POLYONICS METALGARD™

XF-803

Thermal Transfer Printable Aluminum

WHITE

Description: Polyonics XF-803 is an aluminum label material with a permanent pressure sensitive, ultra-high-temperature silicone adhesive and a **high opacity, white topcoat** specifically designed for thermal transfer printing on aluminum labels. Do not touch topcoat or ribbon print when hot as smearing may occur, once cooled ribbon and topcoat are bonded and smear resistant.

Use: Polyonics XF-803 aluminum label material is designed for barcode or alphanumeric identification of hot metal items. It is the ideal label to withstand the high temperatures encountered in steam pipe, oven and other long term high temperature exposure 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. -148ºF to 1112ºF (-100ºC to 600ºC) Application Temp. 68ºF to 104ºF (20ºC to 40ºC)		
	Best results in inert atmosphere, such as Nitrogen (N_2)		
Environmental Tests	Accelerated Weathering	1,000 hrs. QUV	Slight Chalking, scannable
Shelf Life*	**6 months below 80ºF (27ºC) and 60% R.H.**		
Ribbon Recommendations	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:	Control, R.T.	99% PCS; Scans easily
	Lubricating Oil, R.T. 1hr. 40-45ºC, 24 hrs.	98% PCS; scans easily Fails
	Hydraulic Fluid R.T. 1hr. 40-45ºC, 24 hrs.	98% PCS; scans easily Fails
	Salt Water, 40-45º, 24 hrs.	Pass
	Isopropanol 99%, 65-70º, 10 min	98% PCS; scans easily

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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-803 aluminum label material can be stored for at least **6 months** 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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