

ThermaLock 4100D

Direct thermal label

ThermaLock 4100D is a direct thermal polypropylene label. The labels are designed to withstand temperatures—as low as -65°F/-54°C and up to 165°F/74°C—as well as exposure to sunlight, and a wide range of chemicals.



Label Appearance

The appearance of ThermaLock 4100D consists of a gray color with darker streaks, a characteristic of its manufacturing process. This appearance in no way affects the scannability of the labels.

Testing

We encourage our customers to get samples we provide free of charge to test the material in your specific application before making a purchase.

Simplified Printing — No Ribbon Required

ThermaLock 4100D is compatible with Zebra's direct thermal mobile, desktop and industrial printers, providing all the benefits of direct thermal printing—there's no ribbon to stock, monitor and replenish.

Mobile Printing Features

Besides the advantages that ThermaLock 4100D provides due to its compatibility to Zebra's direct thermal printers, one of its main benefits is being able to print resistant labels from mobile printers without the need of a ribbon. Additionally, the ability to print labels with unique data at the point of application improves worker productivity and workflow efficiency. The need to travel back and forth to a centralized desktop printer to retrieve labels and the opportunity to inadvertently apply the label to the wrong asset are eliminated.

Health- and Environmentally-Conscious Engineering

These BPA/BPS-free/Phenol-free labels protect the environment and the safety of everyone who comes in contact with them—from workers who load label stock into the printers and apply the labels to customers who purchase labeled goods.

ThermaLock 4100D — direct thermal polypropylene label designed to resist extreme temperatures and a wide range of chemicals.

Specifications

Material Construction

RM Number	10035994RM
Facestock	Glossy silver polypropylene film; 3.1 mils
Adhesive	Permanent acrylic adhesive
Liner	2.3 mils
Total thickness +/- 10%	5.9 mils
Environment	Indoor use only

Temperature Performance

Minimum Application Temperature ¹	38°F/3°C
Service Temperature Range ²	-65°F to 165°F/-54°C to 74°C

Recommended Printers and Settings

Printers	Direct thermal printer; use Zebra desktop, mid-range, and high-performance thermal printers for optimal performance
Ribbons	N/A

Adhesive Strength

Corrugate	5 min: 15 oz./in.; 24 hr: 19 oz./in.
Steel	Attraction between adhesive and surface is so great that the facestock rips
Polycarbonate	Attraction between adhesive and surface is so great that the facestock rips
Polyethylene	5 min: 35 oz./in.; 24 hr: 35 oz./in.

Chemical Resistance

Weak Chemicals	Blood, Body Fluid, Salt Water, Water, Window Cleaner: Test in your application
Moderate Chemicals	Alcohol, Ammonia, Bleach, IPA: Test in your application
Harsh Chemicals	Gasoline: Test in your application Grease: Not recommended
Extreme Chemicals	Acetone, IR Reflow, MEK, TCE, Xylene: Test in your application

Regulatory and Compliance

BPA/BPS-free/Phenol-free

Product Performance and Suitability

Recommended storage conditions	1 year duration when stored at 68° F to 77° F/20° C to 25° C at 40 to 50% RH
Expected life span in application ³	3 years

Footnotes

1. When the label is applied, the environment and surface should be above this temperature.
2. Following correct application and appropriate dwell time (usually 24 hrs) the media will withstand this temperature range.
3. Following correct application and appropriate dwell time (usually 24 hrs) we expect, but do not warrant, a life span as indicated.

- * Specifications are subject to change without notice.
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Markets and Applications

Logistics

- Labeling of packaging material including corrugate, plastic, glass and metal

Retail

- Lawn and garden centers

Healthcare

- Laboratory testing

Manufacturing

- Work-in-process labels

Government

- Citation labels



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