YOU CAN RELY ON HIGH-PERFORMANCE LOGISTICS & SERVICES

With a main logistics platform in Lille (France), offices, and storage facilities in Poland, U.S.A. and Australia we can provide our clients with:

- A wide range of belt specifications in stock
- Cutting service to customer belt width and length
- Hole punching service for elevator belts
- A one-stop shop for conveyor belt-related products such as splice kits, glues, mechanical fasteners, idlers, loading stations, belt cleaners, vulcanizing presses...
- Buckets for elevator belts together with related fastening and installation equipment (e.g., bolts, clamps).
- Short delivery times

DEPREUX is part of the COBRA GROUP.
For further information on DEPREUX or the COBRA GROUP ACTIVITIES please contact your closest COBRA subsidiary or your head office.

8 Boswell Drive - Bristol TN 37620
www.cobraamerica.com
Toll Free: (866) 766-9750

MSHA Approved
UNDERGROUND CONVEYOR BELT

FABRIC CARCASE
- Firewall / Firewall II
  Multiply with rubber covers
- Firemaster - PVG
  Solid-woven with rubber covers
- Fireshield
  Straight-warp with rubber covers

STEEL CORD
- Firemaster - ST
  Steel cord with rubber covers
MSHA Approved Conveyor Belt for Underground Applications
complying with European standard (EN 1497)

Preamble
This brochure describes the heavy-duty DEPREUX belts to be used underground, that are fire-resistant and fire-resistant and that comply with the European standard (EN 1497).

This brochure describes the heavy-duty DEPREUX conveyor belts for underground applications. They are fire-resistant and comply with MSHA Part 14 standards.

Product Range: 150 PIW to 3200 PIW with a maximum width of 72”

Standard conveyor belting is a highly flammable product, as it is composed of chemical products derived from petrochemicals. Special agents are added in the dipping solution of the fabrics, the impregnation paste, and in the different rubber components that make up a safety belt. This process increases the fire resistance and decreases the friction factor of the metal elements. These agents act in synergy at different high temperature levels. These added fire resistant agents will generally degrade the mechanical properties of the covers.

The DEPREUX brand has more than 100 years of experience in designing safety belts that comply with the various world safety standards. While complying with the standards, DEPREUX has optimized the mechanical parameters for the different conveying applications which will ensure the belt longevity your company needs.

Applications
The conveyor belts described in this brochure are to be used for conveying material underground mines or tunneling applications. A risk analysis should be done by the user in order to assess the extent of the following hazards:

i. Limited means of escape
ii. Potentially flammable environment
iii. Presence of flammable dust or transport of flammable material
iv. Presence of additional duel combustion elements such as wood, plastics, etc.

Range
DEPREUX offers different types of constructions and different types of covers as indicated herebelow:

<table>
<thead>
<tr>
<th>FIREWALL™ Chloroprene Rubber</th>
<th>OPERATING TEMPERATURE</th>
<th>ABRASIVE RESISTANCE (mm3)</th>
<th>TENSILE STRENGTH (Mpa)</th>
<th>ELONGATION AT BREAK (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0° to 50°</td>
<td>150 to 300</td>
<td>&lt;120</td>
<td>&gt;18</td>
<td>&gt;400</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FIREWALL II™ Nitrile Rubber / NBR</th>
<th>OPERATING TEMPERATURE</th>
<th>ABRASIVE RESISTANCE (mm3)</th>
<th>TENSILE STRENGTH (Mpa)</th>
<th>ELONGATION AT BREAK (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0° to 50°</td>
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<td>&lt;180</td>
<td>&gt;14</td>
<td>&gt;380</td>
</tr>
</tbody>
</table>

Firewall™ - Firewall II™
Plied Belts for Underground Use

Application
Both Firewall and Firewall II are belts used for the transportation of bulk or other material in various underground mining and quarrying applications, or any application in which MSHA Part 14 fire resistance is a requirement.

Tensile strength
150 PIW to 1400 PIW using 2 to 5 plies.

Width and Length
Standard 60” maximum. DEPREUX can supply wider belts if required. The width tolerance is ±1%. Belts are supplied in standard 656 ft. rolls, but can be offered in as much as 1300 ft. rolls if required.

Please contact us for more information.

Belt Structure
The Fireshield™ and Firewall II™ belt carcase is made up of layered fabrics, from 2-5 plies. Each ply is separated by a rubber interlayer which enables the belt to absorb shocks.

Main mechanical properties:
- Belt stretch
- Adhesion

Belt joining
DEPREUX belts can be joined by any of the following methods:
- The "hot" vulcanized method, using DEPREUX or other jointing materials and a field press,
- The "cold" method: using special glues,
- With mechanical fasteners. In this case, DEPREUX can supply the required belt with fasteners ready for use at each end.

PRODUCT TYPE OF COVER ABRASIVE RESISTANCE (mm3) TENSILE STRENGTH (Mpa) ELONGATION AT BREAK (%)

| FIREWALL™ Chloroprene Rubber | <120 | >18 | >400 |
| FIREWALL II™ Nitrile Rubber / NBR | <180 | >14 | >380 |

“Plied Belts for Underground Use”
**Firemaster™ -PVG**

**Solid Woven Carcase, PVC/Rubber blended covers for underground use.**

**Application**

- DEPREUX Firemaster-PVG belts are used when a long service life is sought. It is for use in applications which are characterized by severe operating conditions such as high speed systems, presence of large material, risk of impact damage, longitudinal tearing, or edge wear.

**Advantages for the overall system**

- A major advantage over ply belts is that Firemaster-PVG belts need smaller drum diameters.
- Firemaster-PVG belts need less power to function.

**Belt joining**

- DEPREUX belts can be joined by any of the following methods:
  - the «hot» vulcanized Finger splicing method, using DEPREUX or other jointing materials and a field press,
  - the «cold» Finger splicing method using special glues, - with mechanical fasteners. In this case, DEPREUX can supply the required length with fasteners ready for use at each end. Please note that a small increase in belt length is required to make the splice. Also, in the case of «hot»-jointing, the splicing materials used have an effective shelf-life of less than 6 months and should not be stored at high temperatures.

**Main mechanical properties:**

- **Belt stretch**
  - at 10% of nominal belt tensile strength: 1% maximum Elastic stretch: 0.5% to 0.7% for standard carcase Permanent stretching of the belt, and of polyamide (P) yarn in the weft direction for good belt flexibility.
- **Fasteners**
  - Excellent fastener holding capacity - from 50% to 90% - which makes this joining technique increasingly popular.
- **Mechanical resistance**
  - The «solid-woven» textile is made of polyester (E) yarns in the warp direction to minimize the stretching of the belt, and of polyamide (P) yarn in the warp direction for good belt flexibility. At 10% of nominal belt tensile strength: 1% maximum Elastic stretch: 0.5% to 0.7% for standard carcase Permanent stretching of the belt, and of polyamide (P) yarn in the weft direction for good belt flexibility.

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**Tensile strength**

- This belt ranges from a standard of 150 PIW to 2200 PIW.

**Belt structure**

- The Depreux belts are made of a textile «solid-woven» carcase, impregnated with a special PVC. The carcase is then protected by a proprietary DEPREUX cover providing the user with special characteristics insuring long life and superior performance.

**Thicknesses and weights for different specifications, please contact us.**

**Application**

- DEPREUX Firemaster-PVG belts are used when a long service life is sought. It is for use in applications which are characterized by severe operating conditions such as high speed systems, presence of large material, risk of impact damage, longitudinal tearing, or edge wear.

**Advantages for the overall system**

- A major advantage over ply belts is that Firemaster-PVG belts need smaller drum diameters.
- Firemaster-PVG belts need less power to function.

**Belt joining**

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**Firemaster™ – ST**

**MSHA Approved Steel Cord Belt**

**Application**

Steel cord belts are preferred to textile plied or solid woven conveyor belts in the following situations:
- when the required tensile strength is high and the conveyor is narrow. The superior toughening capabilities of steel cord belt are suited to conveyors typically found in long overland conveyor systems, such as those between a mine and a power plant or steel works or tunnelling projects.
- when a very low elongation of the belt is required.
- when the life expectancy for the belt is the prime objective.
- when loading and transport conditions are compatible.

**Product description**

A Firemaster-ST conveyor belt is composed of:
- Steel Cables placed at a constant pitch across the width of the belt.
- A special rubber bonding layer to the cables and to the rubber covers.
- Top and bottom rubber covers.

The manufacture of a steel-cord belt requires a heavy-duty steel cord production line together with an experienced, knowledgeable production team. DEPREUX Firemaster-ST belts are the result of 80 years experience.

The belt ranges from a standard ST630 N/mm to a ST5400 N/mm.

**Steel cable construction**

Firemaster ST utilizes the open type steel cord construction that allows the rubber to penetrate fully into the cable, which is a guarantee of the longevity for the belt. This technique optimises the adhesion and minimises corrosion to the steel cords in the case of damage to the belt.

Open steel cables also offer characteristics that enhance the impact absorption capability of the belt and makes for easy transition between the troughed position of the belt to flat and vice versa.

The steel cables are also protected against corrosion with special anticorrosion.

**Different bonding layer and cover combinations**

The bonding layer is a key part of steel-cord belt. It has to be formulated to have:
- Good penetration in the cable
- Good adhesion with the cables
- Good adhesion with the cable
- Good adhesion with the covers, even after ageing
- Good adhesion with the covers, even after the dynamic stresses of the conveyor operation

<table>
<thead>
<tr>
<th>Type</th>
<th>Unité ST</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>600 +10/-5</td>
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<tr>
<td>Tensile</td>
<td>N/mm</td>
</tr>
<tr>
<td>Max. cord diameter</td>
<td>mm</td>
</tr>
<tr>
<td>Min. cord tensile strength</td>
<td>kN</td>
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<tr>
<td>Space between cords (s)</td>
<td>mm</td>
</tr>
<tr>
<td>Min. thickness cover</td>
<td>mm</td>
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<tr>
<td>Belt Width</td>
<td>mm</td>
</tr>
</tbody>
</table>

**Recommended Pulley Diameters**

**Firewall / Firewall II**

<table>
<thead>
<tr>
<th>Tensile Strength PIW</th>
<th>220</th>
<th>330</th>
<th>440</th>
<th>400</th>
<th>600</th>
<th>800</th>
<th>1000</th>
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<tbody>
<tr>
<td>Number of plies</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Pulley High Tension</td>
<td>10”</td>
<td>16”</td>
<td>25”</td>
<td>16”</td>
<td>25”</td>
<td>32”</td>
<td>50”</td>
</tr>
<tr>
<td>Pulley Low Tension</td>
<td>8”</td>
<td>12”</td>
<td>20”</td>
<td>12”</td>
<td>30”</td>
<td>25”</td>
<td>40”</td>
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**Firewall**

<table>
<thead>
<tr>
<th>Tensile Strength PIW</th>
<th>400</th>
<th>500</th>
<th>600</th>
<th>700</th>
<th>800</th>
<th>1000</th>
<th>1200</th>
<th>1400</th>
<th>1600</th>
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</thead>
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<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Pulley High Tension</td>
<td>12”</td>
<td>20”</td>
<td>25”</td>
<td>32”</td>
<td>32”</td>
<td>40”</td>
<td>40”</td>
<td>50”</td>
<td>50”</td>
</tr>
<tr>
<td>Pulley Low Tension</td>
<td>10”</td>
<td>16”</td>
<td>20”</td>
<td>25”</td>
<td>32”</td>
<td>32”</td>
<td>32”</td>
<td>40”</td>
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</tbody>
</table>

**Firemaster – PVG**

<table>
<thead>
<tr>
<th>Tensile Strength PIW</th>
<th>400</th>
<th>500</th>
<th>600</th>
<th>700</th>
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<th>1000</th>
<th>1200</th>
<th>1400</th>
<th>1600</th>
</tr>
</thead>
<tbody>
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<td>Number of plies</td>
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<td>1</td>
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<tr>
<td>Pulley High Tension</td>
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<td>25”</td>
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<td>40”</td>
<td>40”</td>
<td>50”</td>
<td>50”</td>
</tr>
<tr>
<td>Pulley Low Tension</td>
<td>16”</td>
<td>16”</td>
<td>20”</td>
<td>25”</td>
<td>32”</td>
<td>32”</td>
<td>32”</td>
<td>40”</td>
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</tbody>
</table>

**Firemaster – Steel Cord**

<table>
<thead>
<tr>
<th>Tensile Strength N/mm</th>
<th>ST630</th>
<th>ST800</th>
<th>ST1000</th>
<th>ST1250</th>
<th>ST1500</th>
<th>ST2000</th>
<th>ST2500</th>
<th>ST3250</th>
<th>ST3750</th>
<th>ST4000</th>
<th>ST5000</th>
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<tr>
<td>High tension pulleys Wrap:</td>
<td>Head, Drive, Tripper</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low tension pulleys Wrap:</td>
<td>Tail, Take-up, Take-up bend</td>
<td></td>
<td></td>
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<td></td>
<td></td>
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*High tension pulleys Wrap: Head, Drive, Tripper
*Low tension pulleys Wrap: Tail, Take-up, Take-up bend