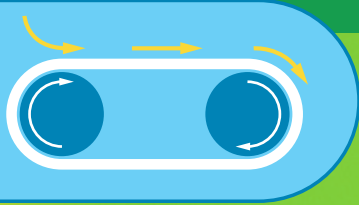
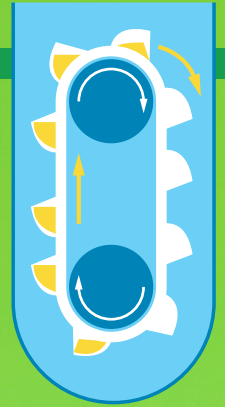


# TRANSCO



## CONVEYOR

## ELEVATOR BELTS and SKIRT RUBBER



# Agriculture and Food Processing Industrie Rubber or PVC

### PRODUCT RANGE

WHITE RUBBER AND PVC  
Food contact

- **FDA-BLANC**
- **FDA MONOPLAST**
- **FDA-MULTIPLAST**

BLACK RUBBER  
Food contact

- **FDA-BLAK**

BLACK RUBBER  
Handling agriculture products

- **BLAK**

BLACK RUBBER  
Non grease/fat Handling agriculture products

- **DEPREUX Range** anti abrasive and flame resistant

WHITE RUBBER

- **BLANC general use**

Chevy Belit

- **DELTAPROFIL** anti abrasive
- **CHEVY** anti-fat
- **CHEVY FDA GREEN** food contact, anti-fat, green

Round Balers

- **ROUND-BALER**

Skirt Rubber

- **WHITE** food contact
- **BLACK** other applications



# INTRODUCTION

**TRANSCO is the actual European leader in the manufacture of conveyor and elevator belts uniquely designed to handle bulk products in both agriculture and food processing industries.**

TRANSCO has the right product to meet your dedicated needs according to the following properties :

**Direct contact with Food :** When the conveyed products are meant for human consumption it is compulsory to ensure :

- That the particules potentially released by the slow abrasion of the belt over time, that could get mixed with the conveyed food products, are not harmful to human health.
- A total stability and innocuity of the conveyor and elevator belt compounds to prevent any contamination

of the conveyed products. Risk of such contamination is particularly acute in moist and greasy environments.

**Belt colour :** In food processing industries a white belt's benefit is that it does not release visible particles in the conveyed product, thus being an efficient non-marketing, non-staining alternative.

**Safety Fire and Explosion Risks :** An ATEX certified belt in compliance with international standards I2882 about flammability safety Iso 284 for antistatic and ISO 340 for flame/fire resistance is essential in high risk environments such as cereal silos, sugar, refineries, etc... (detail p5).

**Conveying Greasy and Oily products :** While a standard belt will most likely swell and deform when conveying greasy/oily products a high content of nitrile will enable better control of such phenomena.

## FOOD SAFETY

### AGRICULTURAL PRODUCTS

It is accepted that agricultural raw materials (sugar beet, sugarcane, potato, ..) are not considered «food», and that these products can be conveyed by belt or elevator. However, this principle seems sometimes questioned under the precautionary principle.

This is obviously not the case of the crude product washed and undergoing the first treatment.

### FOOD INDUSTRIES

In different food processing industry, the requirement of food security is increasingly requested under precautionary measures for human health. This can go as far as to require in food contact a processing of food for cattle.

In the case of transport of fat but not wet solids (such as sugar, for example) or in the case of transport of fat migration testing of the coating in an aqueous phase or oil in question are required, in this addition to the requirement of food grade components used in the coating formulation.

TRANSCO's food belt meet the American standard FDA CFR 177.2600 and EU Directive 1935/2004, this for rubber and plastics. We meet too for migration in the aqueous phase.

Olive belt meet the requirements of migration in olive oil.

## FIRE AND EXPLOSION SAFETY

### INTERNATIONALS STANDARDS, EUROPEAN, ATEX DIRECTIVES

Conveyor and elevator belts are made of a majority of natural or synthetic rubber components that usually derive from hydrocarbon compounds.

Therefore, a non protected standard conveyor or elevator belt would be highly flammable.

For the safety of installations, it is compulsory to avoid the accumulation of static electricity thus preventing sparks which could act as a source of ignition for an explosion. Belts should facilitate this discharge of static electricity and minimise fire propagation.

European standards specify the safety parameters of conveyor belts :

- **EN I2882 :** Electrical and flammability safety requirements :
  - Class 2A : Antistatic performance ISO 284 and fire resistance with cover ISO 340
  - Class 2B : Antistatic performance ISO 284 and fire resistance with and without cover ISO 340

- **Antistatic performance ISO 284 :** Measure the electrical conductivity of the belt between circular electrodes. The resistance must be <300 Megaohm.

- **Fire resistance ISO 340 :** The belt is tested with and without its covers. The test consists in holding a series of 6 samples with covers and 6 without covers over a naked gas flame. The samples must self extinguish within 15s. The total extinguishing time for 6 samples cannot exceed 45s.

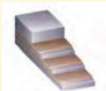

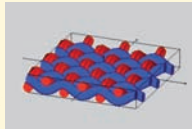


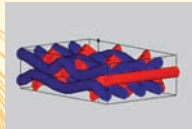
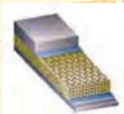

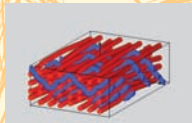
**Furthermore, the European Union has issued the ATEX directives**, defining 3 dust areas depending on the explosion risk, **Areas 20** : Permanent explosive atmosphere, **Areas 21** : Occasionally explosive atmosphere, **Areas 22** : Accidental explosive atmosphere (dysfunction).

**Belt TRANSCO class 2B** can be used in **areas 20, 21 and 22** : Belt for which a notified body carries out an annual audit of the manufacturing process (ATEX certification).

**Belt TRANSCO class 2A** can be used in **areas 21 and 22** : In this case, it is a autocertification (manufacturing file with a notified body)



# CARCASE TYPE CHOICE

CARCASE	SKETCH	BELT CONSTRUCTION		
Multiply			Multiply construction mode of 2 to 4 textile ply (or more), separate by rubber and 2 rubber cover. Inner-ply acts as damping in the carcass.	
Straight-warp (VLE)			Carcass named « straight-warp » is made of one or two ply. each ply is a straight warp protected by two textile weft. That is illustrated of the drawing. The straight warp is made of thick twiste (textile cord) in polyester. This warp is between two weft maps on textile, is made of thick twiste in polyamide.Warp and Weft is connected by a yarn that ensures the holding of textile.The built carcass is dipped RFL and can be cover of diffrents types of rubber.	
Solid-woven			Solid woven carcass is Solid-woven carcass is a textile carcass «single-ply» three-dimensional, impregnated PVC. Mono bloc carcass is protected by 2 PVC cover.	

Multi-ply is more common. Technology is well known, in particular its splice.

Conveyor belt application, straight warp carcass remains the following advantage: Impact and tear resistance, a low elongation and a great flexibility at drum level.

**For Elevator belt application**, straight-warp and solid-woven carcass remains a best resistance screw bucket, a low elongation and can be used with smaller drum than multiply carcass.

TRANSCO has a particular attention in choice of fabric for elevator belt to optimise the transverse stiffness, screw bucket resistance, deformation between screws and elongation. For its VLE range (straight-warp carcass for elevator belt application), the fabric is specific to control the initial elongation: obtain a permanent elongation as low as possible obtained in a number of cycles as short as possible.

**NOTA**: name BLAK, FDA-WHITE,... are multiply building, prefix « VLE », VLE BLAK, VLE FDA-BLANC,... means straight warp carcass

## RUBBER COVER/PVC COVER

### Rubber cover proprieties

- The best abrasion resistance
- The best impact resistance
- The best ageing: PVC cracks and hardens over time due to the exudation of plasticizer and fine material can penetrate the cracks making them deeper. The rubber coating has links macromolecular because it is chemically crosslinked (vulcanized) while the PVC coating is a cured gel. Therefore, a rubber belt is better cleaned by scraping than PVC, limiting the fall of material around the conveyor. In the case of transport of wet food material, cracks in the PVC behave like nests where germs can grow.
- The best friction coefficient which is an advantage: for the transmission of power via the driving drums... this feature will minimize the risk of slippage of the belt and fire starting. This characteristic is also interesting for conveying product on steeply inclined conveyors.
- The difference in friction between the rubber and PVC increases when the belt is wetted.

### PVC cover proprieties

- It is intrinsically fat resistant
- Price is better competitive than rubber
- It can be used in a direct and continuous process manufacturing conveyor belts in a very competitive gelation process without use of press

## RANGE ANTI-ABRASIVE DEPREUX

### TO CONVEYED AGRICULTURAL PRODUCTS NON GREASE/NON OIL

We can require some agricultural product conveyed used to abrasive resistance belt, without specific requirement for food, fat or fire resistance.

For this application, we must consult our DEPREUX range, and choose the best adapted belt between:

- **DELTA belt**, multiply textile carcass
- **DX-FLEX belt**, straight-warp carcass

And the different cover proposed: **B, Y, W, X or SH.**

For this application, we must consult our DEPREUX specific range, described in the brochure « Safety conveyor or elevator belt for aboveground applications in compliance with European norm EN12882. »

# BLACK

## BLACK FOOD

### FDA-BLAK ACID : BELT OR ELEVATOR BLACK TO DIRECT CONTACT WITH FOOD

This black belt, named FDA-BLAK acid is in accordance with American standards FDA and European regulation for food contact. It presents the following properties :

Cover	Black Food rubber
Construction	Multiply 250N/mm to 1600N/mm (2 to 4 ply)
PRODUCT NAME	FDA-BLAK acid
Temperature Range	-20° to +110°C
Abrasion index value	<150mm <sup>3</sup>
Acid resistant	YES
Food contact specifications comply to FDA & 1935/2004 CE	YES






## BLACK NOT FOOD

### BLAK OR VLE BLAK : BLAK BELT OR ELEVATOR SPECIAL TO CONVEYED OIL OR FAT AGRICULTURAL PRODUCT

TRANSCO offers BLAK belt Range particularly adapt to conveyed agricultural product.

This range is this following table :

Cover		Black rubber				
PRODUCT NAME		BLAK or VLE BLAK				
Cover grades		G oil/fat resistant)	superG oil/fat resistant)	GS (oil/fat resistant + SAFETY)		superGS (oil/fat resistant + SAFETY))
				GS (2A)	GS (2B)*	superGS (2A)
SAFETY EN 12882	Class2A : Antistatic performance ISO 284 and fire resistance with cover ISO 340			YES		YES
	Class 2B: Antistatic performance ISO 284 and fire resistance with and without cover ISO 340				YES	
ATEX 13463-I et -5 Area				 II 2 Dcu Area 21-22	 II 1 Dc Area 20-21-22	 II 2 Dcu Area 21-22
Oil/Fat resistant		Medium	Hard	Medium		Hard
Abrasion index value		<150 mm³	<140 mm³	<170 mm³		<170 mm³
Temperature Range		-25° to +80°C	-25° to +80°C	-20° to +80°C		-25° to +80°C

\* Nota: VLE BLAK GS(2B) only exists in 2 plies





# WHITE WHITE FOOD

## WHITE COVEYOR OR ELEVATOR BELT FOR FOOD CONTACT



**FDA-BLANC or FDA-BLANC flex : rubber cover**  
**FDA-MONOPLAST and MULTIPLAST : PVC cover**

The white conveyor or elevator belt range meets the following standard specifications for rubber and plastics in contact with food :

- **US Standard norm FDA**
- **European norm 1935/2004**

Cover		White Food rubber				White food PVC	
PRODUCT NAME		FDA-BLANC or VLE FDA-BLANC				FDA-MULTIPLAST	FDA-MONOPLAST
Cover grades		AA (anti-abrasive)	superG (oil/fat resis- tant)	superGS (oil/fat resistant + SAFETY)		superGS (oil/fat resistant + SAFETY)	
				superGS (2A)	superGS (2B)*	superGS (2A)	superGS (2B)
SAFETY EN 12882	Class 2A : Antistatic performance ISO 284 and fire resistance with cover ISO 340			YES		YES	
	Class 2B : Antistatic performance ISO 284 and fire resistance with and without cover ISO 340				YES		YES
ATEX Area				⚡ II 2 Dcu Area 21-22	⚡ II 1 Dc Area 0-21-22	⚡ II 2 Dcu Area 21-22	⚡ II 1 Dc Area 20-21-22
Oil/Fat resistant			Hard	Hard		Hard	
Food contact specifications comply to FDA & 1935/2004 CE		YES	YES	YES		YES	
Abrasion index value		<120 mm³	<200 mm³	<200 mm³		<200 mm³	
Temperature Range		-30° to +110°C	-25° to +80°C	-25°C to 80°C, 100°C peak		-10° to +50°C	

\* Nota:VLE FDA-BLANC super GS(2B) only exists in 2 plies

## WHITE NOT FOOD

### WHITE :WHITE COVEYOR OR ELEVATOR BELT TO GENERAL USE

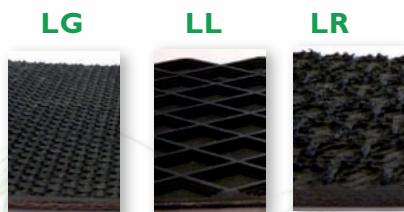
TRANSCO offers a white rubber belt multiply, BLANC to general use, it means to application do not require sanitaure or safety properties. For exemple to conveyed salt, ...

This belt presents the following properties :

Cover	White rubber
PRODUCT NAME	BLANC
Temperature Range	-30° to +100°C
Abrasion index value	<200mm <sup>3</sup>



## ROUND-BALERS



With a proven expertise in the manufacture of Round-Balers, TRANSCO has a dedicated range and can cater to a variety of needs from distributors. The baler belts can be delivered in « sheets », cut to customised width and length or even spliced in an « endless belt » using hot splicing techniques or mechanical fasteners. TRANSCO's Round Baler range offers three types of products :

### ROUND-BALER

**LG type** with a grain structure impression on top carry cover

**LR type** with plain structure on top carry cover

**LL type** with a rhomb structure impression on top carry cover

**Complete product denomination (example) : ROUND-BALER 400/3 – LG**

## CHEVY BELT

Transco has developed a chevy range specially adapted on food requirement. This belts are used to conveyed agricultural or food product on steeply sloping.

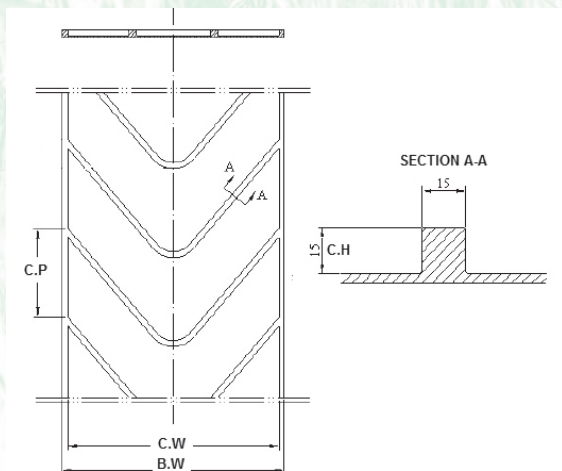
The proposed profile in 15 mm height is particularly suitable for the transport of solids rather small or medium size, such as olives.

This belt can be proposed with different types of cover :

	ANTI ABRASIVE	BLACK NOT GREASE/FAT RESISTANT	GREEN FOOD ANTI ABRASIVE
NAME	DELTAPROFIL K15 B	CHEVY K15 G	CHEVY FDA GREEN K15G

Chevy Geometry is describe in the following table.  
Available in 600mm and 800mm width

WIDTH BELT B.W.	PLAGE CHEVRON C.W.	PITCH CHEVY C.P.	HEIGHT CHEVY C.H.
600	570	230	15





# SKIRT RUBBER

TRANSCO offers :

- BLACK skirt rubber, medium fatty resistant, flame resistant, antistatic, as described below

**Hardness  $60 \pm 5$  shore A available in 10mm thick**

**Fire resistant : En 13823 E or NFP 13520 M**

**Antistatic : Iso 284**

- WHITE FOOD skirt rubber, highly resistant fat, flame resistant, antistatic, according to the description below :

**Hardness  $55 \pm 5$  shore A available in 6mm and 10mm thick**

**Fire resistant : En 13823 E or NFP 13520 M**

**Antistatic : Iso 284**

**TO FACILITATE THE CHOICE OF TRANSCO BELT TYPE,  
MOST SUITED TO YOUR APPLICATION,  
WE BUILT THIS GUIDE FOR MOST COMMON APPLICATIONS.**

	Food contact	Belt color	Grease/fat resistance	Acid resistance	Fire explosion risks	Recommended belts
<b>SUGAR BEET CHAIN</b>						
Unprocessed sugar beets		BLACK				Antiabrasive
Grated beets and cossettes		BLACK				Antiabrasive
Moist pulps a after sugar extraction	YES	BLACK		YES		FDA-BLAK Acid
Pressed beet pulp		BLACK				Antiabrasive
Sugar beet pulp pellet (Animal feed)		BLACK	YES		YES	BLAK GS
Dry or moist refined sugar	YES	WHITE			YES	FDA-BLANC superGS or FDA MONO/ MULTI PLAST
<b>SUGAR CANE CHAIN</b>						
Bagasse		BLACK				Antiabrasive
Dry or moist cane sugar		BLACK	YES	YES		FDA-BLAK Acid
Dry or moist refined sugar	YES	WHITE			YES	FDA-BLANC superGS or FDA MONO/ MULTIPLAST
<b>CEREALS, FLOUR, BREAD &amp; PASTRIES CHAINS</b>						
Cereals chains	YES	WHITE			YES	FDA-BLANC superGS
Mixed silos cereals/oleaginous		BLACK	YES		YES	BLAK superGS
Cereal silos (non greasy)		BLACK			YES	BLAK GS
<b>MALTERIE CHAIN</b>	YES	WHITE				FDA-BLANC AA
<b>RICE CHAIN</b>	YES	WHITE	YES			FDA-BLANC superGS
<b>SALT CHAIN (STORAGE)</b>	YES	WHITE				FDA-BLANC AA
<b>FERTILIZERS CHAIN</b>		BLACK				BLAK GS / BLAK superGS
<b>OLIVE CHAIN</b>						
Cleaning		BLACK				Antiabrasive
Clean olives	YES	GREEN	YES			FDA GREEN



## 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 stock belting specifications
- Cutting services to customised belts width and length
- Pre-drilling of elevator belts on request
- Buckets for elevator belts together with related fastening and installation equipment (eg: bolts, clips...)
- A "one stop shop" for conveyor belt related products such as splice kits, glues, mechanical fasteners, idlers, loading stations, belt cleaners, vulcanising presses...
- Short delivery periods
- Most importantly a high quality technical service and support at all times.

**TRANSCO is part of COBRA GROUP.**

For further information on TRANSCO or the Cobra Group activities please contact your closest Cobra subsidiary or our head office.



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