



High-Performance, Polypropylene Direct Thermal Alternative

Most direct thermal media uses heat to cause a chemical change using leucodyes. The leucodyes are susceptible to UV light, heat, and chemicals.

ThermaLock 4000D is different in that heat causes a physical change meaning the image is more permanent resulting in significantly better heat and outdoor resistance, as it is resistant to fading - all without having to use a ribbon. The black layer that is revealed is carbon-based (similar to a thermal transfer ribbon) which is not susceptible to UV light outdoor exposure (for up to 18 months) or heat below 248° F.

SPECIFICATIONS AT A GLANCE

Material Type: Polypropylene

Color: Silver

Print Technology: Direct Thermal Alternative

Fade Resistant

Heat Resistance: up to 248°F

Outdoor Exposure: Up to 18 months

Withstands Sterilization

Custom Limitation: Unable to be pre-printed with color

THERMALOCK 4000D

HIGH-PERFORMANCE, POLYPROPYLENE DIRECT THERMAL ALTERNATIVE



DATASHEET

GREAT ECONOMICAL SOLUTION FOR APPLICATIONS WITH THE FOLLOWING IMAGE DURABILITY REQUIREMENTS:

- Indoors under fluorescent lights for over 12 months without fading
- Up to 18 months outdoors
- Exposure to temperatures up to 248°F (traditional direct thermal paper can withstand up to 131°F, while traditional direct thermal polypropylene can withstand up to 200°F)

MATERIAL COMPARISON CHART

(represents the typical performance characteristics of the standard materials listed)

MATERIAL TYPE	FADE RESISTANT	SCUFF RESISTANT	SERVICE TEMP	WATER-PROOF	TEAR-PROOF	CHEMICAL RESISTANCE	OUTDOOR EXPOSURE (UP TO)
DIRECT THERMAL PAPER LABEL	No	Somewhat	131°F	No	No	Weak	None
THERMAL TRANSFER PAPER LABEL WITH WAX RIBBON	Yes	Yes	200°F	No	No	No	None
THERMALOCK 4000D	Yes	No	248°F	Yes	Yes	Varies*	18 months
DIRECT THERMAL POLYPROPYLENE LABEL	No	Somewhat	131°F	Yes	Yes	Weak	None
THERMAL TRANSFER POLYPROPYLENE LABEL WITH WAX / RESIN RIBBON	Yes	Yes	200°F	Yes	Yes	Weak	1-2 Years

* If the application involves contact with non-oil based chemicals, please test in the application prior to purchasing as scannability varies by the type of chemical and how the chemical is applied.



Corporate Headquarters
+1 800 423 0442
inquiry4@zebra.com

Asia-Pacific Headquarters
+65 6858 0722
apacchannelmarketing@zebra.com

EMEA Headquarters
+44 (0)1628 556000
mseurope@zebra.com

Latin America Headquarters
+1 847 955 2283
inquiry4@zebra.com



Other Locations / USA: California, Georgia, Illinois, Rhode Island, Texas, Wisconsin **Europe:** France, Germany, Italy, the Netherlands, Poland, Spain, Sweden, Turkey, United Kingdom **Asia Pacific:** Australia, China, Hong Kong, India, Indonesia, Japan, Malaysia, Philippines, Singapore, South Korea, Taiwan, Thailand, Vietnam **Latin America:** Argentina, Brazil, Colombia, Florida (LA Headquarters in USA), Mexico **Africa/Middle East:** Dubai, South Africa