

ZeOn-demand Printable Indicators

Technical Specifications

Specifications are provided for reference. Results may vary in actual application settings. Zebra recommends always qualifying any application with thorough testing.



Technical Specifications Information

Temperature - Reversible

| Environmental Response | Response Time | Accuracy | Color Change | Indication Cycle | Storage Conditions | Shelf Life |
|-----------------------------|-----------------|----------|-------------------|------------------|--|--|
| Freeze/Cold: 4°C Descending | Within a minute | +/- 2°C | Colorless to Blue | 100 | Store in cool, dry environment (below 30°C) protected from light | Up to 1 year from time of manufacture when stored under recommended conditions |
| Heat: 60°C Ascending | | +/- 10°C | Colorless to Pink | | | |

Temperature - Irreversible

| Environmental Response | Response Time | Accuracy | Color Change | Indication Cycle | Storage Conditions | Shelf Life ¹ |
|--|-------------------|----------|--|------------------|---|--|
| Freeze/Cold: 0°C Descending ² | Within 1 minute | ± 2°C | Light Blue to Dark Blue | 1 | Store at room temperature (20°C to 25°C) protected from light and moisture | Up to 1 year from time of manufacture when stored under recommended conditions |
| Freeze/Cold: 5°C Descending ² | | ± 3°C | Colorless to Blue | | | |
| Thaw: -12°C Ascending ³ | Within 15 minutes | ± 4°C | Blue to colorless, revealing "Thawed" text | | | |
| Thaw: 0°C Ascending ³ | | ± 2°C | Light Grey to Colorless, revealing "Thawed" text | | | |
| Heat: 60°C Ascending | Within 5 minutes | ± 10°C | Colorless to Magenta | | Store in a cool, dry environment (below 30°C) protected from light and moisture | Up to 6 months from time of manufacture when stored under recommended conditions |
| Heat: 80°C Ascending | | ± 5°C | Colorless to Blue | | | |

Humidity - Irreversible

| Environmental Response | Response Time | Accuracy | Color Change | Indication Cycle | Storage Conditions | Shelf Life |
|------------------------|---------------------------|----------|-------------------------|------------------|---|--|
| 100% | Direct Moisture-Immediate | N/A | Dark Blue to Light Blue | 1 | Store in a dark, cool, and dry environment (below 25°C) protected from light and moisture | Up to 6 months from time of manufacture when stored under the recommended conditions |
| 90% | Within 24 hours | | | | | |
| 80% | Within 13 days | | | | | |

RFID High Temperature Indicator (HTI)

| Environmental Response | Response Time | Accuracy | RF Response | Indication Cycle | Storage Conditions | Shelf Life |
|------------------------|------------------------|----------------------|---|------------------|---|--|
| Heat 40°C Ascending | Within 2 hours at 43°C | ± 3°C (37°C to 40°C) | Read EPC location @0x200h. If 1 appears, product exceeded threshold temperature, otherwise, product did not exceed threshold temperature. | 1 | Store in a dark, cool and dry environment (best at 22°C @ 50% RH) protected from light and moisture | Up to 6 months from time of manufacture when stored under the recommended conditions |

Zebra Certified Thermal Materials⁴

Direct Thermal Paper

Z-Select 40000D, Z-Select 4000D Removable, Z-Select 4000D Tag, 8000D High-Temp, 800D High-Temp, 8000D Lab, Z-Select 2000D*, Z-Select 2000D Removable*, Z-Select 2000D 145 Tag⁵

Thermal Transfer Paper

Z-Select 4000T, Z-Select 4000T All-Temp, Z-Select 4000T Removable, Z-Select 4000T Tag, 8000T High-Tack, 8000T Super-Tack, 8000T Multi-Removable, 8000T Opaque, 8000T Piggyback, 8000T Lab, Z-Select 2000T*, 8000T All Temp*, Z-Select 2000T Removable*, Z-Perform 1000T Tag*

Thermal Transfer Synthetic

PolyPro 4000T, PolyPro 4000T High-Tack, PolyPro 4000T Tag, PolyPro 4000T 216 Tag*, Poly Pro 3000T Gloss High Tack*

1. The value for shelf-life may be adjusted with further comprehensive studies

2. Do not exceed temperatures above 40°C when in use. (NOTE: At around 40°C, there is a reversible loss of blue color that is regained when the sensor is cooled down again, i.e., back to room temperature. Loss of blue color will however become permanent if heated to 60°C and above.)

3. Pre-conditioning required for at least 15 minutes at or below -25°C

4. Confirm Zebra indicator compatibility with Zebra Certified Thermal Material

5. Materials available in EMEA

For more information, visit www.zebra.com/tempmonitoring



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