



## Flame Retardant Conveyor Belts to EN 14973 and EN 12882

# Continental Industrial Solutions



**Continental is the most comprehensive, high-performance conveyor belt systems provider in the world.**

We offer a wide range of products, services and technologies for mining and industrial applications. Our full-service capabilities include planning and commissioning, technical advice, training, digital monitoring and on-site maintenance for the life of the conveyor operation.

As your global innovation and development partner, we strengthen mining, mineral processing and construction projects around the world. We do this by exceeding your specific needs and requirements. That's because we push the boundaries of what's possible by developing solutions for tomorrow's challenges.

Continental is one of the world's largest developers and providers of innovative rubber and plastic solutions, technologies and services for a wide range of industries including automotive, construction, agriculture, chemicals, petrochemicals and mining.

**Continental has developed fabric and steel cord conveyor belts which meet the much higher requirements of EN 12882 and EN 14973.**

**Due to our many years of experience in the field of fire safety, we are able to offer our customers conveyor belts certified by an external test institute.**

» **Shield UTS conveyor belts**  
to EN 14973

» **Shield FRS conveyor belts**  
to EN 12882



## Shield UTS conveyor belts

For use underground with electrical and fire safety requirements to EN 14973

### Requirements to EN 14973

- › Electrical conductivity
- › Drum friction test
- › Resistance to ignition
- › Determination of fire propagation

For this design of belt, compliance with the safety requirements to EN 14973:2015, classes A and B2 has been proven by an external test institute. If an order is placed, this certificate can be made available.

### Special versions:

Other fire classes, other versions of belt and special physical properties (e.g. resistance to abrasion) are possible on request.

### Splicing with corresponding high-quality materials:

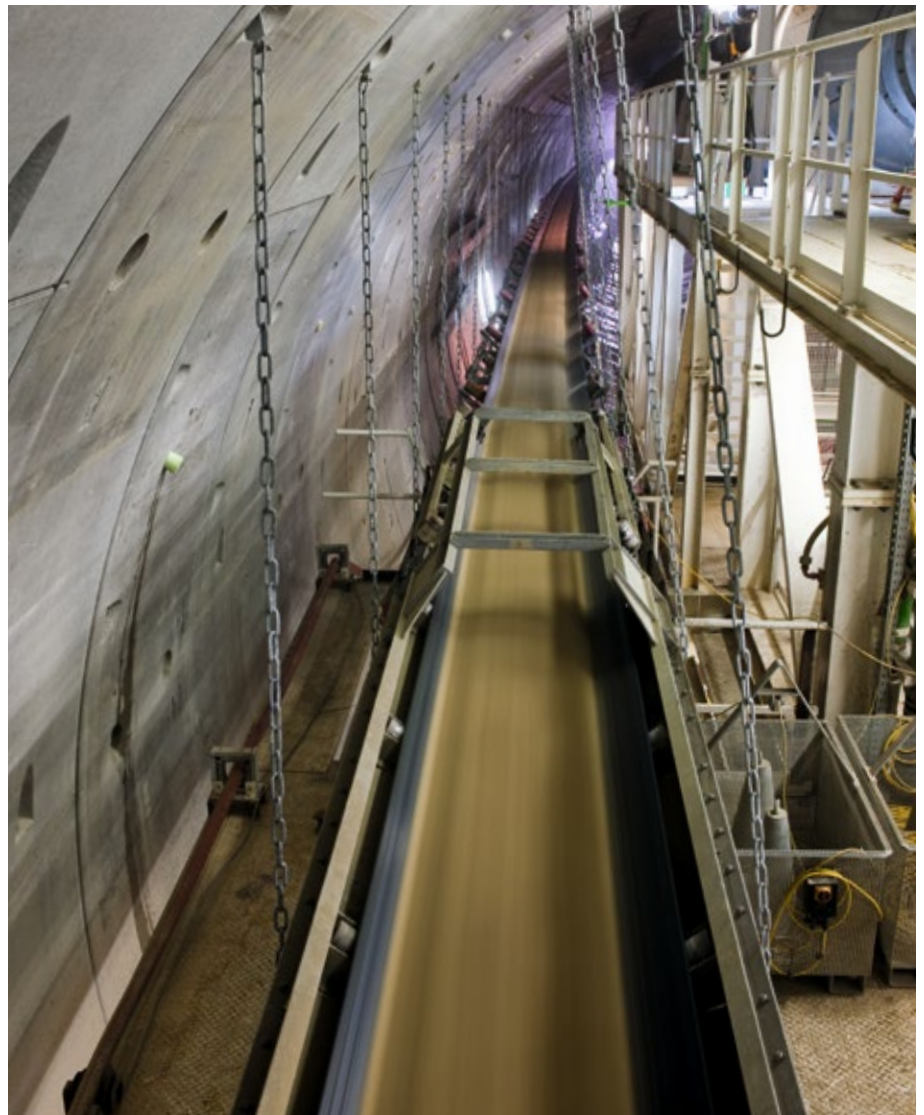
To splice conveyor belts with fireproof cover stock, we recommend that only Continental splicing materials be used. This then ensures optimum splice strength and service life.

### Example applications for Shield UTS conveyor belts used underground:

- › Tunnels
- › Mining

Shield UTS belts			
	Width	Strength	Cover thickness*
Fabric ply belts with <b>Shield UTS TX</b> cover grade	min. 650 mm	EP 400/3 - EP 800/3	min. 4:2 mm
		EP 500/4 - EP 2000/4	
		EP 630/5 - EP 2000/5	min. 5:2 mm
Steelcord belts with <b>Shield UTS ST</b> cover grade	min. 800 mm max. 3200 mm	min. ST 800	min. 5:4 mm
		max. ST 4000	max. 20:12 mm

\* minimum values may be higher acc. to belt design



# Shield FRS conveyor belts

For general use with electrical and fire safety requirements to EN 12882

## Fabric ply belts with Shield FRS TX cover grade

Width	Strength	Cover thickness*
min. 650 mm	EP 400/3 - EP 1250/3	min. 4:2 mm
	EP 500/4 - EP 2000/4	
	EP 630/5 - EP 2000/5	min. 5:2 mm

\* minimum values may be higher acc. to belt design

### Requirements to EN 12882

- › Electrical conductivity
- › Drum friction test
- › Resistance to ignition
- › Determination of fire propagation

### Standard range:

For this design of belt, compliance with the safety requirements to EN 12882:2015, category 1-5A has been proven by an external test institute. If an order is placed, this certificate can be made available.

### Special versions:

Other fire categories (5B and 5C), other versions of belt and special physical properties (e.g. resistance to abrasion) are possible on request.










### Splicing with corresponding high-quality materials:

To splice conveyor belts with fireproof cover stock, we recommend that only Continental splicing materials be used. This then ensures optimum splice strength and service life.

### Example applications for Shield FRS TX conveyor belts:

- › Coal-fired power stations
- › Biomass power stations
- › Fertilizer industry
- › Wood processing industry
- › Port operations
- › Open-cast mining
- › Waste incineration plant

## Current test standards for fire and safety requirements on

Category	Application	Assessment of flame resistance
1	General use, risk only through electrostatic discharge.	
2A	As for category 1, additional hazard from small open flames on the cover stock (additional causes of fire).	
2B	As for category 2A, the additional risk is smaller, open flame on the carcass.	
3A	As for category 2A, additional hazard of local heating due to friction.	
3B	As for category 3A, there is an additional risk due to small, open flame on the carcass.	
4A	As for category 1, additional risk of fire spreading caused by additional fire sources. Secondary safety device?	
4B	As for category 4A, additional hazard of local heating due to friction. Secondary safety device?	
5A	As for category 4B, there is however an increased risk of local heating due to friction. Secondary safety device?	
5B	As for category 5A, with an additional risk from glowing. Secondary safety device?	
5C	As for category 5B with an additional risk when operating in a potentially combustible atmosphere. Secondary safety device?	

› Further cover grades are available, which are fulfilling standard requirements acc. to EN 12882 up to cat. 2B, and other properties are also available, like oil resistance (eg. Shield YS; or Shield SG).



**fabric and steel cord conveyor belts**

Surface resistance to EN ISO 284	Drum friction EN 1554							Ignition to EN ISO 340			Process to determine the fire propagation to DIN EN 12881-1, process A, C or D
	Processes	Flame	Glowing	Load	Time	Maximum drum temperature	Summary of six test specimens	Maximum for each test specimen	Cover stock		
≤ 300 MΩ	Not required							Not required			Not required
≤ 300 MΩ	Not required							45 s	15 s	With	Not required
≤ 300 MΩ	Not required							45 s	15 s	With/without	Not required
≤ 300 MΩ	A1	No	Permitted	Constant 343 N	1 h	No	45 s	15 s	With	Not required	
≤ 300 MΩ	A1	No	Permitted	Constant 343 N	1 h	No	45 s	15 s	With/without	Not required	
≤ 300 MΩ	Not required							45 s	15 s	With/without	Undamaged piece over entire width of a 400 mm length
≤ 300 MΩ	B1	No	Permitted	Constant 343 N	1 h	No	45 s	15 s	With/without	Undamaged piece over entire width of a 400 mm length	
≤ 300 MΩ	B2	No	Permitted	Max. 1.715 N	2.5 h	No	45 s	15 s	With/without	Undamaged piece over entire width of a 400 mm length	
≤ 300 MΩ	B2	No	No	Constant 1.715 N	2.5 h	No	45 s	15 s	With/without	Undamaged piece over entire width of a 400 mm length	
≤ 300 MΩ	B2	No	No	Constant 1.715 N	2.5 h	400 °C	45 s	15 s	With/without	Undamaged piece over entire width of a 400 mm length	

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