







Packaging Steel

Product range rasselstein® Packaging Steel

engineering.tomorrow.together.

thyssenkrupp

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rasselstein® – for those who can!

rasselstein® packaging steel stands for premium quality.
And is now also available CO_2-reduced as bluemint® rasselstein®.

About our packaging steel

More than 250 years of tradition, an immeasurable wealth of experience, state-of-the-art technologies and, above all, highly qualified employees – this is the unique basis for our outstanding product and service portfolio.

In Andernach, at the world's largest production site for packaging steel, we manufacture tinplate or special chromium-coated steel in thicknesses ranging from 0.100 to 0.499 mm – with or without organic coating (lacquer, film) depending on customer requirements. As one of Europe's largest packaging steel manufacturers, we supply around 400 customers in 80 countries.

More than 95 percent of the material is used in the packaging sector, for example for packaging food, beverages or aerosols. But the versatile material is also being used more frequently in the non-packaging sector, for example in the automotive and electronics industries.

Our packaging steel can be recycled over and over again almost 100 percent into a high-quality steel product. And as often as required, without any loss of quality.

We take responsibility for the future – with resource-conserving processes and a closed material loop for steel.

Packaging steel expertise

thyssenkrupp Rasselstein has the world's biggest production site for packaging steel in Andernach and from here, develops the intelligent solutions that make tinplate even more efficient, thinner, stronger and easier to shape.

Efficient.
Innovative.
Sustainable.

We produce the packaging steel of the future – efficient, process-optimized, sustainable.

We are happy to support you in increasing the efficiency of your processes and products. Day by day, we work on evolving our steel grades so they will meet your requirements today and in the future. Among our packaging steels there is sure to be an optimum specification for your application too.

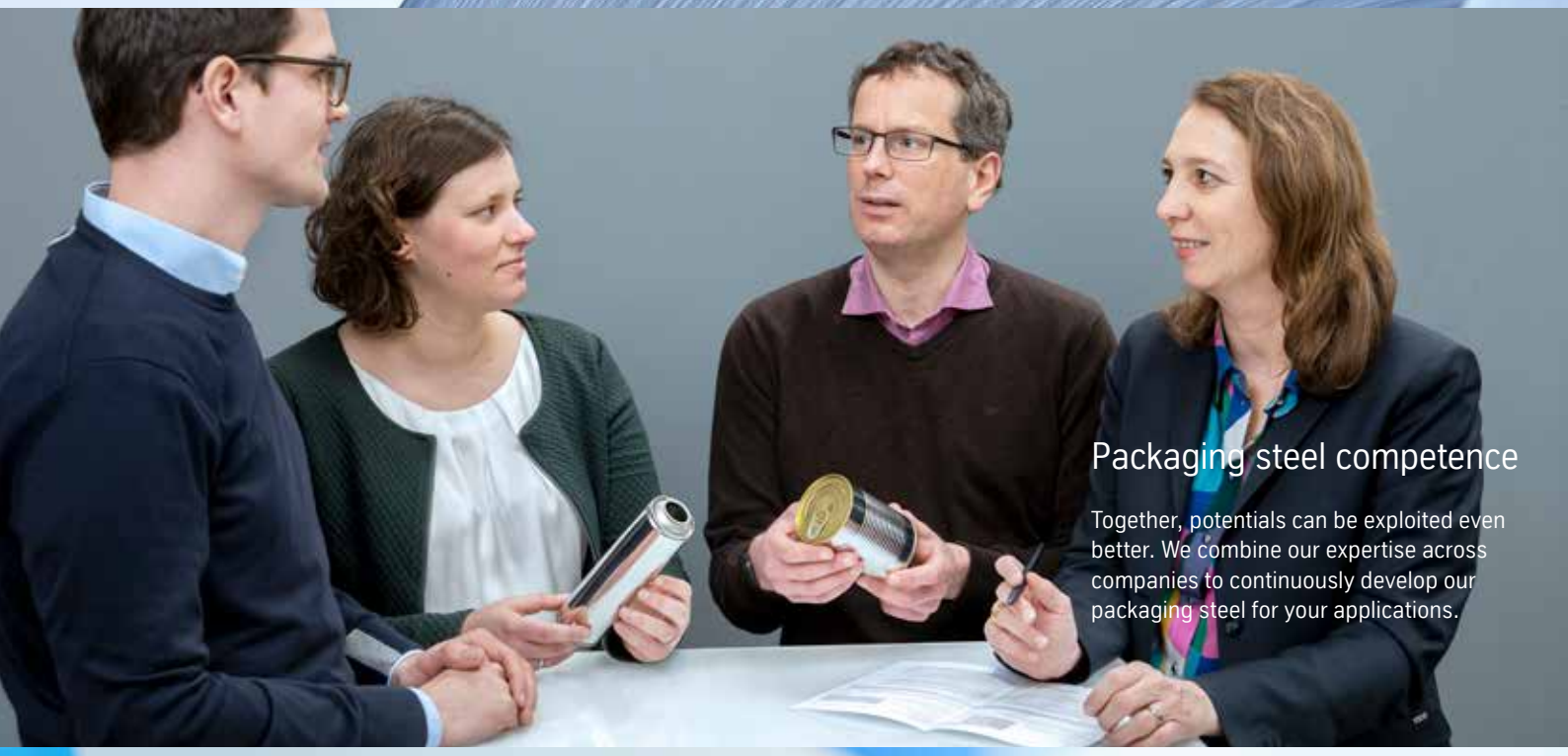
We work together with you to develop solutions that are tailored to your individual requirements. Contact us!

rasselstein®– more than expected!

Our packaging steel meets the highest quality standards. Personal customer advisory service, a competence network along the value chain and digital services for your order complete our portfolio.

Tinplate for the highest requirements

rasselstein® packaging steel stands for continuously evolving material grades in premium quality. As coil, sheet, scroll sheet or narrow strip.

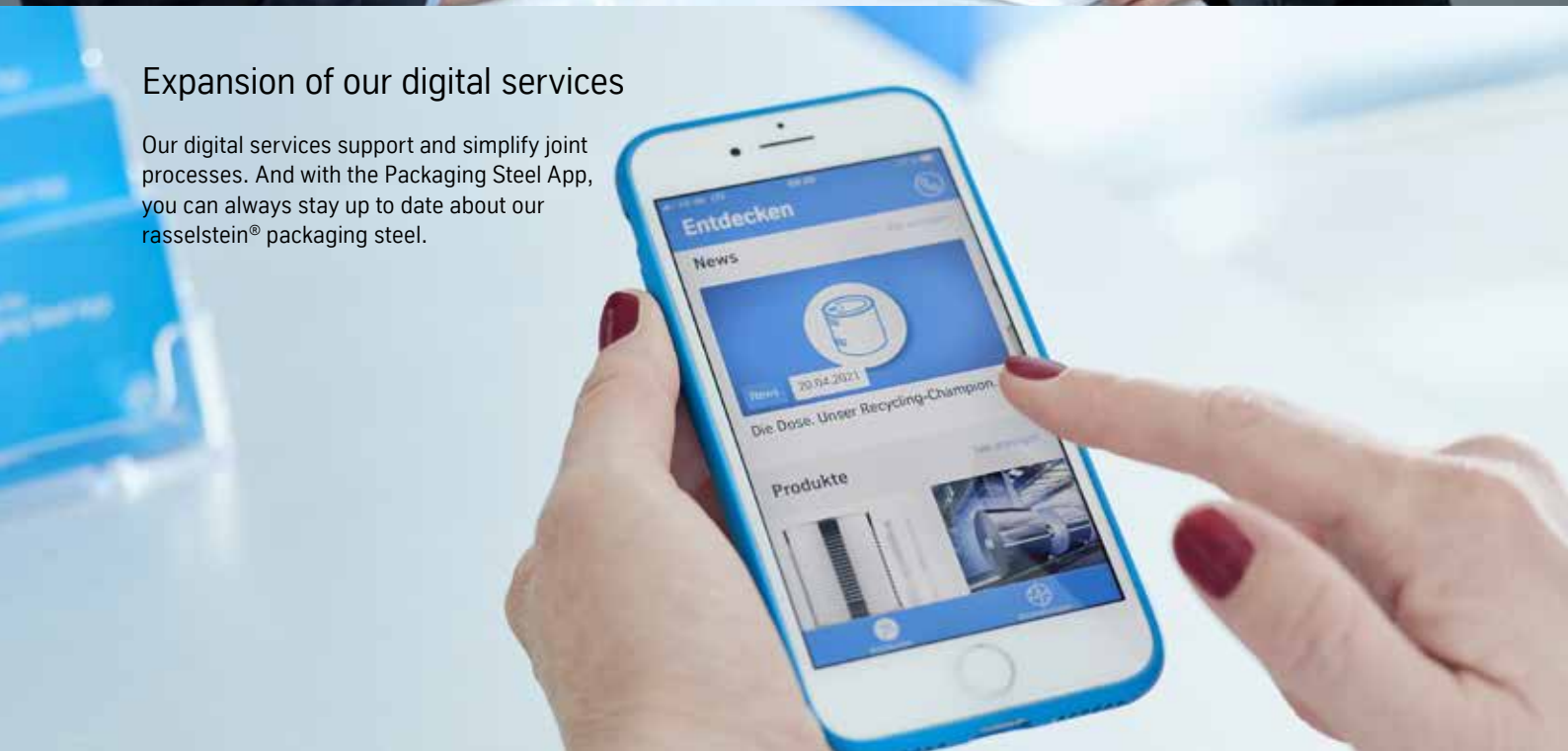


Packaging steel competence

Together, potentials can be exploited even better. We combine our expertise across companies to continuously develop our packaging steel for your applications.

Expansion of our digital services

Our digital services support and simplify joint processes. And with the Packaging Steel App, you can always stay up to date about our rasselstein® packaging steel.



RIGHT HERE.
RIGHT NOW.

bluemint® Steel

The use of bluemint® rasselstein® tinplate can save up to 69% CO_2 already today. And make your own production story even more sustainable.

For bluemint® steel, alternative raw materials are used in the production process. In particular, this reduces the use of coal for the reduction process in the blast furnace. The result is a reduction in CO_2 emissions while maintaining the high quality of the material.

The real CO_2 savings can help you and your customers achieve the Scope-3 goal. And all this without carbon offsetting; only by using alternative source materials in the steel production.

bluemint® steel does not differ from existing steel grades in their material properties – except in its specific CO_2 emissions. The usual high quality of rasselstein® packaging steel is therefore maintained.

Offering bluemint® steel is the first transformation success within the framework of thyssenkrupp Steel's climate strategy.

In the coming years, we will be investing intensively in innovations and technologies within the group of enterprises to bring our customers ever closer to the common goal of climate neutrality and a green steel product.

If you would like to know more about bluemint® rasselstein®, just contact us via sustainability.packagingsteel@thyssenkrupp.com

All steel grades are available

No new qualification required

No compensation certificate

Applicable to your Scope 3 emissions

Grades

In EN 10202:2022, the relevant tensile test parameters were defined in order to describe the temper grades more precisely depending on their properties.

Temper grade	Standard designation	Tensile yield point $R_{p0,2}$ Lower yield strength R_{eL} Upper yield strength R_{eH} [MPa]
EN 10202:2022		
Steel grade designation		
rasselstein® TS230	TS230	230 +/– 50
rasselstein® TS245	TS245	245 +/– 50
rasselstein® TS260	TS260	260 +/– 50
rasselstein® TS275	TS275	275 +/– 50
rasselstein® TS290	TS290	290 +/– 50
rasselstein® TS340	TS340	340 +/– 50
rasselstein® TS480	TS480	480 +/– 50
rasselstein® TS520	TS520	520 +/– 50
rasselstein® TS550	TS550	550 +/– 50
rasselstein® TH200	–	200 +/– 50
rasselstein® TH230	–	230 +/– 50
rasselstein® TH245	–	245 +/– 50
rasselstein® TH275	–	275 +/– 50
rasselstein® TH330	TS330	330 +/– 50
rasselstein® TH340	–	340 +/– 50
rasselstein® TH360	TH360	360 +/– 50
rasselstein® TH415	TH415	415 +/– 50
rasselstein® TH435	TH435	435 +/– 50
rasselstein® TH450	–	450 +/– 50
rasselstein® TH460	TH460	460 +/– 50
rasselstein® TH480	TH480	480 +/– 50
rasselstein® TH520	TH520	520 +/– 50
rasselstein® TH550	TH550	550 +/– 50
rasselstein® TH580	TH580	580 +/– 50
rasselstein® TH620	TH620	620 +/– 50
rasselstein® TH650	TH650	650 +/– 50
rasselstein® TH700	–	700 +/– 50

The applicable strength parameter depends on the steel grade and can be found in the EN 10202:2022 standard.
In addition to the standard grades above, we offer steel grades with special properties for the respective application.
All grades are also available as bluemint® Steel.

	Standard designation	Nominal hardness [HR30TS]	Nominal tensile strength [MPa]
AISI/ASTM 623			
Steel grade designation			
rasselstein® T 1	T 1	49 +/- 4	
rasselstein® T 2	T 2	53 +/- 4	
rasselstein® T 3	T 3	57 +/- 4	
rasselstein® T 4	T 4	61 +/- 4	
rasselstein® T 5	T 5	65 +/- 4	
rasselstein® DR 7	DR 7		480 +/- 50
rasselstein® DR 7.5	DR 7.5		520 +/- 50
rasselstein® DR 8	DR 8		550 +/- 50
rasselstein® DR 8.5	DR 8.5		580 +/- 50
rasselstein® DR 9	DR 9		620 +/- 50
rasselstein® DR 9.5	DR 9.5		660 +/- 50

All grades are also available as bluemint® Steel.

	Lower yield strength R_{eL} [MPa]	Minimum elongation at fracture [%]
rasselstein® Solidflex: higher-strength packaging steel with good forming properties		
Steel grade designation		
rasselstein® Solidflex 600	600 +/– 50	5
rasselstein® Solidflex 620	620 +/– 50	5
rasselstein® Solidflex 650	650 +/– 50	5

All grades are also available as bluemint® Steel.

	Upper yield strength R_{eL} [MPa]
rasselstein® Solid: high-strength packaging steel	
Steel grade designation	
rasselstein® Solid 650	650
rasselstein® Solid 700	700
rasselstein® Solid 750	750

All grades are also available as bluemint® Steel.

	Proof strength $R_{p0.2}$ [MPa]	Typical elongation [%]
rasselstein® High Formability: soft, non-ageing packaging steel with high breaking elongation		
Steel grade designation		
rasselstein® High Formability 200	200 +/– 50	38
rasselstein® High Formability 230	230 +/– 50	35
rasselstein® High Formability 245	245 +/– 50	33

All grades are also available as bluemint® Steel.

Tinplate

Coating weights for tin

	[g/m²] one-side	corresponds to [lb/bb] both-sides
EN 10202:2022		
	0.60	0.050
	1.00	0.089
	1.40	0.125
	2.00	0.179
	2.80	0.250
	4.00	0.357
	5.00	0.446
	5.60	0.500
	8.40	0.750
	11.20	1.000
AISI/ASTM		
	0.60	0.05
	1.10	0.10
	1.70	0.15
	2.20	0.20
	2.80	0.25
	3.90	0.35
	5.60	0.50
	8.40	0.75
	11.20	1.00

The above coating weights are available for equal or differential coating.
Deviations in coating weights are possible in the range 0.60 to 11.20 g/m² (0.050 to 1.000 lb/bb).

One-side tin coatings possible in the range 0.50 to 5.60 g/m².
Marking for differential coatings in accordance with Euronorm, alternative markings by arrangement.

Other tin coatings on request.

Passivation for tinned grades

	Code	Chromium coating [mg/m²] per side	Titanium [mg/m²] per side
EN 10202:2022			
CFPA (Chromium-free Passivation Alternative)	555	–	1 +/- 0.2
Dip passivation	300	1–3	–
Electrochemical passivation	310	2–7	–
Electrochemical passivation	311	3.5–9	–
Electrochemical passivation	314*	>5	–

* On request.

Special chromium-coated, Electrolytic zinc coated steel, Blackplate, Oiling

	Average coating weight [mg/m²] per side	
	min.	max.
EN 10202:2022		
Coating weights for TCCT® (ECCS-RC)		
Total chromium	50	250
Chromium oxide	2	35

Note: The total chromium is the sum of metallic chromium and chromium oxide.

	Nominal coating weight [g/m²] per side
Special product: Electrolytic zinc coated steel **EN 10152**	
	11 (1.5 µm)
Uncoated blackplate **EN 10205**	

Oiling

	EN 10202:2022 Tinplate	**EN 10202:2022** TCCT®	Blackplate
DOS	x	x	–
ATBC	x	–	–
Anticorit	–	–	x

DOS and ATBC are suitable for food contact.

Oiling (in accordance with European Standard EN 10202:2022) is applied uniformly across the surface in certain quantities to be compatible with lacquering, printing and handling operations.
Our standard is oil coatings with max. 6 mg/m².

Finishes

	Roughness [µm]
EN 10202:2022	
Surface finish	
bright	≤ 0.30
fine stone	0.25 – 0.45
stone	0.35 – 0.60
silver	0.40 – 2.25
matt	0.40 – 2.25

Different roughness values per side on request.
Closer tolerances within the roughness ranges in accordance with the standards or on request.

Organic coating

Coil coating with film

	Color	Thickness [µm]	Surface finishing
Film			
PET	Clear	12, 23	TCCT®
PET	Clear	15	TCCT®
PET	White	23	TCCT®
PET B*	White	20	TCCT®
PP	Clear	100, 200	Tinned/TCCT®

Combinations of coatings, other film thicknesses or colors as well as base materials available on request.
* For subsequent painting on the back side and/or printing.

Coil coating with lacquer

Lacquer		
Single-layered lacquer (one side or both sides)	Clear, gold	For example for mounting cups. Coating weights for lacquer or combination options with PP film and base materials available on request.
Lacquer on both sides	Silver, gold	For example for tab stock. Coating weights for lacquer and base material options available on request.

Other applications on request.

Lacquered sheets

Colors and coating weights (one side or both sides) available on request.

BPA NI solutions are also available.

Dimensions

	Thickness [mm]	SR BA width [mm]	SR CA width [mm]	DR BA width [mm]	DR CA width [mm]
Coils					
	< 0.100*	○	–	○	○
	0.100 – 0.119	600 – 900*	–	600 – 1,000*	–
	0.120 – 0.129	600 – 900*	–	600 – 1,090	–
	0.130 – 0.139	600 – 1,000*	–	600 – 1,090	600*** – 1,090
	0.140 – 0.149	600 – 1,050	–	600 – 1,090	600*** – 1,090
	0.150 – 0.179	600 – 1,090	600*** – 1,090	600 – 1,220**	600*** – 1,090
	0.180 – 0.199	600 – 1,170	600*** – 1,170	600 – 1,220**	600*** – 1,220**
	0.200 – 0.499	600 – 1,220**	600*** – 1,220**	600 – 1,220**	600*** – 1,220**
	≥ 0.50	○	○	○	○

Max. width for TCCT®: 1,250 mm.
Additional dimensions on request.
After consultation for rasselstein® Solidflex, rasselstein® High Formability and rasselstein® Solid.
○ On request.
* After consultation.
** Up to 1,230 mm by arrangement.
*** After consultation for width < 700 mm.

Sheets					
	0.100 – 0.119	600 – 900*	–	600 – 1,000*	–
	0.120 – 0.129	600 – 900*	–	600 – 1,090	–
	0.130 – 0.139	600 – 1,000*	–	600 – 1,090	600** – 1,090
	0.140 – 0.149	600 – 1,050	–	600 – 1,090	600** – 1,090
	0.150 – 0.179	600 – 1,090	600** – 1,090	600 – 1,120	600** – 1,090
	0.180 – 0.199	600 – 1,140	600** – 1,140	600 – 1,140	600** – 1,140
	0.200 – 0.499	600 – 1,140	600** – 1,140	600 – 1,140	600** – 1,140
	≥ 0.50	○	○	○	○

Sheet length: Straight cut: 450 – 1,200 mm, scroll cut: 560 – 1,150 mm.
TCCT®: min. 660 mm – 510 mm, max. 1,250 mm x 980 mm.
After consultation for rasselstein® Solidflex, rasselstein® High Formability and rasselstein® Solid.
○ On request.
* After consultation.
** After consultation for width < 700 mm.

Shipping weights and transport dimensions

	Alignment	max. weight [t]	max. outside diameter [mm]	Inside diameter [mm]	Inside diameter* [mm]
Coils					
	vertical axis	3.0 – 12.7	1,630	420	450/508
	horizontal axis	3.0 – 18.0	1,850	508	420/450
Sheets					
	–	2.5	–	–	–

* On request.

Narrow strip coated				
	Thickness [mm]	Width [mm]	Inside diameter [mm]	Coil weight [kg/mm strip width]
Dimensions according EN 10140				
	0.100 – 0.149*	20 – 460	400/450/508	2 – 10
	0.150 – 0.199	20 – 540	400/450/508	2 – 10
	0.200 – 0.499	20 – 600	400/450/508	2 – 10

Max. width for TCCT®: 625 mm.
* On request.

Blackplate strip uncoated

Quality according to EN 10139, dimensions according to EN 10140

		Delivery conditions
Grades		
Steel grade designation	Standard designation	
rasselstein® DC 01	DC 01	LC C290–C690
rasselstein® DC 03	DC 03	LC C290–C590
rasselstein® DC 04	DC 04	LC C290–C590
rasselstein® DC 05	DC 05	LC
rasselstein® DC 06*	DC 06	LC

* On request.

Oiling

Anticorit

Oiling weights by arrangement (min. 300 +/– 100 mg/m² – max. 750 +/– 100 mg/m²).

Finishes

	Roughness [µm]
EN 10202:2022	
Surface finish	
smooth	< 0.35
stone finish fine	0.25–0.45
stone finish	0.35–0.60
matt fine	0.75–1.25
matt	1.00–2.00
matt rough	1.75–2.25

C590 and C690 only available in “stone finish” surface with minimum values also < 0.35 µm.

Dimensions

Thickness [mm]	Width [mm]		Inside diameter [mm]	Coil weight [kg/mm strip width]
< 0.150	○	○	400/450/508	2–10*
0.150–0.199	10–540	650–1,080	400/450/508	2–10*
0.200–0.499	10–600	650–1,200	400/450/508	2–10*

Axis: horizontal/vertical.
* Higher coil weights on request. After consultation up to 1,250 mm possible.
○ On request.

Steel
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