



POLYONICS

XF-803

Thermal Transfer Printable Aluminum

WHITE

Description:

Polyonics XF-803 is an aluminum label material with a permanent pressure sensitive, 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.

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.

Applications:

- Barcode or alphanumeric identification of hot metal items.
- Aluminum and steel mills: cold rolling, tube mills & structural steel mills
- Coils springs, heat treating, nameplates on industrial equipment
- Any place a label needs to survive temperatures greater than 662°F (350°C)

Special Considerations:

- The surface that you want to label should be clean, dry and free of any surface contamination, such as dust, oil or rust. Isopropyl alcohol would be a recommend solvent to clean the surface.
- When you apply the label, you must use firm pressure to increase the physical contact of the adhesive with the surface of the product.
- Pressure sensitive adhesives will provide stronger bonds to a warm surface, as compared to a colder one. The adhesive will 'flow' more readily, increasing the surface area and increasing the adhesion peel strength.
- The XF-803 top coat & print should not be contacted while exposed to elevated temperature.
- All values shown are averages and should not be used for specification purposes. Adhesion and tack values have a 15% tolerance allotted to the above values stated.
- 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

Technical Data

Properties		Test Method	Average Results	
			USA Units	SI Units
Thickness		ASTM D1000		
-Substrate			0.0024 inch	0.0609 mm
-Adhesive			0.0011 inch	0.0279 mm
-Total			0.0035 inch	0.0888mm
Adhesion		Polyonics 80313		
-Stainless Steel		20 minute dwell	≥ 41 oz/in	45N/100 mm
		24 hour dwell	≥ 55 oz/in	60N/100 mm
Tack		Polyonics 80155	≥ 1500g	
Thermal Characteristics		Application Temp.	Typical 70°F to 100°F (21°C to 38°C)	
		Operating Temperature	-40°F up to 758°F (-40°C to 400°C)	
		Temperature Range (up to)	-40°F up to 1112°F (-40°C to 600°C)	
Shelf Life*	1 year below 80°F (27°C) and 60% R.H.			
Ribbon Recommendations	Armor AXR7+, AXR8, DNP R510			

All SI units are mathematically derived from U.S. conventional units.

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References:

ASTM: American Society for Testing and Materials (U.S.A.) (U.S.A.)
 SI: International Systems of Units



***Shelf Life:** Customer experience, supported by our laboratory data clearly show that XF-807 aluminum label material can be stored for at least one year in an environment below 80 degrees 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 adaptability to his/her 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 Purchaser has complied with the handling, storage and shelf life requirements as specified by Polyonics in applicable materials specifications.

The above warranties extend solely to Purchaser and all warranty claims must be made by Purchaser. 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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