POLYONICS

POLYONICS WIREGARD

XF-300

Thermal Transfer Printable Nylon White

Description: POLYONICS XF-300 is a nylon film with a permanent pressure sensitive acrylic adhesive and a high opacity, matte white colored topcoat specifically designed for EITHER thermal transfer, dot matrix or write-on printing.

Applications:

- POLYONICS XF-300 is designed for barcode or alphanumeric identification of wire and cable marking.
- Terminal Marking
- Tubing
- Vial or slide labeling for laboratory identification
- General label applications where the part has a curved or contoured surface.
- XF-300 is particularly useful in manufacturing processes where dimensional stability of the label is critical.

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.
- 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

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Polyonics Material Specifications

Properties	Test Method	Average Results	
		USA Units	SI Units
Thickness	**ASTM D1000**		
-Face sheet		0.0050 inch	0.127 mm
-Adhesive		0.0020 inch	0.051 mm
-Total		0.0070inch	0.178 mm
Adhesion	**Polyonics 80313**		
Stainless Steel	**20 minute dwell**	≥ 35 oz/in	38 N/100 mm
	24 hour dwell	≥ 40 oz/in	44 N/100 mm
Tack	**Polyonics 80155**		
		≥ 1200 g/in	
Weatherometer Testing	**ASTM G154**	No Visible Effect	
Short Term High Temperature	5 minutes @ 180°C	Slight discoloration	
Long Term High Temperature	30 days at 110°C	No visible effect	
Short Term Cold Temperature	1 Hour in Liquid Nitrogen at -196°C (-320°F)	No Visible Effect	
Long Term Cold Temperature	30 days at -70°C		
Temperature Rating:	-40 to 293 °F (-40 to 145°C)		
Shelf life	**1 year below 80ºF (27ºC) and 60% R.H.**		
UL File #	TBD		
Tested Ribbons	Ricoh B110A, Iimak SP330, Dai Nippon R510, Ricoh B110C		

Durability Testing

Adhesive Performance Property	Chemical Resistance	
Chemical Re-agent	**Subjective Observation of Visual Change**	
	Effect to label- Stock/adhesive	Dot matrix print
Methel Ethyl Ketone	Complete unwrap	No visible effect
1,1,1- Trichloroethane	Complete unwrap	No visible effect
Isopropyl Alcohol	Complete unwrap	No visible effect
Mineral spirits	Slight unwrap	No visible effect
SAE 20 WT oil at 70°C	No unwrap, label stained tan	No visible effect
Mil 5606 oil	No unwrap, label stained red	No visible effect
Gasoline	Complete unwrap, label discolored	No visible effect
Rust Veto® 342	No unwrap, label discoloration	No visible effect
De-ionized water	No visible effect	No visible effect
3% Alconox® Detergent	No visible effect	No visible effect
10% Sodium hydroxide solution	No visible effect	No visible effect
10% Sulfuric acid solution	No visible effect	No visible effect
Buzz saw degreaser	Complete unwrap	No visible effect
S-kut cutting oil 332	No unwrap, label stained red	No visible effect
5% salt solution	No visible effect	No visible effect

Chemical Testing

Chemical Re-agent	Ricoh B110A-thermal transfer ribbon	Ricoh B110C-Thermal transfer ribbon	Iimak SP330-thermal transfer ribbon	Dai Nippon R510 thermal transfer ribbon
Methel Ethyl Ketone	Slight print smear	Severe print smear	Slight print smear	Slight print smear
Isopropyl alcohol	Slight print removal	Severe print removal	Slight print removal	Slight print removal
Mineral Spirits	No visible effect	Moderate print removal	No visible effect	No visible effect
SAE WT Oil at 70°C	No visible effect	No visible effect	No visible effect	No visible effect
Mil 5606 oil	Slight print smear	Slight print removal	No visible effect	No visible effect
Gasoline	Slight print smear	Moderate print removal	No visible effect	No visible effect
Rust Veto® 342	No visible effect	No visible effect	No visible effect	No visible effect
10% Sodium Hydroxide solution	No visible effect	No visible effect	No visible effect	Slight print smear
10% Sulfuric Acid solution	Slight print removal	Severe print removal	Moderate print removal	Moderate print removal
Buzz saw degreaser	No visible effect	Severe print removal	Moderate print removal	Moderate print removal
S-kutt cutting oil 332	No visible effect	No visible effect	No visible effect	No visible effect
5% salt solution	No visible effect	Severe print removal	No visible effect	Slight print removal

Polyonics Material Compliance

RoHS- Restriction of Hazardous Substances (EU Directive 2002/95/EC)	Limits set forth in Directive 2005/618/EC amending Directive 2002/95/EC
REACH- Registration Evaluation and Authorization of Chemicals (EU Directive 1907/2006/EC)	Limits set forth in Directive 1907/2006/EC Article 7 (2)
Halogens- Restriction use of Halogen (IEC 61249-2-21)	Limits set forth in International Electrochemical Commission

Key for tables on page 2 & 3

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

Durability-

- Samples wrapped around a 12 AWG, TFE jacketed wire and allowed to dwell 24 hours prior to test. Test was conducted at room temperature except where noted. Testing consisted of 5 cycles of 10 minute immersions in the specified test fluid followed by a 30 minute recovery period. After final immersion, samples rubbed 10 times with cotton swab saturated with test fluid.

Chemical-

- Samples printed with ribbon listed on a Datamax I4604 thermal transfer printer. Samples laminated to aluminum panels and allowed to dwell 24 hours prior to test. Test performed at room temperature except where noted. Testing consisted of 5 cycles of 10 minute immersions in the specified test fluid followed by a 30 minute recovery period. After final immersion, samples rubbed 10 times with cotton swab saturated with test fluid.

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

RoHS Compliant
SJ/T11364-2006 & EU202/95/EC
2003/11/EC
76/69/EEC

WARRANTY-LIMITATION

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