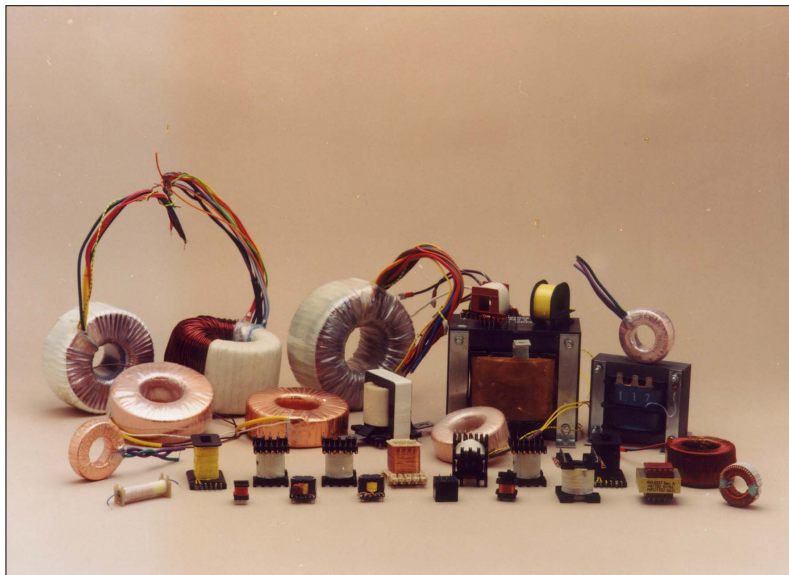


I.S. EN ISO 9001:2008



# PPI TAPES FOR TRANSFORMERS



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*A Brand Of  
Quality To  
Rely On...*



**PPI ADHESIVE PRODUCTS LIMITED** was originally established in **1970** and commenced production at Waterford Industrial Estate in **1971**.

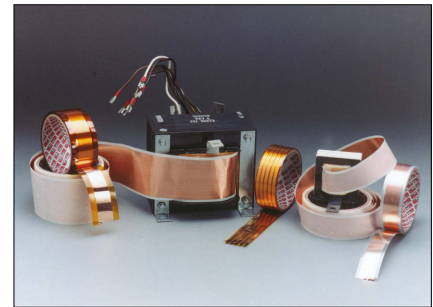
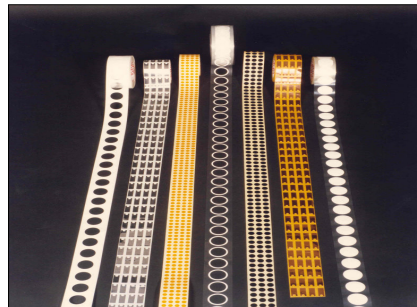
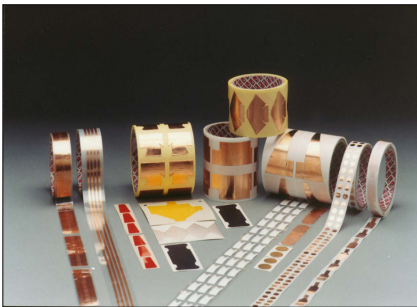
The company, which is owned and managed by its Irish board of directors, produces a very extensive and sophisticated range of technical self-adhesive tapes for a very wide range of high end applications, notably in the Electrical, Electronic, Audio/Video, Magnetic media, Aerospace, Automotive, Medical, Pharmaceutical and Photographic sectors.

In addition the company specializes in the production of precision die-cut self-adhesive components and laminates for a wide range of specialized industrial applications.

PPI products are exported to more than **45** countries worldwide and are approved by many of the leading multinational companies in the above-mentioned industries. The products meet most of the major international standards e.g. **EN, VDE, DIN, BSS, IEC, ASTM, UL, MIL, AFERA and CEN** and the company is registered under the **I.S. EN ISO 9001:2000** quality system.

PPI Adhesive Products Ltd. has two production facilities in Ireland and maintains its own PPI sales companies in France, Germany, Hong Kong, Korea, Malaysia, Singapore, Slovakia, South Africa, UAE (Dubai), UK and USA. The company is also represented worldwide by PPI authorized distributors.

The company, through its own independent Research & Development Center also based in Waterford, has excelled in developing custom made products tailored to meet specific and special requirements from customers apart from providing quality solutions to engineering and technical problems.



***PPI ADHESIVE PRODUCTS LTD.***  
***OVER 30 YEARS OF COMMITMENT***  
***TO QUALITY AND INNOVATION***

## BONDING AND SPLICING TAPES

### **PPI 6180 Kraft Paper Tape With Heat Activated Adhesive**

This tape is designed to be heat bonded to paper, presspan or cardboard sections that are immersed in the Oil filled Transformer. The advantage of this is that it heat seals at a lower temperature and at a faster rate than epoxy papers. The adhesive has excellent oil resistance. The tape achieves optimum oil resistance after curing for 16 hours at 100°C.

#### **Applications:**

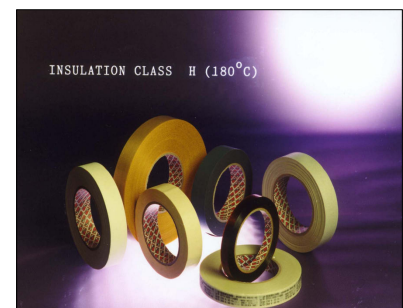
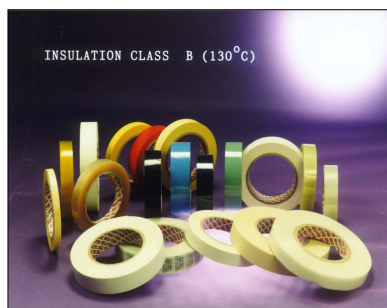
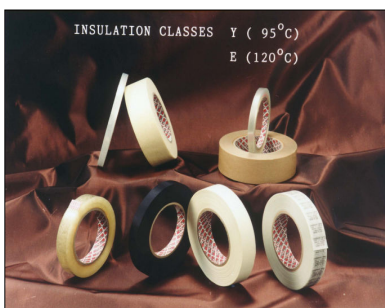
- **Spacer bonding** in Oil Filled Transformers to bind together the cardboard sections that are then finally wrapped into the internal area of the transformer.
- **Paper Layer Bonding** and **Splicing** in transformers to ensure that the layers of paper are wrapped and held in position.

### **RD 323B Double-Sided Transformer Oil Resistant Tape**

Based on a non-woven fleece coated on both sides with a Thermosetting Acrylic Adhesive. The tape possesses excellent resistance to most transformer oils when cured as recommended.

#### **Applications:**

- Used in the manufacture of Oil filled Transformers especially for overlap bonding/sealing of presspan to presspan to form the transformer core/tube.





## TRANSFORMER INSULATING TAPES

### **PPI 1016 Polyester Self Adhesive Tape with Thermosetting Oil Resistant Polyacrylate Adhesive**

A pressure sensitive acrylic adhesive tape based on Polyester film which has an excellent balance of tack and adhesion. Also this particular adhesive is **resistant against exposure to most oils** used in oil filled transformers. In addition the tape has excellent dielectric strength.

Base thickness: 0.025mm, 0.036mm and 0.050mm. Colour: Yellow or Transparent.

**UL Listed.**

Heat class: **B**

#### **Applications:**

- Most suited for insulation in oil filled transformers.
- Strengthening of edges in slot insulation and for slot insulation in general.
- Core, Layer and final insulation of coils and transformers.
- Sealing connection leads for final insulation.
- Phase and coil end insulation.

### **PPI 1017 Polyester Electrical Tape With Thermosetting Polyacrylate Adhesive On Both Sides.**

Double sided version of PPI 1016. Base thickness: 0.025mm. Total thickness: 0.075mm  
Colour: Yellow. Heat Class: B

#### **Applications:**

- Holding, strengthening and general insulation of stick wound transformer coils for relays and resistors.
- Specially used for splicing of presspan paper. This is used in insulation during the assembly of transformers.
- Sealing connection leads for final insulation.
- Phase and coil end insulation.

### **PPI RD-709 Shrinkable Polyester Based Oil Resistant Tape**

Shrinkable version of PPI 1016 based on a special grade of Polyester film, coated with Oil resistant Thermosetting Acrylic Adhesive. Has excellent oil resistance and dielectric strength when cured as recommended. Colour: Transparent



## **PPI 1710, PPI 1711A & SP-799S Filament Reinforced Oil Resistant Tapes**

**PPI 17100:** Polyester film laminated to Glasscloth with Synthetic Rubber Adhesive. Used as outer wrap for coils and in general insulation that require high impact and tensile strength in both directions. Heat class: **B**.

**PPI 1711A:** Polyester film laminated to Glasscloth with Thermosetting Acrylic Adhesive. It features a higher tack for Oil filled Transformers and is resistant against most transformer oils when cured as recommended.

**UL Listed.** File number. **E86214.** Heat class: **B**.

**PPI SP-799S:** High tack and instant adhesion version of PPI 1711A. SP-799S features a high tack adhesive in combination with a smooth, tight roll unwind strength. When applied, wrapped and cured (as recommended) SP-799S provides a permanent insulation layer that is resistant against most transformer oils. Heat Class: **B**.

### **Applications:**

- Core, Layer and Final insulation of coils and oil-filled transformers.
- General electrical insulation requiring high impact and tensile strength.

## **PPI 6510 Nomex® Polyamide Paper Tape with Rubber Adhesive**

Polyamide based electrical insulating tape with thermosetting synthetic Rubber Adhesive. Colour: Buff. Available in 0.05mm, 0.08mm, 0.13mm, 0.18mm, 0.25mm base thickness. Heat class: F. **UL Listed.**

## **PPI 6512 Nomex® Polyamide Paper Tape with Acrylic Adhesive**

Polyamide paper based insulating tape with single sided thermosetting Synthetic Resin adhesive.

Colour: Buff. Available in 0.05mm, 0.08mm, 0.13, 0.18mm, 0.25mm base thickness. Heat class H. **UL Listed.**

### **Applications:**

- Insulation for bar wound armature.
- Phase and Layer Insulation
- Coil Banding and Wrapping

**\*\*\* SPECIFIC DATA SHEETS AVAILABLE ON REQUEST \*\*\***

® Registered Trade Mark of Du Pont



## GLASS FABRIC TAPES

**PPI 84100:** Single sided Tear and Temperature-resistant tape based on glassfabric coated with **Thermosetting Acrylic Adhesive**. Excellent abrasion resistance and high mechanical strength with good impregnability. Used as wrapping tape at high temperatures.

Base Thickness: 0.12mm. Heat class: **F**. White in colour. **UL Listed**.

**PPI 84110:** Single sided Tear and Temperature resistant tape with **Thermosetting Rubber Adhesive**. Excellent abrasion resistance and high mechanical strength.

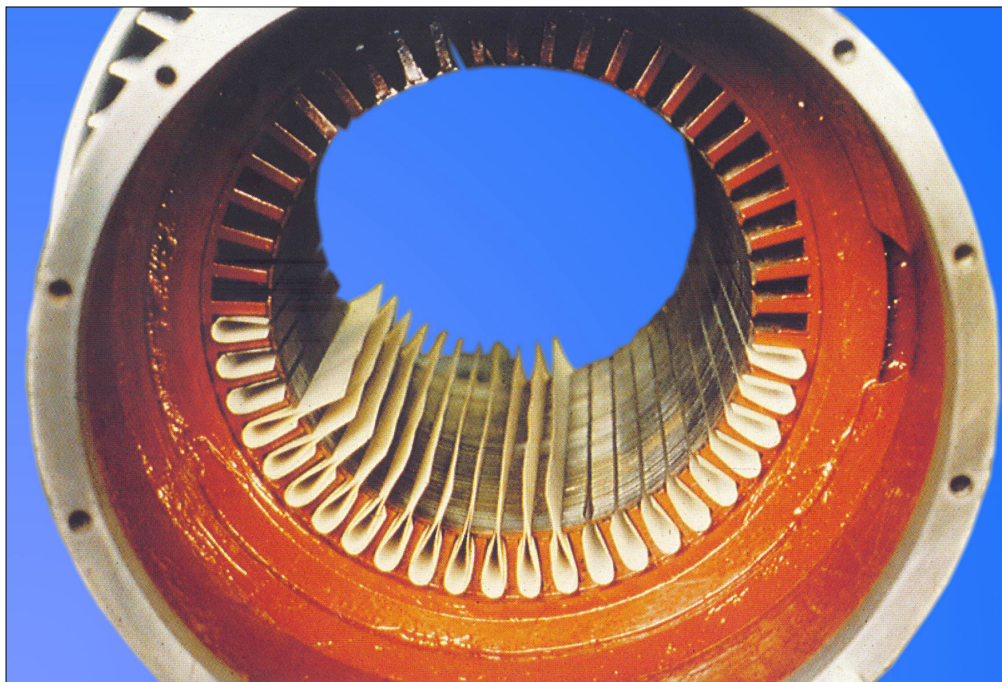
Base Thickness: 0.12mm. Heat Class: **B**. White in colour. **UL Listed**.

**PPI 84150:** Single sided High Temperature resistant tape with **Thermosetting Silicone Adhesive**.

Base Thickness: 0.12mm. Heat Class: **H**. White in colour. **UL Listed**.

### Applications:

- ❖ Inter phase insulation, Holding General Insulation of coils and transformers.
- ❖ Wrapping tape at high Temperatures.
- ❖ Heavy coil Banding, Slot Edge Reinforcement and Inter phase Insulation.
- ❖ Traction machine manufacturing for Motors and Transformers.



## SHIELDING TAPES

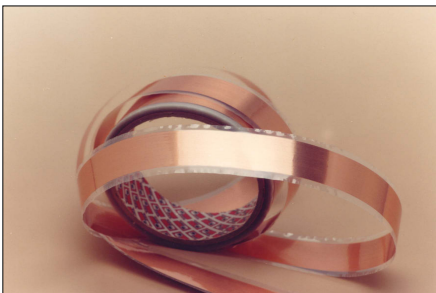
### **PPI 1091/1091-2 Single Sided Copper - Polyester Laminate Tape**

**PPI 1091 single sided** is a special laminate tape based on a combination of soft, annealed Copper foil with polyester film. This heat class B (up to 130°C/ 266°F) laminate tape can be supplied in a multitude of film and copper foil thicknesses and width constructions. This wide range of suitable substrates coupled with PPI's production expertise means that a very wide range of customer tailored laminate tapes can be readily produced with excellent quality.

PPI 1091 shields the entire inner width of the transformer spool whereas PPI 1091-2 offers even greater security because of its fringing on both edges which ensures complete insulation of the spool ends.

PPI 1091 and PPI 1091-2 are applied directly between the primary and secondary windings and the lead can be point soldered to the copper foil through the polyester film. The solder point should then be covered with a PPI self-adhesive insulating tape.

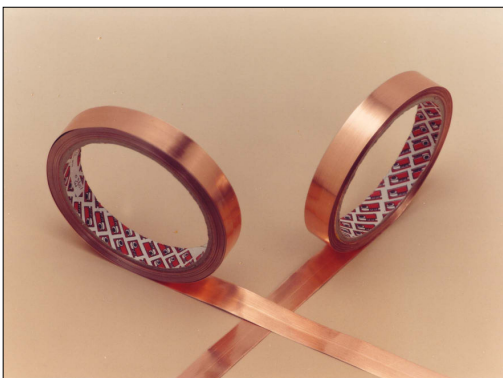
**UL Listed**



PPI 1091 SINGLE SIDED LAMINATE

### **PPI 1095 Copper – Polyester Laminate Tape**

**PPI 1095** is a special laminate tape based on a combination of soft, annealed copper foil with polyester film. The copper foil is completely wrapped with the polyester insulation with an average **overlap** of 2 mm. Where an earth contact is required, it is possible to solder through the polyester insulating layer.

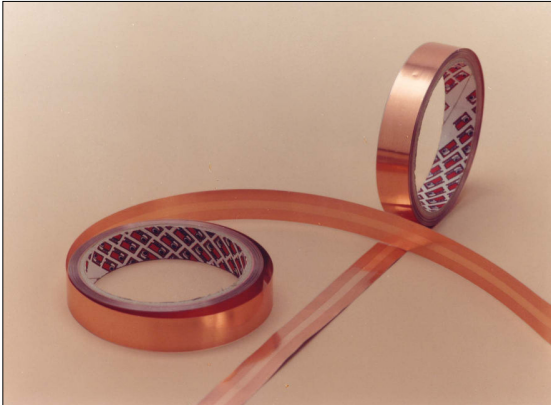


PPI 1095 LAMINATE WITH OVERLAP



## **PPI 1096 Copper – Polyester Laminate Tape**

**PPI 1096** is a special laminate tape based on a combination of soft, annealed copper foil with polyester film. The copper foil is partially wrapped with the polyester insulation leaving a minimum 1 mm **solder gap** on one side. This laminate tape can be supplied in a multitude of film and copper foil thicknesses and width constructions. **UL Listed**



*PPI 1096 LAMINATE WITH SOLDER GAP*

### **Applications:**

#### **Static Shielding:**

Acting as an electromagnetic/ electrostatic shield, the laminate is applied between the primary and secondary winding and also earthed. The shield thus prevents capacitive coupling between the primary and secondary winding.

#### **Direct Winding:**

Copper foil laminates are also used as replacements for copper wire in primary and secondary windings. Foil conductors have the advantage of having a greater surface area for a given cross sectional area, when compared to wire conductors. Since most of the current flowing through a conductor is on the surface (i.e. the so called "skin effect") and the limitations of the skin effect are most noticeable as frequencies increase, this has resulted in major use of foil laminate tapes in the production of high frequency transformers.



## METAL FOIL TAPES FOR EMI/RFI SHIELDING

### COPPER FOIL TAPES

**PPI 9110:** Single sided solderable Copper foil tape with Non Conductive Acrylic Adhesive. Available in 0.025mm, 0.035mm, 0.05mm, 0.1mm, 0.2mm foil thickness and also with siliconised Polyester film interliner. **UL Listed.**

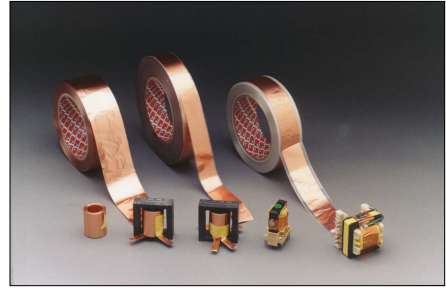
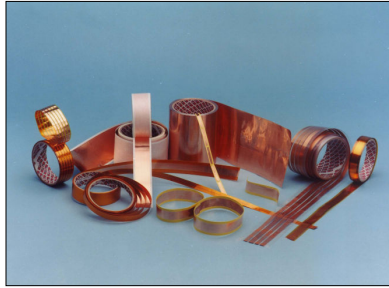
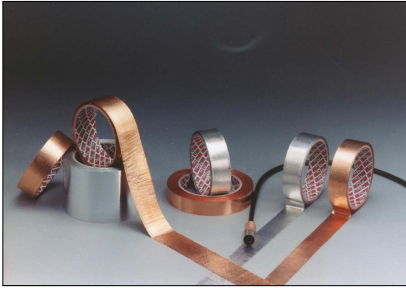
**PPI 91150:** Single sided Solderable Copper foil tape with Conductive Acrylic adhesive for EMI/RFI and static shielding. Completely moisture resistant. Electrical resistance through the adhesive is **0.003 ohms**. Available in different thicknesses ranging from 0.035mm to 0.20mm ... also supplied with interliner. **UL Listed.**

**PPI 91160:** Double sided Copper foil shielding tape with Conductive Thermosetting Acrylic adhesive. Used for Bonding of conductive surfaces and Electrical grounding.

**PPI 9120:** Embossed Soft Copper solderable electrical tape and conductive through the adhesive with lowest contact resistance of **0.001 ohm**. Meets flame retardancy requirements of **UL 510**.

**RD 481:** Soft Copper Adhesive tape with Conductive Thermosetting Acrylic adhesive with a high loading of conductive particles and its conductivity is stable even after aging.





## ALUMINIUM FOIL TAPES

**PPI 901:** Single-sided tape with non-conductive adhesive for EMI/RFI and static shielding.  
Base thickness: 0.030 mm.

**PPI 902:** Single-sided tape with non-conductive adhesive for EMI/RFI and static shielding.  
Base thickness: 0.040 mm. **UL Listed.**

**PPI 9015:** Soft Aluminium self adhesive tape for static shielding with Conductive Acrylic adhesive with an electrical resistance through the adhesive as low as 0.003 ohms. **UL Listed.**

**PPI 9016:** Double sided Aluminium foil Self Adhesive shielding tape with conductive pressure sensitive adhesive. Available with siliconised paper interliner.  
Base thickness: 0.040mm, 0.060mm and 0.100mm.

## TIN CLAD COPPER TAPES

**PPI 9510:** Tin-clad Copper foil based tape with Non Conductive Acrylic Adhesive. The tin layer provides improved solderability and excellent corrosion resistance.

PPI 95150: Tin-clad Copper foil based tape with electrically Conductive Acrylic adhesive thus ensuring secure shielding continuity. UL approved.



**Our group of companies also offers you:**

### **PPI Adhesive Products Ltd.**



PPI Self-adhesive tapes

- For the electrical and electronic industries
- For the audio/video industries (splicing tapes, cleaning tapes, etc.)
- For use in printed circuit board assembly
- For shielding and winding transformer applications
- For a wide range of industrial and speciality applications (floor covering manufacture, masking tapes, etc.)

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### **Technical Adhesive Products Ltd. (T.A.P.)**



Producer of precision die-cut adhesive components for electrical, electronic and general industrial applications.

T.A.P. can offer experienced technical know how on all aspects of product die cutting and design.

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### **Waterford Research & Development Ltd.**



Continuously develops self-adhesive products for our own group and for our interested customers. R&D develops new production techniques and market know-how on all aspects of adhesive products.

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### **Valentia Industries.**



Producer of single and double-sided siliconised polyester films in a range of thicknesses from 0.012mm to 0.190mm.

Available from 6mm to 1350mm wide.

Customised release levels a specialty.

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### **Important Notice To Purchasers**

All statements, technical data and recommendations contained herein are based on tests we believe to be reliable, but the accuracy or completeness is not guaranteed, and the following is made in lieu of all warranties, express or implied.

Sellers' and manufacturers' only obligation shall be to replace such quantity of the product proved to be defective. Neither seller nor manufacturer shall be liable for any injury, loss or damage, direct or consequential, arising out of the use or the inability to use the product. Before using, users shall determine the suitability of the product for their intended use, and users assume all risk and liability whatsoever in connection therewith.

No statement or recommendation not contained herein shall have any force or effect unless embodied in a written agreement signed by authorised officers of seller and manufacturer.



# PPI SALES COMPANIES WORLDWIDE



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