

# TPU Belts

## Food Industry



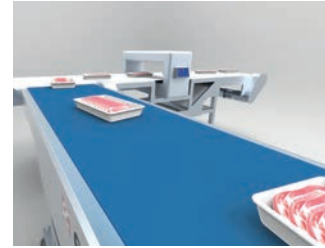
### Anti-microbial

Reduce microbial growth by over 99%. Its principle active agent is bacteriostatic, preventing the belt from adding microbial load to the conveyed product.



### Anti-hydrolysis

TPU with high resistance to hydrolytic deterioration, minimizes fungus formation under warm, wet and humid conditions. Most appropriate for applications with water, daily or frequent cleaning and sanitizing protocols.



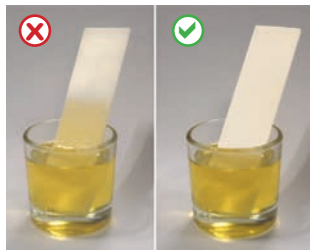
### Metal detectable

Ideal for conveyors which lead products up to metal detection devices or contamination control system.



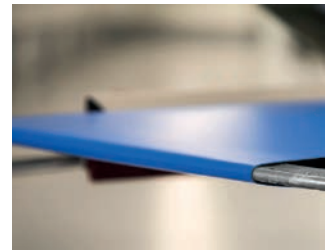
### Frayless

Belts with special fabric that do not fray, avoiding product contamination when belt edges are not sealed.



### Wick resistant

Impermeabilized fabrics which pass Wicking Test G11. Prevent belt fabrics from absorbing water and oils, increasing hygiene in food applications.



### Knife-edges

Belts with high flexibility that adapt to small pulley diameters, common in dough, biscuit and chocolate transfer conveyors.



### Silk-Mat finish

Homogenous, non-porous, easy to clean, low adherent top cover for good release and product transfer.



### Food Quality

Belts as well as their raw materials meet FDA and EU 10/2011 regulations.



### Abrasion resistant

Suitable for abrasive products, or where scrapers or side skirts are used.

# TPU for food

Belt type	Top cover			Bottom cover	Fabrics		Belt thickness mm	Working load at 1% elongation N/mm	at 20°C		Anti-microbial	Anti-hydrolysis	Metal detectable	Frayless
	Color	Hardness °ShA	Finish	Finish	N° of plies	Weft			A ø mm	B ø mm				
<b>Standard TPU</b>														
CS06 UF	Ocher 01	86	Smooth	W Impregn.	1	Rigid	0,75	5	4	15	-	-	-	-
CSX06 K1F	Ocher 01	86	Pattern K1	W Impregn.	1	Rigid	0,82	5	5	15	-	-	-	-
CS07 UF	White	86	Smooth	W Impregn.	1	Rigid	0,75	5	4	15	-	-	-	-
CS07 UFMT	White	86	Mat	W Impregn.	1	Rigid	0,75	5	4	15	-	-	-	-
CSX08 AF-BR	Brown 00	86	Pattern A	W Impregn. ⊕	1	Rigid	1,20	4	6	20	-	-	-	-
CSX08 DF	White	86	Pattern D	W Impregn. ⊕	1	Rigid	1,20	4	6	20	-	-	-	-
CS08 UF	White	86	Smooth	W Impregn. ⊕	1	Rigid	1,00	4	6	20	-	-	-	-
CS08 UFMT	White	86	Mat	W Impregn. ⊕	1	Rigid	1,00	4	6	20	-	-	-	-
CS09 FF	Natur		W Impregn.	W Impregn. ⊕	2	Rigid	1,20	8	5	5	-	-	-	-
CS09 UF	White	86	Smooth	W Impregn. ⊕	2	Rigid	1,45	8	6	30	-	-	-	-
CS09 UFMT	White	86	Mat	W Impregn. ⊕	2	Rigid	1,45	8	6	30	-	-	-	-
CS10 FF	Natur		Cotton-Poly.	Cotton-Poly.	2	Flexible	1,40	6	10	10	-	-	-	-
CS10 UFMT	White	86	Mat	W Impregn.	2	Rigid	1,65	8	8	40	-	-	-	-
CS12 UF <sup>V</sup>	White	86	Smooth	WP	2	Rigid	1,60	10	20	50	-	-	-	-
C12 UFMT <sup>V</sup>	White	93	Mat	WP	2	Rigid	1,50	10	20	50	-	-	-	-
CS20 UFMT	White	93	Mat	W Impregn. ⊕	2	Rigid	2,60	12	60	100	-	-	-	-
NS07 AY	Blue 06	86	Pattern A	Pattern Y	1	Rigid	1,55	5	10	10	-	-	-	-
NS07 UFMT	Blue 06	86	Mat	W Impregn.	1	Rigid	0,75	5	4	15	-	-	-	-
N07UU	Blue 06		W Impregn.	W Impregn.	1	Rigid	0,45	5	8	8	-	-	-	-
NS08 UFMT	Blue 06	86	Mat	W Impregn. ⊕	1	Rigid	1,00	4	6	20	-	-	-	-
NS09 UF	Blue 06	86	Smooth	W Impregn. ⊕	2	Rigid	1,45	8	6	30	-	-	-	-
NS09 UFMT	Blue 06	86	Mat	W Impregn. ⊕	2	Rigid	1,45	8	6	30	-	-	-	-
NS09UFMT-H-BL08	Blue 08	93	Mat	W Impregn. ⊕	2	Rigid	1,45	8	8	30	-	-	-	-
NS11UFMT	Blue 06	93	Mat	W Impregn. ⊕	2	Extra rigid	2,40	6	30	50	-	-	-	-
NS20 UFMT	Blue 06	93	Mat	W Impregn. ⊕	2	Rigid	2,60	12	60	100	-	-	-	-

<b>Premium TPU</b>														
CP07AY-AM	White	85	Pattern A	Pattern Y	1	Rigid	1,55	5	10	10	✓	✓	-	-
CP07UFMT-AM	White	85	Mat	W Impregn.	1	Rigid	0,75	5	4	15	✓	✓	-	-
CP09UFMT-AM	White	85	Mat	W Impregn. ⊕	2	Rigid	1,20	8	6	30	✓	✓	-	-
CPX09UA2MT-AM	White	85	Mat	Pattern A2	2	Rigid	2,10	9	30	50	✓	✓	-	-
CP10UFMT-AM-FL	White	85	Mat	W Impregn.	2	Rigid	1,60	6	10	50	✓	✓	-	✓
NP07UFMT-AM	Blue 06	85	Mat	W Impregn.	1	Rigid	0,75	5	4	15	✓	✓	-	-
NP09DF-AM	Blue 06	85	Pattern D	W Impregn. ⊕	2	Rigid	1,60	8	6	30	✓	✓	-	-
NP09FF	Blue 10	-	W Impregn.	W Impregn. ⊕	2	Rigid	1,00	8	5	5	✓	✓	-	-
NP09UFMT-AM	Blue 06	85	Mat	W Impregn. ⊕	2	Rigid	1,20	8	6	30	✓	✓	-	-
NP09UFMTMD-BL09	Blue 09	85	Mat	W Impregn. ⊕	2	Rigid	1,20	8	6	30	-	✓	✓	-
NPX09 UA2MT-AM	Blue 06	85	Mat	Pattern A2	2	Rigid	2,10	9	30	50	✓	✓	-	-
NPX20 UA2MT-AM	Blue 06	85	Mat	Pattern A2	2	Rigid	3,15	12	100	100	✓	✓	-	-
NP10UFMT-AM-FL	Blue 06	85	Mat	W Impregn.	2	Rigid	1,60	6	50	80	✓	✓	-	✓
NP13UFMT-AM-FL	Blue 06	85	Mat	W Impregn.	2	Flexible	2,30	9	60	90	✓	✓	-	✓



## Food Regulations

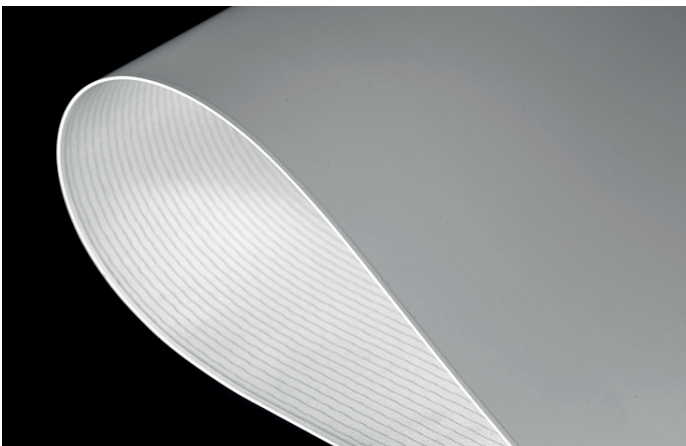
These are very complicated regulations and are constantly evolving. To comply with them, we must follow strictly, what is established by FDA and/or the EU Regulations EC1935/2004 and EU10/2011 as well as their subsequent extensions, this requires much specialization.

In particular, the Declaration of Compliance should include information about the global and specific migrations as well as the simulants used with respect to the normative or regulation compliance. The credibility of the manufacturer who issues the Certificates is vital, e.g. in esbelt, we always test our belts against the most aggressive simulant which best replicates the harshest possible condition during the use of our belts.



Wick resistant	Silk-Mat finish	FDA	EU10/2011 Reg.	1935/2004 Reg.	Abrasion resist.	Sealed edges	Max. roll width mm	Belt type
✓	-	✓	✓	✓	✓	✓	2200	CS06 UF
✓	-	✓	-	✓	✓	✓	1250	CSX06 K1F
✓	-	✓	✓	✓	✓	✓	2200	CS07 UF
✓	✓	✓	✓	✓	✓	✓	2200	CS07 UFMT
✓	-	✓	-	✓	✓	✓	1250	CSX08 AF-BR
✓	-	✓	✓	✓	✓	✓	1300	CSX08 DF
✓	-	✓	✓	✓	✓	✓	2200	CS08 UF
✓	✓	✓	✓	✓	✓	✓	2200	CS08 UFMT
✓	-	✓	✓	✓	-	-	2200	CS09 FF
✓	-	✓	✓	✓	✓	✓	2200	CS09 UF
✓	✓	✓	✓	✓	✓	✓	2200	CS09 UFMT
-	-	✓	✓	✓	-	-	2200	CS10 FF
✓	✓	✓	✓	✓	✓	✓	2200	CS10 UFMT
✓	-	✓	✓	✓	✓	✓	2000	CS12 UF <sup>V</sup>
✓	✓	✓	✓	✓	✓	✓	2-3000	C12 UFMT <sup>V</sup>
✓	✓	✓	✓	✓	✓	✓	2100	CS20 UFMT
✓	-	✓	✓	✓	✓	✓	2000	NS07 AY
✓	✓	✓	✓	✓	✓	✓	2200	NS07 UFMT
✓	-	✓	-	✓	-	✓	3000	N07UU
✓	✓	✓	✓	✓	✓	✓	2200	NS08 UFMT
✓	-	✓	✓	✓	✓	✓	2200	NS09 UF
✓	✓	✓	✓	✓	✓	✓	2200	NS09 UFMT
✓	✓	✓	✓	✓	✓	✓	2200	NS09UFMT-H-BL08
✓	✓	✓	✓	✓	✓	✓	2200	NS11UFMT
✓	✓	✓	✓	✓	✓	✓	2100	NS20 UFMT

✓	-	✓	✓	✓	✓	✓	2000	CP07AY-AM
✓	✓	✓	✓	✓	✓	✓	2200	CP07UFMT-AM
✓	✓	✓	✓	✓	✓	✓	2200	CP09UFMT-AM
✓	✓	✓	✓	✓	✓	✓	1250	CPX09UA2MT-AM
✓	✓	✓	✓	✓	✓	✓	2200	CP10UFMT-AM-FL
✓	✓	✓	✓	✓	✓	✓	2200	NP07UFMT-AM
✓	-	✓	✓	✓	✓	✓	2000	NP09DF-AM
✓	-	✓	✓	✓	✓	✓	2200	NP09FF
✓	✓	✓	✓	✓	✓	✓	2200	NP09UFMT-AM
✓	✓	✓	✓	✓	✓	✓	2200	NP09UFMTMD-BL09
✓	✓	✓	✓	✓	✓	✓	1250	NPX09 UA2MT-AM
✓	✓	✓	✓	✓	✓	✓	1250	NPX20 UA2MT-AM
✓	✓	✓	✓	✓	✓	✓	2200	NP10UFMT-AM-FL
✓	✓	✓	✓	✓	✓	✓	2200	NP13UFMT-AM-FL



### Esbelt Anti-microbial AM belts

**Reduce microbial growth by over 99%** (tested according to ISO 22196 norm). They solve or minimize the prevalent problem of the belts adding microbial load to the conveyed food product in between successive belt sanitization. The effectiveness of this anti-microbial property lasts for the entire belt life as it is based on an innovative formulation which is stable and non-hydrosoluble (unlike silver ions).

By using our AM belts, it is no longer necessary to install UV disinfection lamps on the conveyors, thus saving investment, maintenance and energy costs.

### Detergency & Biofilms

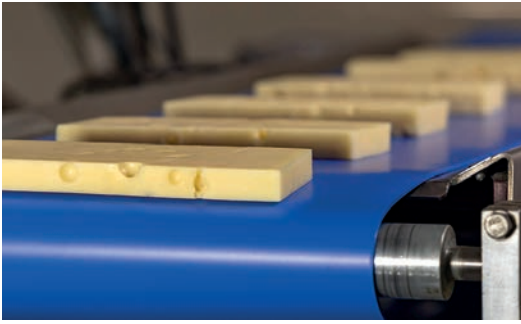
For effective cleaning of the conveyor belts, it is advisable to use enzymatic detergents which are also specifically formulated to not harm the belts. The range of enzymatic detergents specially formulated by ITRAM HIGIENE, in collaboration with the Technical Department of **esbelt**, offers optimal belt sanitization, preventing and eliminating the possible pre-sence of biofilms (very resistant and potentially dangerous colonies of micro-organisms).

### Fabrics resistant to fluid penetration (W impreg. and WP fabric)

The absorption of liquids or oils by the bottom fabric of the conveyor belt can bring about problems like delamination of plies and edge separation. Pathogenic microorganisms may also penetrate the fabric through capillarity. **Esbelt**'s wick resistant belts are made with a specially treated fabric to solve these problems. They pass the Wicking Test G11, a concept defined in an FDA guideline in June 2011 under chapter G, section 11. Press a big nib marker on a fabric to get an idea if the fabric is "wick resistant" or not.

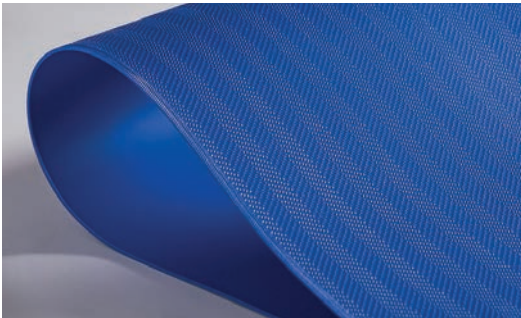
### Sealed belt edges (molded edges)

In esbelt, we can seal the edges of PU belts from 1-ply 0.8mm thick with smooth, mat or embossed top and bottom cover. Sealed edges prevent oils and moistures from penetrating the fabric layer of the conveyor belts from the borders, thus avoiding microbial growth and ply separation. They also prevent fabric fiber from sticking out from the belt edges and contaminating the conveyed products. Our technique of sealing thin PU belts ensures that the belt edges are protected while maintaining its flexibility to work on knife edge applications.



**Double TPU cover. Ideal for use in the cheese production process.**

2-ply blue belts, antimicrobial, high resistance to animal and vegetable oils and fats. Silk matt top cover finish.

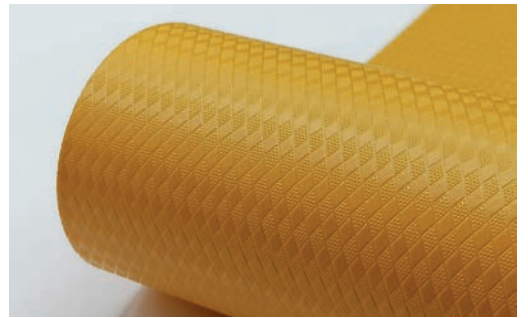


Bottom cover with positive A2 (rice grain) pattern with rounded borders to avoid residue or grease accumulation and to facilitate cleaning.



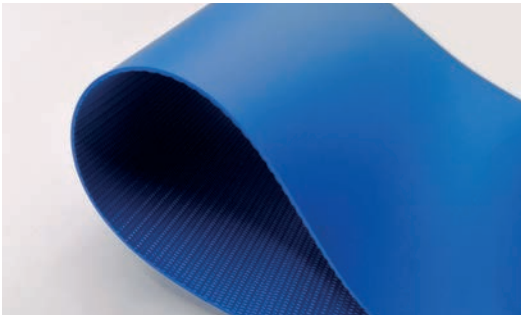
**1-ply TPU belts for cooling tunnels. Thin belts with high thermal conductivity.**

Thin belts with high thermal conductivity. Excellent longitudinal flexibility and high lateral stability. Good abrasion resistance.

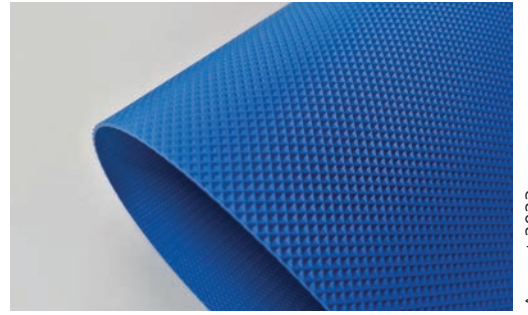


Smooth top cover or with harlequin pattern.

**100% TPU Elastic belts, without fabric for small conveyors without tensioner, Processing of unwrapped food (sorting, cutting, filleting, slicing, precision weighing & packaging).**



Mat finish for easy product release.



D pattern for an optimal grip of the product.

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