluminium	6.7
	ABS	7.2
	PP	3.0
	PVC	4.0
	PC	5.0

The adhesion on Printed Circuit Boards is depending on the used lacquer system. (Test conditions in accordance with FINAT FTM 2, 72 hours dwell time, 300mm / min Pull Back, 90° angle).

Chemical & Solvent Resistance

Film applied onto PCB panels 1 hour prior to immersion and evaluated directly after the test. Duration of immersion, 10 minutes at room temperature.

Xylene	No change
n-Heptane	No change
Ethanol	No change
Isopropanol	No change
Water	No change
Sulphuric Acid (30%)	No change
Caustic Soda (10%)	No change
Trichloroethane 1,1,1	No change
Toluene (5 minutes)	No change

* The film is not resistant to harsh fluorine-chlorine.

Abrasion Resistance

Grinding wheel:	CS10
Load :	250g
100 cycles	no surface damage

Processing

Printing:
GHTR High temperature resistant labelstock is recommended for screenprinting processes using appropriate inks from suppliers like Wiederhold, Marabu, Pröll etc. Both UV and solvent-based inks are suitable but needed to be checked by user before use. Sheet screenprinting must be evaluated depending on size and actual conditions. Flexographic, letterpress and offset printing methods can be considered but should be evaluated on a case to case basis.

Cutting:
High temperature resistant smooth, hard, caliper controlled liner with very good kiss cutting characteristics. Weed stripping is recommended using a 25 mm idler. For better handling we recommend label formats with "rounded" corners.

Application:
All surfaces must be clean and dry and at ambient temperature of over 10°C.
GHTR High temperature resistant labelstock has been developed for application to smooth surfaces.

Storage:
Unprocessed films: at least two years and Processed labels: one year.

Films and labels must be stored in a clean area free of excessive moisture and direct sunlight of room temperature. Processed labels should be stored in Polyethylene bags, 0.1 mm thickness, to protect against moisture fluctuations.

Processing Contd.…

Thermal Transfer:
GHTR High temperature labelstock offers an ideal surface for Thermal **Imageability.**

Transfer Printing.
This technology provides excellent covering power combined with the capability of uniform surface coverage. It also allows the individual printing of high density BARCODES beyond standard labelling applications.

The quality of the printing is dependent on the printer/ribbon combination. Good results have been obtained with the following ribbons:

Armor AXR 7+
ICS- CC-4099-1
Ricoh B.110 C
Ricoh B.110 CX
Ricoh B.110 A
Sony 4070
Sony 5070
Japan Pulp and Paper JP Resin 1

Parameters:
New printer/ribbon combinations should be evaluated beginning with lowest printing speed and highest burn temperature. Printing speed and burn temperature can be then successively increased/reduced.

Insert company information before issue