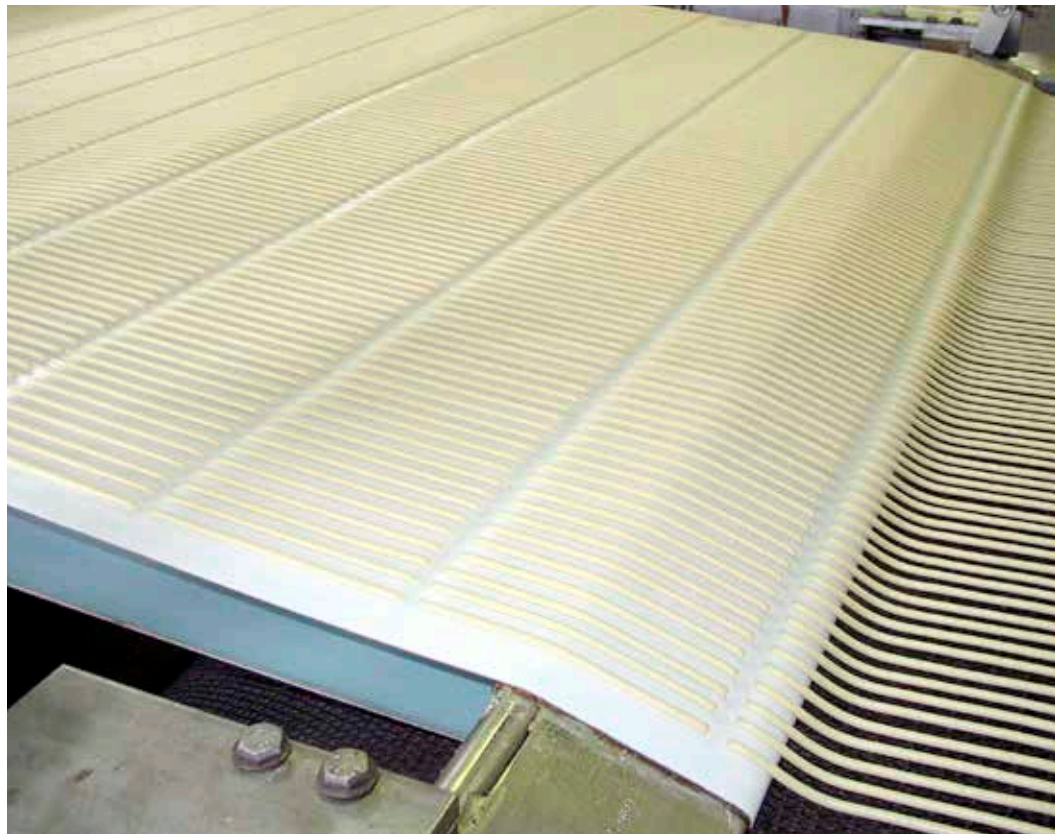


**Your partner  
for food safety**

## HACCP conveyor and process belts



**Bakery**



# HACCP conveyor and process belts for bakery

CHIORINO manufactures conveyor and process belts that fully comply with the latest European and international Food Regulations, and are particularly recommended for the HACCP system. The wide range of CHIORINO food belts is developed to satisfy all demanding applications in bread, biscuits, snacks processing and packaging, assuring safe and high quality baked products.



## Certified Food Compliance

To protect Consumer's health, CHIORINO process and conveyor belts comply with the latest European and international Food Regulations:

**REGULATION EC 1935/2004 and amendments**

**REGULATION EC 2023/2006 and amendments**

**REGULATION EU 10/2011 and amendments**

**FDA (Food and Drug Administration)**

The careful selection of raw materials, the constant adjustment by R&D Department to the legislative developments in food safety, the strict controls throughout the production process (Good Manufacturing Practices) guarantee total food compliance of CHIORINO belts.

Declarations of compliance as prescribed by law are available for every CHIORINO food belt.

Thus, the Customers are certain to use materials that fully comply with the HACCP system.



## KEY FEATURES

Excellent resistance to cut and abrasion

Superior resistance to most aggressive fats and oils

No edge fray

Very high flexibility

Resistance to high temperature



Long life even with scrapers



Highest reliability and increased belts life



No contamination by fibres



Knife edge. Energy saving



Long service life



# At the forefront of hygiene and food safety

The CHIORINO conveyor and process HP® belts are today the leading products for the food Industry as far as **hygiene**, **performance** and **working life** are concerned.

The HP® belts fully support all the **HACCP procedures** through the whole food manufacturing process.



⇒ Total respect of the HACCP system

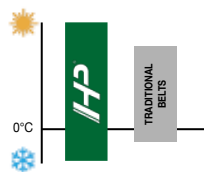
⇒ Time, water and energy saving

⇒ Easy to clean

⇒ Long working life

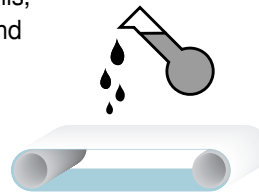
## Resistance to high/low temperatures

The HP® belts offer increased resistance to high temperatures compared to traditional polyurethane belts and maintain their characteristics even at lowest temperatures.



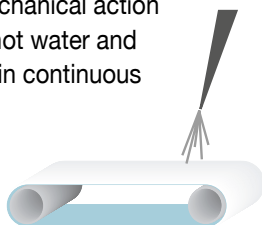
## Resistance to oils and chemical agents

The HP® belts ensure an excellent resistance to the chemical agents, fats and aggressive oils, including palm and coconut oil.



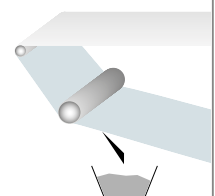
## Resistance to hydrolysis

The HP® belts guarantee an excellent resistance to hydrolysis as well as the chemical and mechanical action of washing with hot water and steam, including in continuous systems.



## Superior flexibility and mechanical resistance

The HP® belts offer a superior flexibility and are extremely resistant to abrasion and mechanical stress caused by knife edges, backflexing and scrapers.

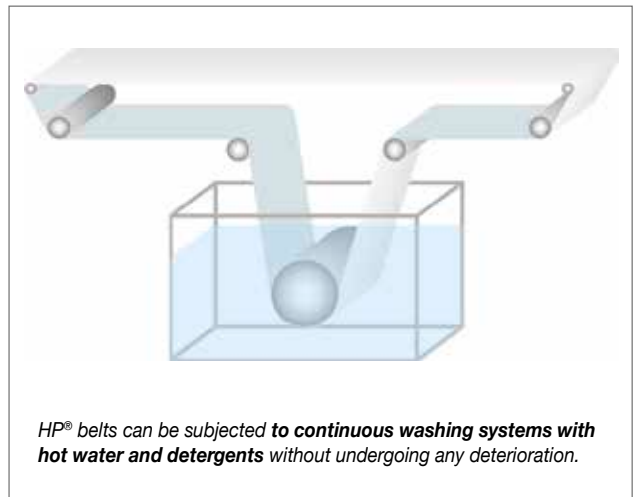


## Extraordinary resistance to cleaning systems

Thanks to the high resistance to hydrolysis, HP® belts do not undergo deterioration due to the “Clean-in-Place” washing and sanitization processes with warm water, steam, foam and aggressive detergents. The User can benefit of belt’s long service life and significant costs reduction.

Moreover, compared to modular belts, HP® belts offer:

- **considerable water, time and energy saving**
- **higher hygiene levels** since all food scraps can be easily removed during cleaning and sanitization phases.



## PRO CHLEAN™

PROCHLEAN™ sealed edges can be made either on monopoly or multiply conveyor belts.

### BENEFITS

- ⇒ Total food safety and hygiene
- ⇒ Clean in place systems
- ⇒ Knife edge running



# Bread - Biscuits - Crackers

Thanks to its wide know-how and expertise, CHIORINO offers a comprehensive range of high performance food belts for processing any kind of dough through the whole production line of bread, pizza, biscuits and crackers.

CHIORINO food belts are fitted all over the world on the most renowned lines, such as MEINCKE, IMAFORNI, RADEMAKER, RONDO, SOGEM, BAKER-PERKINS etc.

KEY FEATURES	BENEFITS
Fray-free edges	⇒ Product safety and no contamination
High resistance to cleaning procedures	⇒ Compliant to HACCP systems
Excellent release properties	⇒ Product's waste reduction and cost saving
Resistance to high temperature	⇒ Total flat running and long service life



45° merge dough conveying over double fixed knife edge



Inclined conveying towards multistory open air proofer

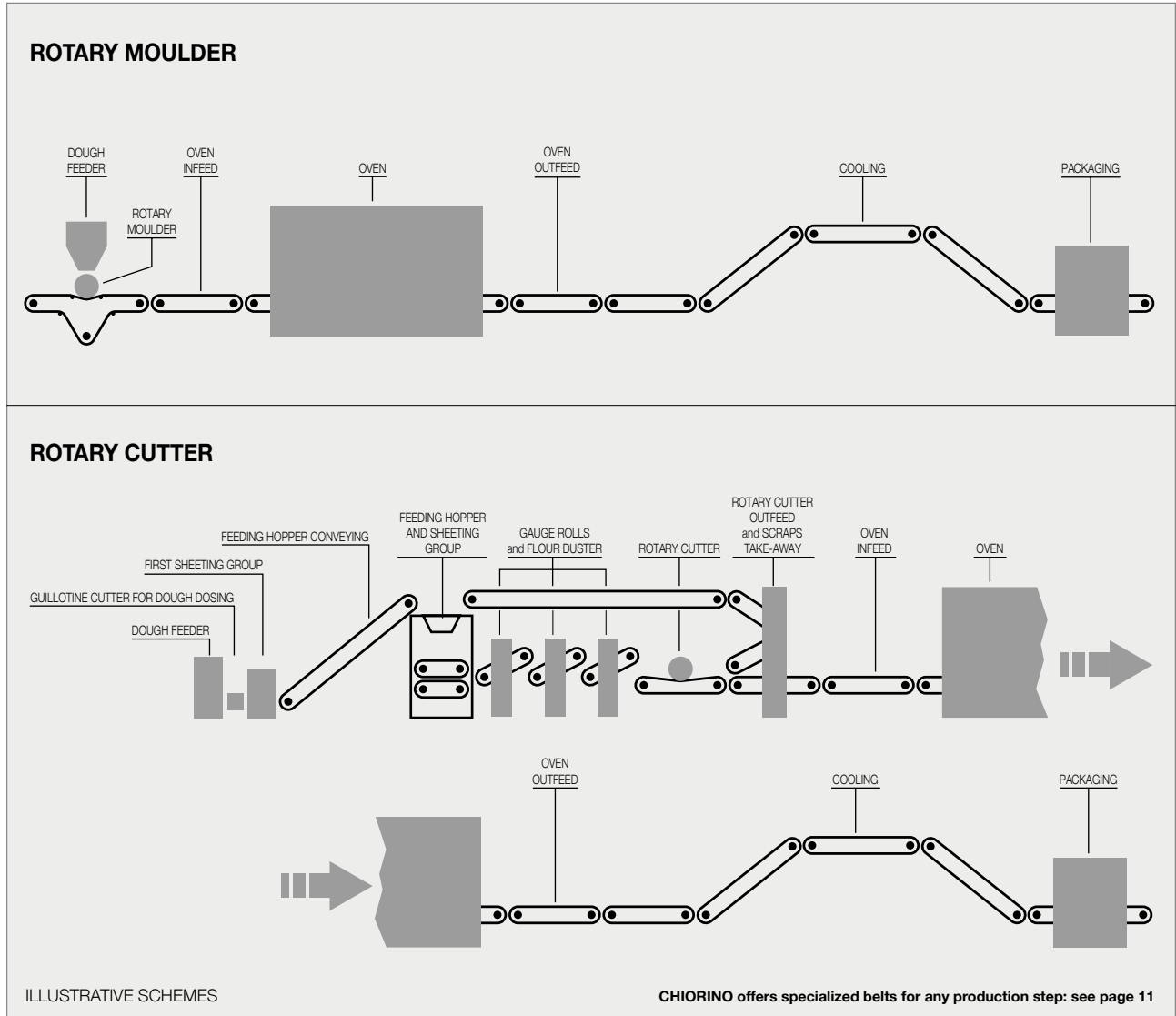


Gauge rolls for dough sheets production



Crackers cooling conveyor

## Industrial line for biscuits and crackers production



Rotary cutter and scrap return belt



Biscuits cooling conveyor

# Snacks

The versatile range of CHIORINO food belts is suitable for processing of any kind of snack, like bretzels, bars, potato chips, frozen fries etc.

## Release properties

The excellent release properties of the dehesive CHIORINO belts assure the best performances even for the most sticky products, such as muesli bars etc.

KEY FEATURES		BENEFITS
High resistance to baking oils	⇒	Long service life
Fray-free edges	⇒	Product safety and no contamination
High resistance to cleaning procedures	⇒	Fully compliant to HACCP systems
Suitable for high speed production	⇒	Cost saving
Wide range of blue surface belts	⇒	Easier impurities identification and lower light reflection



Muesli conveying on a dehesive belt



Fries conveying after frying



Flavoured snacks conveying



Frozen corn (-30°C) conveying



# Packaging

The wide range of CHIORINO belts assures safe and hygienic packaging of all baked products or snacks.

## **HP** elastic belts

The CHIORINO HP® fibreless and **highly resilient** food belts can be easily fitted on spreaders or electronic check-weighers, assuring the following benefits:

- ⇒ Total feeding precision
- ⇒ Quick and easy to fit and replace without tensioning devices
- ⇒ Fully HACCP compliant thanks to their extraordinary resistance to cleaning systems
- ⇒ Blue surface and a wide range of patterns

## Vertical form-fill-seal belts

CHIORINO manufactures **truly endless** belts for vertical form-fill seal belts with different coverings according to the type of packaging used:

- ⇒ **HS W white**: both for PVC and polyethylene films and abrasive packagings (paper, fabric, etc.)
- ⇒ **R purple red**: both for PVC and polyethylene films and abrasive packagings (paper, fabric, etc.)
- ⇒ **B beige**: for very abrasive packagings.

Also available with **special executions** such as countersunks, punched holes, diagonal slots, groovings, application of polyurethane or rubber timing belts.



Square bread packaging



Bread check-weighing



Potato chips vertical form-fill-sealing

## Technical data

Type	Conveying surface coating		Driving surface coating		Perm. artist.	Total thicken.	Min. diam. <sup>1</sup>	Pull for 1% elong. <sup>2</sup>	Max. admiss. pull	Temperature resistance		Coeff. of friction <sup>3</sup>
	material	colour	material	colour						mm	mm	

### Premium line

EL2-U10 HP W	TPU	white	TPU	white		1.0	10	2	2	-30	60	MF
EL2-U10 HP blue	TPU	blue	TPU	blue		1.0	10	2	2	-30	60	MF
EL3-U15 HP PN blue	TPU	blue	TPU	blue		1.5	10	3	3	-30	60	MF
1M5 U0-U2 HP W A	TPU	white	TPU	light blue	•	0.7	↗	5	5	-30	110	MF
1M5 U0-U2 HP W S A	TPU	white	TPU	light blue	•	0.7	↗	5	5	-30	110	HF
1M5 U0-U2 HP blue S A	TPU	blue	TPU	light blue	•	0.7	↗	5	5	-30	110	HF
1M5 U0-U2 HP VL blue A	TPU	blue	TPU	light blue	•	0.7	↗	5	5	-30	110	MF
1T6 U0-U2 HP W A	TPU	white	TPU	light blue	•	0.8	↗	6	6	-30	110	MF
2M5 U0-U0 HP A	TPU	white	TPU	white	•	1.0	↗	6	12	-30	110	LF
2M5 U0-U2 HP W A	TPU	white	TPU	light blue	•	1.3	↗	6	12	-30	110	MF
2M5 U0-U2 HP blue A	TPU	blue	TPU	light blue	•	1.3	↗	6	12	-30	110	MF
2M5 U0-U2 HP W S A	TPU	white	TPU	light blue	•	1.3	↗	6	12	-30	110	HF
2M5 U0-U2 HP blue S A	TPU	blue	TPU	light blue	•	1.3	↗	6	12	-30	110	HF
2M5 U0-U2 HP VL blue A	TPU	blue	TPU	light blue	•	1.3	↗	6	12	-30	110	MF
2M5 U0-U2 HP PN W A	TPU	white	TPU	light blue	•	1.6	↗	6	12	-30	110	MF
2M5 U0-U2 HP PN blue A	TPU	blue	TPU	light blue	•	1.6	↗	6	12	-30	110	MF
2MT6 U0-0 HP	cotton	natural	TPU	light blue		1.5	↗	6	12	-30	100	LF
2T12 U0-U2 HP VL W A	TPU	white	TPU	light blue	•	1.6	↗	12	24	-30	110	MF

### Performance line

EL2-U10 W	TPU	white	TPU	white		1.0	10	2	2	-20	60	LF
EL4-U20 W	TPU	white	TPU	white		2.0	10	4	4	-20	60	LF
1M5 U0-U2 W A	TPU	white	TPU	white	•	0.7	↗	5	5	-20	100	LF
1M5 U0-U2 W A LF VL	TPU	white	TPU	white	•	0.7	↗	5	5	-20	100	LF
1M5 U0-U2 D W A	TPU	white	TPU	white	•	0.7	↗	5	5	-30	100	HF
2M5 U0-U1 W S A	TPU	white	TPU	white	•	1.3	↗	6	12	-20	100	HF
2M5 U0-U1 blue S A	TPU	blue	TPU	light blue	•	1.3	↗	6	12	-20	100	HF
2M5 U0-U2 W A	TPU	white	TPU	white	•	1.3	↗	6	12	-20	100	MF
2M5 U0-U2 LF W A	TPU	white	TPU	white	•	1.3	↗	6	12	-20	100	LF
2T8 U0-0	PET	natural	TPU	white		1.3	↗	8	16	-20	100	LF
2M8 U0-U2 W A SP	TPU	white	TPU	white	•	1.5	↗	8	16	-20	100	LF
2T12 U0-U2 W SP	TPU	white	TPU	white	•	1.6	30	12	24	-20	100	LF
2M12 U0-U3 R W A	TPU	white	TPU	white	•	1.7	40	12	24	-20	100	LF
2M12 U0-U15 LT W A	TPU	white	TPU	white	•	6.0	50	12	24	-20	100	MF
2M5 U0-U-S2 W	silicone	white	TPU	natural	•	1.3	↗	6	12	-30	100	HF
2MT8 S0-S2	silicone	transpar.	silicone	white	•	1.3	30	8	16	-40	160	HF
2T12 U0-U-S2	silicone	transpar.	TPU	grey	•	1.4	30	12	24	-30	100	HF
SILON 25 W	PET	white	PET	white		2.5	30	10	10	-20	120	LF

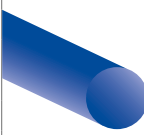
<sup>1</sup> Minimum roller diameter is dependent on the joint recommended by CHIORINO.

<sup>2</sup> EL series: pull for 8% elongation.

<sup>3</sup> Conveying surface coefficient of friction: **LF** low, **MF** medium, **HF** high

↗ knife edge

### round belts

	Type	Material	Diameter	Pull for 8% elongation	Minimum pulley's diameter
			mm	N	mm
	RU-3 HP blue	TPU	3	15	20
	RU-4 HP blue	TPU	4	26	35
	RU-5 HP blue	TPU	5	42	45
	RU-6 HP blue	TPU	6	60	50
	RU-8 HP blue	TPU	8	110	70
	RU-10 HP blue	TPU	10	170	80

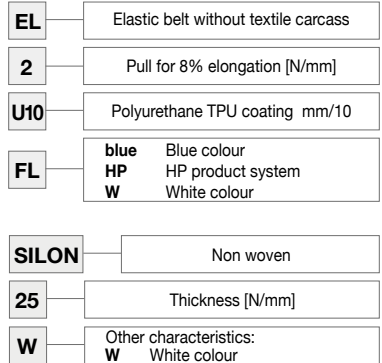
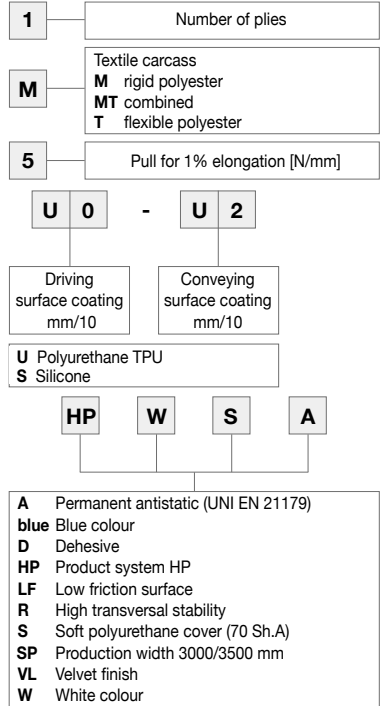
Applications <sup>4</sup>															
BREAD and PIZZA	BISCUITS and CRACKERS														
	Dough feeder	First sheeting group	Feeding hopper conveying	Feeding hopper and sheeting group	Gauge rolls	Rotary cutter	Rotary moulder	Rotary cutter outfeed	Oven infeed	Oven outfeed	Cooling	PASTA	SNACKS	CHECH-WEIGHERS	PACKAGING

																• •	EL2-U10 HP W
																• •	EL2-U10 HP blue
																• •	EL3-U15 HP PN blue
																• •	1M5 U0-U2 HP W A
																• •	1M5 U0-U2 HP W S A
																• •	1M5 U0-U2 HP blue S A
																• •	1M5 U0-U2 HP VL blue A
																• •	1T6 U0-U2 HP W A
																• •	2M5 U0-U0 HP A
																• •	2M5 U0-U2 HP W A
																• •	2M5 U0-U2 HP blue A
																• •	2M5 U0-U2 HP W S A
																• •	2M5 U0-U2 HP blue S A
																• •	2M5 U0-U2 HP VL blue A
																• •	2M5 U0-U2 HP PN W A
																• •	2M5 U0-U2 HP PN blue A
																• •	2MT6 U0-0 HP
																• •	2T12 U0-U2 HP VL W A

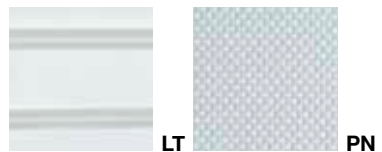
																• •	EL2-U10 W
																• •	EL4-U20 W
																• •	1M5 U0-U2 W A
																• •	1M5 U0-U2 W A LF VL
																• •	1M5 U0-U2 D W A
																• •	2M5 U0-U1 W S A
																• •	2M5 U0-U1 blue S A
																• •	2M5 U0-U2 W A
																• •	2M5 U0-U2 LF W A
																• •	2T8 U0-0
																• •	2M8 U0-U2 W A SP
																• •	2T12 U0-U2 W SP
																• •	2M12 U0-U3 R W A
																• •	2M12 U0-U15 LT W A
																• •	2MT8 S0-S2
																• •	2M5 U0-U-S2 W
																• •	2T12 U0-U-S2
																• •	SILON 25 W

<sup>4</sup> This chart provides guidance to the belt selection based on CHIORINO's field experience, but it is not binding.

### EXPLANATION OF TYPE DESIGNATION



### SURFACE PATTERNS



## Endless vertical form-fill-seal belts

	Type	Traction core	Outer cover			Inner cover			Total thickness	Pull for 1% elongation	Temperature resistance	
			material	colour	Sh.A	material	colour	Sh.A			min. °C	max. °C
	<b>MF R-052</b>	---	elastomer	purple red	45	elastomer	purple red	45	5÷15	0.1 <sup>5</sup>	-20	+100
	<b>MF R-053</b>	---	elastomer	purple red	45	elastomer	black	65	5÷15	0.1 <sup>5</sup>	-20	+100
	<b>MF HS W-300</b>	PET	elastomer	white	40	---	black	---	6÷12	10.0	-20	+100
	<b>MF R-300</b>	PET	elastomer	purple red	45	---	black	---	6÷12	10.0	-20	+100
	<b>MF B-300</b>	PET	elastomer	beige	50	---	black	---	6÷12	10.0	-20	+100

<sup>5</sup> Strength in N/mm<sup>2</sup> at 10% elongation

The technical data are valid under normal environmental conditions and are subject to change without notice.

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