



Z-Supreme 4000T White

Permanent labels

Thermal Transfer

Description

A gloss white polyimide film designed for thermal transfer printing with Zebra printers. Z-Supreme 4000T White media is coated with a high performance, high temperature permanent acrylic adhesive. Together with 5095 and 5100 resin ribbons, this Zebra labelling solution is designed for extremely high temperature and harsh environmental applications.

Suggested Applications

- Printed circuit board applications (top-side and bottom-side labelling)
- High temperature, harsh environments requiring excellent print quality, durability and label performance.
- High-temperature product and asset labelling

Technical Specifications

	Description	Caliper
Facestock	White gloss coated polyimide film	64 microns
Adhesive	Permanent, acrylic based high-temperature adhesive	46 microns
Liner	65 gsm white glassine liner	81 microns
		Total 191 microns

Recommended Zebra printers: high-performance thermal transfer printers
(testing is strongly recommended on mid-range printers)

Recommended Zebra ribbons: 5095, 5100

Minimum application temperature: 10°C

Service temperature range: -40°C to 575°C (short term)

Recommended storage conditions: One year duration when stored at 21°C
50% RH

Expected exterior life: two years



Z-Supreme 400T White continued

Performance Characteristics

- Scannability:** Excellent ANSI bar code print quality
- Print Quality:** Excellent human readable print quality
- Print Durability:** Excellent Crockmeter durability
500 rubs - no print degradation
- Maximum Recommended Print Speed:** **5095 ribbon 76.2mm/sec**
5100 ribbon 50.8mm/sec
- High Temperature Testing:** Bar code printed labels applied to aluminium panels tested in muffle furnace. Five minute adhesive dwell time before heat exposure. ANSI grade B before and after exposure, no visible degradation of printed bar code or facestock.

Maximum Heat Resistance:

Temperature	Time
575°C (1067°F)	30 seconds
500°C (932°F)	60 seconds
375°C (707°F)	5 minutes
325°C (617°F)	30 minutes
275°C (527°F)	60 minutes

Solvent Resistance Testing: Z-Supreme 400T White media with Zebra 5100 ribbon

- Solvents Tested:**
 - IPA (Isopropyl Alcohol)
 - Oil (10W-40)
 - Toluene
 - Water
 - Heptane
 - Unleaded Gas
 - Windex
 - MEK (Methyl Ethyl Ketone)
- Test Method:** Apply printed samples to stainless steel panels. Put panels through following cycles:
10 minutes immersed
30 minutes out
Rubbed with standard cloth when wet after immersion
Rubbed with standard cloth when dry after immersion



Z-Supreme 4000T White™ Continued

Thermal Transfer Material Test Results

Solvent	Wet	Dry
IPA	No effect	No effect
Oil	No effect	No effect
Toluene	Ribbon and coating rub off after one cycle	No effect
Water	No effect	No effect
Heptane	Some rub off after three cycles	No effect
Unleaded Gas	Ribbon rub off after three cycles	Coating appears slightly degraded; bar codes show no substantial effect
Windex	Some ribbon/coating rub off after two cycles	No effect
MEK	Ribbon and coating rub off after one cycle	No effect

Product was also tested in Zebra's wave solder process as follows:

Zebra In-House Wave Solder Process

Standard 67/33 solder and no clean flux

Pre-heat zone set at 425C (0.6 metres)

Wave solder temp 260C +/- 10C at line speed of 1.2M/minute

Z- Supreme 4000T White tested in above wave solder process with 5 mil narrow bar Code 39 using Zebra 5100 ribbon. Print image resists smearing after exposure to wave solder process.

Product Performance and Suitability

The information contained in this document is to be used for guidance only and is not intended for use in setting specifications. All purchasers of Zebra products shall be solely responsible for independently determining if the product conforms to all requirements of their unique application.

For testing of this material, please order SAM5392.