

**Description:**

POLYONICS XF-574 is a 2 mil polyimide film with a high temperature low tack acrylic adhesive.

Properties:

Labels printed with XF-574, in combination with the appropriate thermal transfer ribbon, resist the harsh chemicals, cleaners, and saponifiers used in PCB manufacturing; moreover, in combination with the appropriate thermal transfer ribbon, passes the requirements of **MIL-STD-202G, Notice 12, Method 215K** and **MIL-STD-883E, Notice 4, Method 2015.13**. The print resists smearing, even when the board and label are directly removed from a reflow or wave solder environment. Preheating the labeled product can further enhance print permanence in the case of extreme solvent and/or abrasion exposure, although this is not typically required for board processing applications.

Applications:

- POLYONICS XF-574 is designed for barcode or alphanumeric identification of printed circuit boards, or related electronic components. It is the ideal label to withstand surface mount board processes, on either the top or bottom side of the board.
- POLYONICS XF-574 is specifically designed for high-temperature-lead-free solder applications.
- It is the ideal label to withstand surface mount board processes, on either the top or bottom side of the board. It can also be used on the top side of the board in mixed processes, and is recommended for the bottom side that is directly exposed to the wave solder environment.
- XF-574 is particularly useful in manufacturing processes where dimensional stability of the label is critical.
- IC labeling for work in process, permanent ID & warranty labeling
- Product ID, asset tracking
- Anywhere a label will be exposed to extreme temperatures
- XF-574 is designed to work with automatic label dispensing equipment

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-574 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



Polyonics Material Specifications

| Properties | Test Method | Average Results | |
|----------------------------|------------------------|--|------------|
| | | USA Units | SI units |
| Thickness | ASTM D1000 | | |
| -Face sheet | | 0.0027 inch | 0.068 mm |
| -Adhesive | | 0.0018 inch | 0.046 mm |
| -Total | | 0.0045 inch | 0.114 mm |
| Adhesion | Polyonics 80313 | | |
| Stainless Steel | 20 minute dwell | ≥ 19 oz/in | 21N/100 mm |
| | 24 hour dwell | ≥ 27 oz/in | 30N/100 mm |
| Tack | Polyonics 80155 | | |
| | | ≥ 700 g/in | |
| Temperature Rating: | | -40 to 1000°F (-40 to 537°C) | |
| Shelf Life | | 1 year below 80°F (27°C) | |
| Recommended Ribbons | | Armor AXR7+, JPP1, Ricoh B110C, Union Chemicar US300, DNP R510 | |

Durability Testing

| Properties | Test Method | Test Environment | PCS ¹ | Read Rate ² |
|---------------------------------|------------------------|--|------------------|------------------------|
| Heat/Chemical Resistance | Polyonics 80386 | Control 70°C 5 min. | 99% | 100% |
| | | Kyzen Corp. Aquanox SS, 30% aqueous, 70°C, 5 min. | 100% | 99% |
| | | Re-Entry KNI 2000 Terpene, 70°C 5 min. | 98% | 100% |
| | | Alpha Metals Inc. EC-7R Terpene, 70°C 5 min. | 98% | 100% |
| | | Alpha Metals Inc. 2110 Saponifier, 10% aqueous, 70°C, 5 min. | 97% | 100% |
| | | Isopropanol 99% 70°C 5 min. | 99% | 100% |
| | | Kyzen XJN + 30%, 70°C, 5 min. | 99% | 100% |

Chemical Testing

| Properties | Test Method | Test Fluid | Results |
|----------------------------|--|--|-------------------------------|
| Chemical Resistance | MIL-STD-202G, Notice 12, Method 215K MIL-STD-883E, Notice 4, Method 2015.13 | | |
| | | Solvent A- 1 part IPA, 3 parts Mineral Spirits | No visible effect |
| | | SolventB1,1,1 Trichloroethane | Solvent deleted per notice 12 |
| | | SolventC-Terpene Defluxer | No visible effect |
| | | Solvent D- Saponifier | No visible effect |

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

- All SI units are mathematically derived from U.S. conventional units.
- Labels printed with recommended thermal transfer ribbon. Labels printed with 6.7 mil X dimension bars at 2:5 ratio. Labels exposed to indicated environments.
- ¹PCS - Print Contrast Signal. PCS determined with Quick Check 650, 0.005" aperture, 660 nm wavelength.
- Quick Check 650 manufactured by : Photographic Sciences Corp.
- ² Read rate determined using PSC 850 laser scanner.

Trademarks:

XJN+ & Aquanox SSA-™ is a trademark of Kyzen Corporation.

EC-7R™ is a trademark of Petroferm Inc.

RE-ENTRY™ is a registered trademark of Environsolv Inc.

References:

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

SI: International Systems of Units.

**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 Purchaser shall return the products using Polyonics' return policy as stated above.

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.

THE ABOVE WARRANTIES ARE EXCLUSIVE OF AND IN LIEU OF ALL OTHER WARRANTIES, WRITTEN OR ORAL, EXPRESS OR IMPLIED, STATUTORY OR OTHERWISE. NO IMPLIED STATUTORY WARRANTY OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE SHALL APPLY. POLYONICS SHALL NOT BE LIABLE EITHER IN TORT OR IN CONTRACT FOR ANY LOSS OR DAMAGE, DIRECT, INCIDENTAL OR CONSEQUENTIAL, ARISING OUT OF THE USE OR INABILITY TO USE THE PRODUCT, OR FROM DELAY IN THE REPLACEMENT OR REPAIR OF PRODUCTS UNDER THE ABOVE WARRANTY.

Polyonics, Inc**867 Rt. 12, Westmoreland, N.H. 03467****Ph: +1 603-352-1415****Fax: +1 603-352-1936****1-888- POLYONX (765-9669)****Email: info@polyonics.com****Web: www.polyonics.com****Polyonics, Inc****19 Loyang Way #02-09****Changi Logistics Centre****Singapore, 508724****Ph: 65-6542-5484****Fax: 65-6542-5185****Email: infoasia@polyonics.com****Polyonics, Inc.****Rm. 1004A, Xin Cheng Mansion****No.167 Jiangning Rd.****Shanghai, China 200041****Ph: 86-21-6258-0571****Fax: 86-21-6258-0579****Email: infoasia@polyonics.com****Polyonics, Inc****Convention Times Center Exhibition****Bldg. 3008 Yitian Rd. Unit 510****Futian District Shenzhen, China 518026****Ph: 86-755-8825-0441****Fax: 86-755-8825-2429****Email: infoasia@polyonics.com**