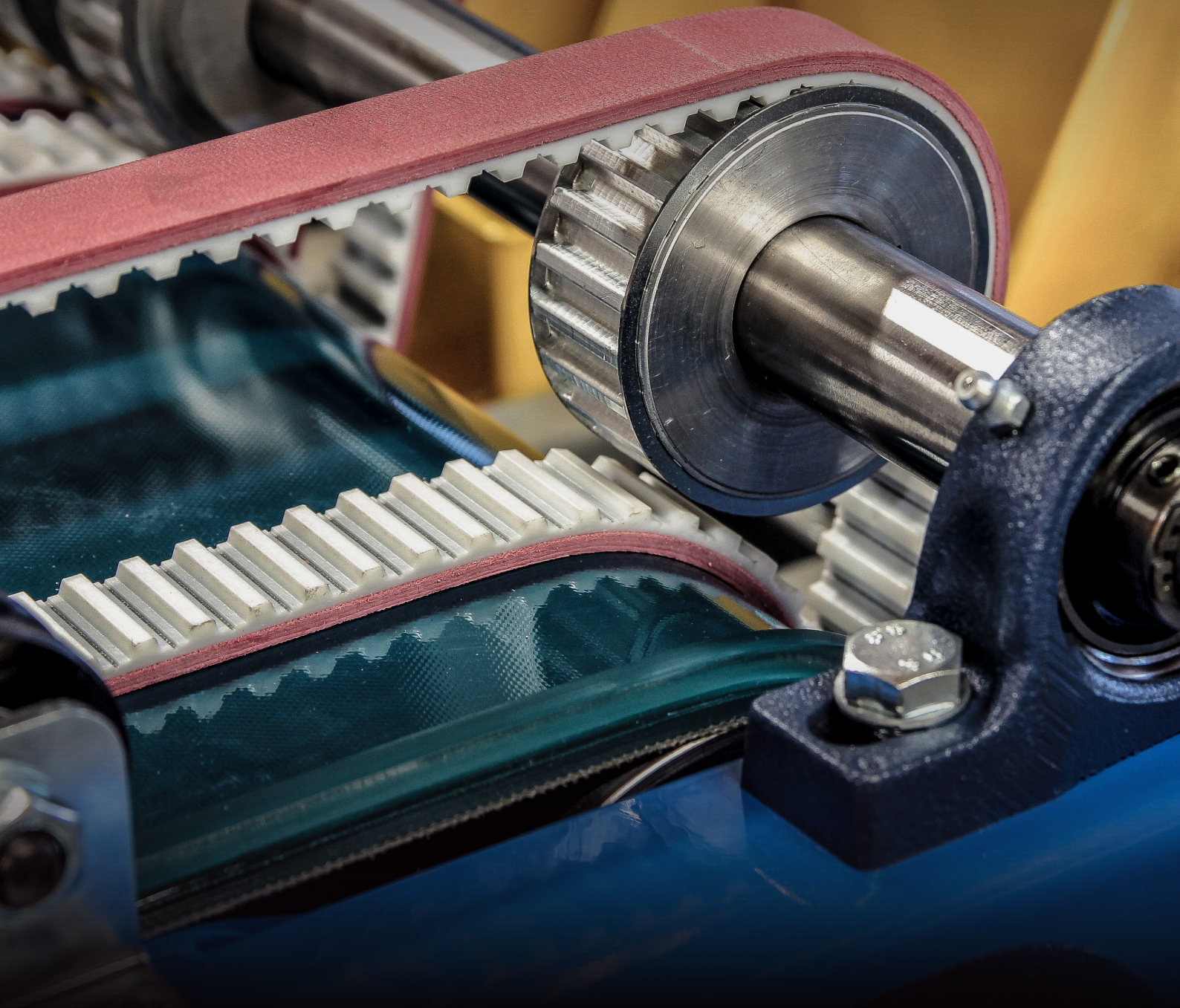




# TPU BELTS

THERMOPLASTIC POLYURETHANE



# TIMING BELT BACKINGS







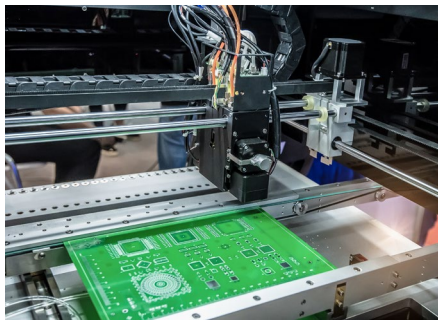
# INFINITE BACKING AND PROCESSING POSSIBILITIES



Gates offers infinite design possibilities for endless timing belts from over 30 different backing material options. We can manufacture the customized belt for your application – whether the coefficient of friction, chemical resistance, or static conductivity specifications need to be tailored for your need, we offer additional surface finishing for any unique surface characteristics for your application. Ground edges or surfaces, tight tolerances, punching or machining holes and slots, CNC machining of 3-dimensional contours – Gates provides customized solutions for all applications.

## FABRICATION POSSIBILITIES

All industry standard widths and lengths are available – while this brochure provides an overview of the most common backings. Specialized backings, thicknesses, and dimensions are available upon request.



## OVERVIEW BACKINGS

|                       |   |
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| Polyurethane Backings | 3 |
| Rubber Backings       | 4 |
| Foam Backings         | 5 |
| PVC Backings          | 6 |
| Special Backings      | 7 |

# POLYURETHANE BACKINGS

Polyurethane is the most abrasion-proof, resilient and durable backing – with a variety of thickness & hardness selections available, we offer options to suit your application. Polyurethane backings are applied by welding process onto the belt to ensure a strong bond to the base belt for enhanced durability.

## APPLICATIONS

- Stone processing industry
- Wood processing industry
- Glass processing industry
- Card sheet processing industry
- Cardboard transport
- Packaging industry
- Feeding and pulling applications
- Ascending conveyor

## ATTRIBUTES

- High friction
- Abrasion resistance
- Chemical resistance
- Oil/fat resistance
- Available with FDA/EU food approval

| MATERIAL                       | COLOR | HARDNESS                 | MATERIAL THICKNESS | MINIMUM Ø/Ø FACTOR | NAME               | BACKING |
|--------------------------------|-------|--------------------------|--------------------|--------------------|--------------------|---------|
| <b>PU</b><br>(FDA/EU Approved) | Clear | 85 Shore A               | 2mm/3mm*           | x 30               | Polyurethane Clear |         |
| <b>PU</b>                      | White | 92 Shore A               | 2mm/3mm*           | x 30               | Polyurethane White |         |
| <b>PU</b>                      | Clear | 85 Shore A               | 5mm                | Ø 120mm            | Glass Backing      |         |
| <b>PU</b>                      | Clear | 85 Shore A               | 3mm                | Ø 90mm             | Ridge Top          |         |
| <b>PU</b>                      | Clear | 85 Shore A               | 1mm/2mm            | x 30               | HV Foil            |         |
| <b>PU</b>                      | Clear | 85 Shore A<br>95 Shore A | 2.7mm              | Ø 75mm             | Fine Glass Backing |         |

\* Several layers can be welded together or ground for other thicknesses.

# RUBBER BACKINGS



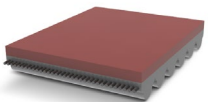
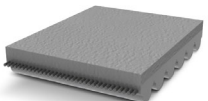
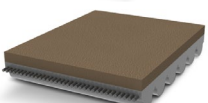
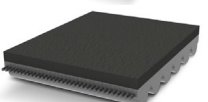
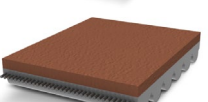
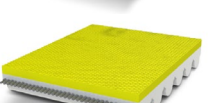
Rubber backings deliver a high coefficient of friction, temperature resistance, and are commonly used within wood processing, glass processing, and ceramics industries. Rubber backings are applied by adhesive bonding to suit the material characteristics.

## APPLICATIONS

- Wood processing industry
- Metal processing industry
- Paper processing industry
- Textile sheet processing industry
- Packaging industry
- Feeding and pulling applications
- Pharmaceutical/cosmetic industry

## ATTRIBUTES

- High friction
- Abrasion resistance
- High/Low temperature resistance
- Atmospheric resistance
- Flexibility at low temperatures
- Available with FDA Approval

| MATERIAL                         | COLOR  | HARDNESS   | MATERIAL THICKNESS | MINIMUM Ø/Ø FACTOR | NAME               | BACKING                                                                               |
|----------------------------------|--------|------------|--------------------|--------------------|--------------------|---------------------------------------------------------------------------------------|
| Natural Rubber                   | Red    | 38 Shore A | 1.6mm up to 10mm*  | x 20               | Linatex®           |  |
| Natural Rubber<br>(FDA Approved) | White  | 38 Shore A | 3mm<br>5mm<br>8mm* | x 20               | Linaplus FG™       |  |
| Natural Rubber                   | Beige  | 40 Shore A | 3mm<br>6mm         | x 20               | Tan Natural Rubber |  |
| Natural Rubber                   | Black  | 65 Shore A | 3mm<br>5mm<br>6mm* | x 25               | Nitrile Rubber     |  |
| Natural Rubber                   | Orange | 55 Shore A | 3mm<br>8mm*        | x 20               | Linatrile®         |  |
| Natural Rubber                   | Yellow | 38 Shore A | 2mm<br>4mm*        | x 20               | RP400              |  |

\* Several layers can be welded together or ground for other thicknesses.



# FOAM BACKINGS

Foam backings provide high flexibility and are commonly used within glass, paper, textile, and wood processing industries. Foam backings are applied by adhesive bonding.

## APPLICATIONS

- Paper processing industry
- Foil processing industry
- Wood processing industry
- Glass processing industry
- Labelling machines
- Feeding and pulling applications
- Vacuum applications
- Cleaning/bottling applications

## ATTRIBUTES

- Excellent compressibility
- Abrasion resistance
- High coefficient of friction
- Chemical resistance
- Oil/fat resistance

| MATERIAL                                          | COLOR           | HARDNESS/<br>DENSITY | MATERIAL<br>THICKNESS | MINIMUM Ø/Ø<br>FACTOR | NAME            | BACKING |
|---------------------------------------------------|-----------------|----------------------|-----------------------|-----------------------|-----------------|---------|
| Polyurethane                                      | Yellow          | 55 Shore A           | 2mm up to 8mm*        | x 30                  | HD® Yellow      |         |
| Foamed Polyurethane                               | Yellow          | 160 kg/m³            | 12mm*                 | x 15                  | Sylomer® Yellow |         |
| Foamed Polyurethane                               | Blue            | 220 kg/m³            | 12mm<br>25mm*         | x 15                  | Sylomer® Blue   |         |
| Foamed Polyurethane                               | Green           | 300 kg/m³            | 6mm<br>12mm<br>25mm*  | x 15                  | Sylomer® Green  |         |
| Foamed Polyurethane                               | Brown           | 400 kg/m³            | 6mm<br>12mm<br>25mm*  | x 15                  | Sylomer® Brown  |         |
| Foamed Polyurethane                               | Red             | 500 kg/m³            | 6mm<br>12mm<br>25mm*  | x 15                  | Sylomer® Red    |         |
| Cellular Rubber                                   | Black           | 150-200 kg/m³        | 3mm<br>5mm<br>10mm*   | x 15                  | Neoprene        |         |
| Natural Foamed Polyurethane<br>(High Flexibility) | Beige or Yellow | 400 kg/m³            | 3mm up to 8mm*        | x 15                  | Natural         |         |

\* Several layers can be welded together or ground for other thicknesses.

# PVC BACKINGS



Polyvinylchlorid (PVC) backings are commonly used in glass and wood processing, ceramic and packaging industries. Due to various FDA/EU approvals, PVC backings are allowed within food processing or industry applications requiring high hygiene. PVC backings are applied by adhesive bonding.

## APPLICATIONS

- Wood processing industry
- Glass processing industry
- Stone processing industry
- Paper processing industry
- Labelling industry
- Packaging industry

## ATTRIBUTES

- Excellent compressibility
- Abrasion resistance
- High coefficient of friction
- Chemical resistance
- Oil/fat resistance
- Available with FDA/EU food approval

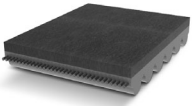
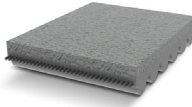
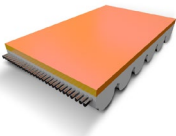
| MATERIAL                 | COLOR | HARDNESS/<br>DENSITY | MATERIAL<br>THICKNESS | MINIMUM Ø/Ø<br>FACTOR | NAME                       | BACKING |
|--------------------------|-------|----------------------|-----------------------|-----------------------|----------------------------|---------|
| PVC                      | Green | 46 Shore A           | 4.8mm                 | 90mm                  | Rough Top                  |         |
| PVC<br>(FDA/EU Approved) | White | 65 Shore A           | 1.2mm*                | 25mm                  | Small Pebbles<br>Structure |         |
| PVC<br>(FDA/EU Approved) | White | 35 Shore A           | 6mm                   | 40mm                  | Large Pebbles<br>Structure |         |
| PVC<br>(FDA Approved)    | White | 70 Shore A           | 4.5mm                 | 90mm                  | PVC<br>Herringbone         |         |
| PVC<br>(FDA/EU Approved) | White | 40 Shore A           | 2.5mm                 | 90mm                  | PVC Saw Tooth              |         |
| PVC<br>(FDA/EU Approved) | White | 65 Shore A           | 0.7mm                 | 50mm                  | PVC Waffle<br>Structure    |         |
| PVC                      | Blue  | 60 Shore A           | 1mm<br>2mm            | 40mm                  | PVC Blue                   |         |
| PVC<br>(FDA/EU Approved) | White | 65 Shore A           | 2mm                   | 40mm                  | PVC White                  |         |

\* Several layers can be welded together or ground for other thicknesses.

# SPECIAL BACKINGS + FABRIC

## SPECIAL BACKINGS

Gates offers additional special backings such as Novo Fleece, Chrome Leather, and Taracx. All special backings are applied by adhesive bonding.

| MATERIAL          | COLOR      | HARDNESS       | MATERIAL THICKNESS | MINIMUM Ø | ATTRIBUTES                                                            | NAME                                                                                                                | NAME           | BACKING                                                                               |
|-------------------|------------|----------------|--------------------|-----------|-----------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|----------------|---------------------------------------------------------------------------------------|
| Polyester         | Anthracite | Not Measurable | 1.2mm              | 25mm      | Suited for High Temp Ranges<br>Oil/fat Resistance                     | General Conveying Applications<br>Glass Processing                                                                  | Novo Fleece    |    |
| Leather           | Grey       | 65 Shore A     | 2mm<br>3mm         | 90mm      | High Coefficient of Friction<br>Abrasion Resistance<br>Oil Resistance | General Conveying Applications                                                                                      | Chrome Leather |   |
| PU-based Compound | Orange     | 60 Shore A     | 2mm<br>3mm*        | 30mm      | High Coefficient of Friction<br>Abrasion Resistance                   | Wood, Paper, and Textile Processing<br>Feeding and Pulling Applications<br>Metal Stamping Applications<br>Packaging | Taracx         |  |

\* Several layers can be welded together or ground for other thicknesses.

## FABRIC

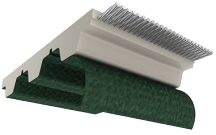
Polyamide fabric reduces the coefficient of friction to provide smooth & enhanced operating characteristics.

## APPLICATIONS

- Accumulating conveyor
- Sliding applications

## ATTRIBUTES

- Low coefficient of friction
- High wear resistance
- Good sliding attributes
- Low-noise operation
- Oil/fat resistance

| MATERIAL                       | COLOR | CODE     | BACKING                                                                               |
|--------------------------------|-------|----------|---------------------------------------------------------------------------------------|
| Polyester Fabric on Tooth Side | Green | NT [PAZ] |  |





# TPU BELTS

THERMOPLASTIC POLYURETHANE

## BACKING MATERIALS TO FIT YOUR APPLICATION NEEDS

Gates is a leading manufacturer of innovative thermoplastic polyurethane power transmission and conveyor belts. We are a trusted partner delivering superior quality and reliability with optimal lead times worldwide.



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