

Description: Polyonics XF-801 is high temperature aluminum label material has a permanent pressure sensitive, high temperature acrylic adhesive and a **high opacity, white topcoat** specifically designed for thermal transfer printing. Do not touch topcoat or ribbon print when hot as smearing may occur, once cooled topcoat and ribbon are bonded and smear resistant.

Use: Polyonics XF-801 aluminum label material is designed for barcode or alphanumeric identification of hot items. These labels withstand the hot environments of heat treating and baking in the metal and ceramic processes. Ideal for environments where long term heat exposure prohibits the use of synthetics such as polyester, PEN and polyimide. Name and Rating plates, track and trace labeling and many other applications.

Printer Technology: The choice of **thermal transfer** printer influences the print quality for the overall aluminum tag performance. Our materials can be used with most high performance industrial thermal transfer printers. **Testing for specific printer and ribbon is mandatory.**

Properties	Test Method	Average Results	
		USA Units	SI Units
Thickness	ASTM D1000		
-Substrate		0.0024 inch	0.061 mm
-Adhesive		0.0010 inch	0.025 mm
-Total		0.0034 inch	0.086 mm
Thermal Characteristics	Operating Temp. -148 °F to +842°F (-100°C to 450°C)* Application Temp. 68°F to +104°F (20°C to 40°C) ***Best results in inert atmosphere, such as Nitrogen (N ₂)***		
Environmental Tests	Accelerated Weathering	1,000 hrs. QUV	Slight chalking, scannable
Shelf Life*	1 year below 80°F (27°C) and 60% R.H.		
Ribbon recommendations	Armor AXR7+, Dia Nippon R316, Ricoh B110A, Polyonics PRC-33		

Note. All values shown are averages and should not be used for specification purposes. Test data and test results contained in this document are for general information only and shall not be relied upon by POLYONICS customers for designs and specifications, or be relied on as meeting specified performance criteria. Customers desiring to develop specifications or performance criteria for specific product applications should contact POLYONICS for further information.

Properties	Test Method	Average Results
Chemical Resistance: Ribbon used Polyonics PRC-33		
	Control- Room Temp.	99% PCS; scans easily
	Lubricating oil R.T. 1 hr. 45°C, 24 hrs.	98% PCS; scans easily Fails
	Hydraulic Fluid R.T., 1 hr. 45°C, 24 hrs.	Fails Fails
	Salt Water, 45°C, 24 hrs.	99% PCS; scans easily
	Isopropanol 99%, 82°C, 10 min.	Fails



References:

PCS: Print Contrast Signal - determined with Quick Check 650, 0.005" aperture, 660 nm wave length. Quick Check 650 manufactured by : Photographic Sciences Corp.

Read rate determined using PSC 850 laser scanner.

ASTM: American Society for Testing and Materials (U.S.A.)

SI: International Systems of Units. All SI units are mathematically derived from U.S. conventional units.

* **Shelf Life:** XF-801 aluminum label material can be stored for at least **1 Year** in an environment below 80° F and 60% RH. We are confident that our product will perform well beyond this time frame, however, it remains the responsibility of the user to assess the risk of using such product. We encourage customers to develop functional testing protocols that will qualify a product's fitness for use, in their actual applications.

Surface conditions: Slight surface imperfections such as microcracks, pick-up (sparkles or bumps) and die lines are often caused by local variations in the microstructure of the foil due to size and distribution of intermetallic particles, grain size and grain orientation/texture. Such imperfections are common and beyond our control. This material is not recommended for high density small print labels.

WARRANTY-LIMITATION

Polyonics' products are sold with the understanding that the buyer will test them in actual use and determine for him/herself their functionality for the intended uses. Polyonics warrants to the buyer that its products are free from defects in material and workmanship, but limits its obligation under this warranty to replacement of the products shown to Polyonics' satisfaction to have been defective, provided that the Buyer has complied with the handling, storage and shelf life requirements as specified by Polyonics in applicable materials specifications.

The above warranties extend solely to Buyer and all warranty claims must be made by Buyer. Rework or Replacement shall neither extend nor decrease the original warranty period. The term of all warranty periods shall not exceed thirty (30) days from the date of the original shipment.

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POLYONICS

POLYONICS THERMOGARD®

XF-801

Thermal Transfer Printable Aluminum

White

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