

# PTFE COATED CONVEYOR BELTS

PTFE (Teflon) is a material of remarkable properties: Nonstick, friction free self lubricating, non-wettable, nonflammable, non brittle, non-toxic, resistant to atmospheric conditions, resistant to fungus growth are some of its major properties. Its electrical properties are equally outstanding. All properties are maintained over a wide temperature range -200°C to +360°C





FIBRE GLASS too is a material of remarkable properties.

Fabrics made from continuous filament yarn exhibit superior properties in terms of high tensile strength, low elongation, high temperature resistance etc.

A combination of both produces a unique blend PTFE/GLASS CLOTH, retaining all the properties of both the constituents. It is highly suitable for manufacturing conveyor belts for high temperature resistance etc.

| PROPERTIES  |   |  |  |
|---|---|--|--|
| PHYSICAL / MECHANICAL PROPERTIES                  | ELECTRICAL  |  |  |
| Outstanding non-stick properties.                 | Unsurpassed dielectric properties, make the belts |  |  |
| High tensile & tear strength.                     | the only suitable choice for use in micro-wave    |  |  |
| Very low elongation at break                      | Ovens.  |  |  |
| Light - weight - requires very low power to drive | Unique electrical insulation properties           |  |  |
| CHEMICAL PROPERTIES                               | THERMAL PROPERTIES                                |  |  |
| Non-toxic - Safe for hygiene                      | Conserves heat energy during passage through      |  |  |
| Inert to almost all chemicals, paints & solvents  | oven or dryer. Does not loose energy through      |  |  |
| Non-wettable, lower moisture absorption           | radiation   |  |  |
| Immune to fumes & fungus                          | Operating temperature tem200°c to +360°c.         |  |  |

| THICKNESS AVAILABLE & THEIR TECHNICAL SPECIFICATIONS |      |                       |                               |      |  |
|--|------|-----------------------|-------------------------------|------|--|
| Thickness  |      | Weight                | BREAKING STRENGTH (KG/2.54CM) |      |  |
| Mil / Colour   | mm   | Gms/ mtr <sup>2</sup> | WARP                          | WEFT |  |
| 6 Mil (Brown)  | 0.15 | 250                   | 65                            | 65   |  |
| 10 Mil (Brown)                                       | 0.25 | 520                   | 80                            | 70   |  |
| 10 Mil (BLack)                                       | 0.25 | 520                   | 100                           | 90   |  |
| 14 Mil (Brown)                                       | 0.35 | 660                   | 125                           | 125  |  |
| 14 Mil (Black)                                       | 0.35 | 650                   | 150                           | 110  |  |
| 36 Mil Leno Mesh (Black)                             | 0.9  | 465                   | 100                           | 90   |  |
| 36 Mil Leno Mesh (Brown)                             | 0.9  | 550                   | 90                            | 150  |  |
| 22 Mil (Brown)                                       | 0.55 | 1000                  | 130                           | 120  |  |
| 28 Mil (Brown)                                       | 0.67 | 1200                  | 140                           | 130  |  |

For More Details, Please Contact:

### **PETRORAYS PRODUCTS CO**

### Think Polymers...... Think Petrorays

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# **TYPES OF JOINTS / SPLICES**

### **LENO SPLICE (POROUS)**

In this splice, two pieces of leno fabric are used for two ends folded together to form loops and a pin is placed to complete the splice. Leno fabric pieces are than stitched to the belts ends. This maintained good porosity in the spliced areas and can be put together without dismantling the machine parts



## **SMART LOOP (BULL NOSE) SPLICE**

In this splice, two pieces of Leno woven Kevlar fabric are used for two ends folded together to form loop and a pin is passed to complete the splice. Kevlar fabric is then stitched to both the ends of the belt. This maintains good porosity in spliced area, adds flexibility and strength to the joint and can be put together without dismantling the machine parts.



### **PEEK SPIRAL SPLICE**

In this splice, peek spiral is held in two pieces of Kevlar fabric and peek pin is placed to complete the joint. Two pieces of Kevlar fabric are then stitched to both ends of the belt, it has got all the advantages like smart loop.



### TWO PLY LAMINATED BELT

Two pieces of fabric casted together, TAN on one side & BLACK on other side, or both side TAN color, with splices staggered to attain optimum life. This type of belts are mainly used in fusing machine. Thickness of the belt is maintained throughout the conveying operation



### TRACKING DEVICES

The belts can be supplied with Guiding Pins or Dot fasteners on one or both edges, Standard is 12.7mm from edge, 38mm apart.

These studs are designed to run through a groove machined in the roller For belts more than 600mm width the standard method is to incorporate a web guiding mechanism to the machine system, which runs either electrically or mechanically. Tracking devices prolong belt life by preventing edge damage caused by incorrect tracking.



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Teflon® | Nylon | Derlin® | Poly-Urethane | Poly-Propylene | PEEK ® | UHMW-PE





# **TYPES OF JOINTS / SPLICES**

### **HEAT SEALED OVER LAP**

This is standard splice for most of the applications. Overlap splices are normally 90°. However 67.5° or 45° splices are slightly stronger and more flexible especially when running on small diameter rollers. The overlap joint width also depends on the roller diameter.



### **HEAT SEALED BUTT**

In this splice, ends are butted and joined by sealing a strip of same fabric under the butted ends. The splice is normally at 90° but also available at any other angle. The top surface is as smooth is as desired with just a hairline joint.



### **FINGER SPLICE**

This is a very intricate type of joint not mastered by many In this splice, ends are cut into small inter-locking fingers. The fingers of one end match perfectly in the cutout of the other and vice-versa. Then it is joined by sealing a strip of fabric on each surface



### **FABRIC PIN SPLICE**

This soft seal splice completely eliminates use of any metal in splicing Loops are formed by fabric at one end. Similar loops at the other end. It is then easy to match the loops in to the cutout. The joint is finally held by fibre pin. This type of belt is employed in microwave ovens and equipments where metal is not recommended and endless belt is not possible for installations.



### **ALIGATOR / METAL SPLICE**

Mechanical splices are used where an endless belt is not possible for installation. This splice is made with metal alligator lacing through which a pin is placed to complete the splice. This provides a belt which can be put together without dismantling the machine parts. Cover flaps can be used to provide continuous release surface on one or both ends of belt



#### **EDGE - REINFORCEMENT**

The belts are recommended to be supplied with 25m edge reinforcement of similar or any other material. Sealed or sewn edge safeguards & protects both the edges of the belts during operation. Thus the edge of the belt is prevented from fraying & improving longevity.



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| TYPICAL APPLICATIONS |   |  |  |
|----------------------|---|--|--|
| PROCESS              | TYPICAL APPLICATIONS  |  |  |
| Conveying            | Packaging, Screen Printing  |  |  |
|                      |   |  |  |
| Casting              | Polymers processing, Manufacturing floor coverings, carpet tiles & Rubber extrusions    |  |  |
|                      |   |  |  |
| Releasing            | Food processing, Screen printing, Rubber Extrusion processing, Composites manufacturing |  |  |
|                      |   |  |  |
| Laminating           | Textiles fuse pressing, wood processing, composites manufacturing                       |  |  |
| Drying               | Screen printing, Packaging, Food processing   |  |  |

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