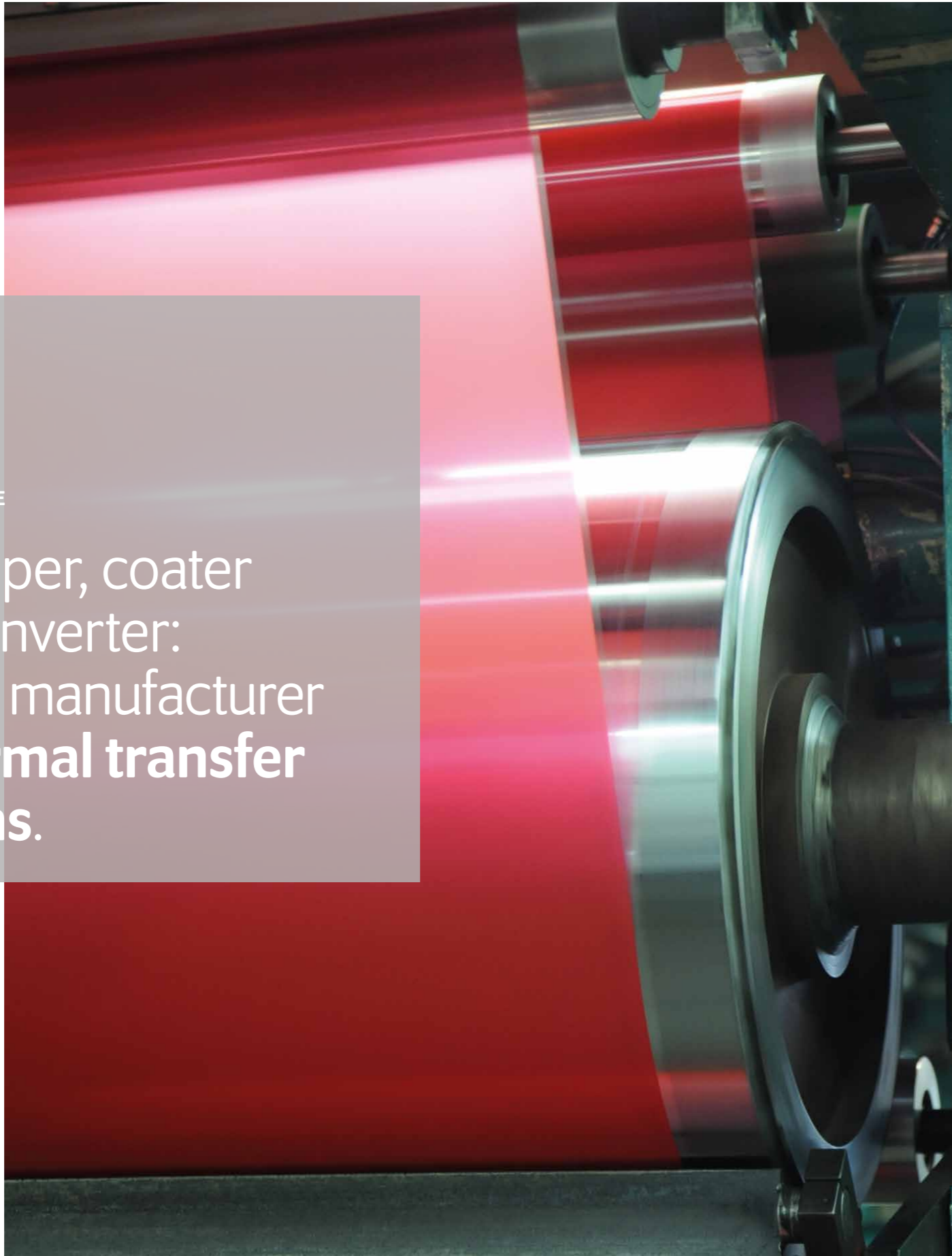




CALOR

THERMAL TRANSFER RIBBONS

The right ribbon for every purpose



CALOR AT A GLANCE

Developer, coater and converter:
We are manufacturer of **thermal transfer ribbons**.

CALOR

The experts in thermal transfer ribbons

Since CALOR was founded in 1991 (in Baesweiler, close to Aachen in Germany) our passion has been thermal transfer ribbons. As a manufacturer and converter we supply products of outstanding characteristics to label manufacturers, system integrators and OEM's in Europe and all over the world.

Since the acquisition of REGMA (in Normandy, France) in 2002, we have been coating our own thermal transfer ribbon qualities and can develop new products with special properties. As experts in thermal transfer ribbons, we offer a comprehensive standard product range, which covers the majority

of applications for the variable printing of labels and packaging film. We offer more than 100 different colours and 5 quality levels. On the other hand, we can create new products and support you by developing solutions for the special applications of your customers. Benefit from our thirty years of experience in the market: Short delivery times, advantageous prices, individual commercial and technical advice and personal customer care are all aspects of great importance to us.

Take a look for yourself and get to know us. Sample rolls are ready for you to try out, brochures, data sheets and technical information are at your disposal.

made to measure	compact	<p>Product line „compact“ The standard range</p> <ul style="list-style-type: none"> • Selected, proven qualities • 100 standard dimensions • Short lead-times, bestsellers from stock • Attractive prices 	
	compact	<p>Product line „made to measure“ The flexible roll production</p> <ul style="list-style-type: none"> • A comprehensive product range with solutions also for difficult materials • Ribbons made to order in all dimensions 	
world of colours	special	<p>Product line „special“ Solutions for special applications</p> <ul style="list-style-type: none"> • Ribbon qualities for card and sign printing, security printing, franking systems, ... • The development of customised ribbon qualities and special colours 	
	special	<p>The widest range of colours</p> <ul style="list-style-type: none"> • More than 100 different colours in 5 quality levels • 18 standard dimensions available in small quantities starting from 5 rolls 	

PRODUCT RANGE

Black thermal transfer ribbons

Flat-head

WAX

WAX/RESIN

RESIN

- UL-certified
- BS 5609-certified
- Top price/performance ratio
- Food packaging
- Thermal Transfer Overprint on packaging film
- Max. printing speed
- Printing quality
- Flexibility
- Smear resistance
- Mechanical resistance
- Chemical resistance
- Heat resistance
- Price

Flat-head printers
The "flat-head" is the most frequently used print head: The dotline is located about 5 to 10 millimetres away from the edge of the carrier plate. In most cases, the ribbon is deflected upwards using an additional roller. After the ink transfer, the separation of the media takes place with a certain spatial and temporal delay. The heat impulse is not very strong, but lasts relatively long.

Wax
High sensitivity, flexibility and blackness, low resistance, low price

Wax/resin
Increased resistance, high resolution, highest printing speed (NE), universally usable

Near-edge printers
In the case of "near-edge" and "corner edge" print heads, the dot-line is located quite close to the edge of the ceramic carrier plate. Without any further deflection, the ribbon is guided upwards at a sharp angle. The ribbon and label are separated immediately after the ink transfer. The heat impulse is strong, but brief. "Near-edge" printers achieve the best results when used with specially matched thermal transfer ribbons.

Resin
Very good resistance, high durability, for smooth label materials

ratio T 152 Sw

low high

The mother-of-all thermal transfer ribbons for standard applications on paper. Economic efficiency included! The ideal solution when it comes down to the price.

prima T 151 Sw

low high

prima is a very sensitive classic wax quality, which saves printing heads. High-resolution and very black printing also on vellum.

brillant T 143 Sw

low high

brillant is a premium wax-grade quality enhanced with artificial resins for universal use. High pigment density, a high resolution and good sensitivity.

brillant+ T 154 Sw

low high

brillant+ is a premium wax+-grade quality that combines exceptional print results on many label materials and a good mechanical resistance. High resolution for printing small characters, fine lines and exceptional barcode quality.

mix T 459 Sw

low high

A universal wax/resin quality with an excellent price/performance ratio. High-quality product labelling on many different materials. Good smear resistance.

vario+ T 455 Sw

low high

An especially flexible ribbon grade with good smear resistance and resistance against alcohol and brake fluid. Excellent print results on many materials, also on synthetic papers.

ideal T 456 Sw

low high

Flat-head ribbon for a large variety of applications with good overall resistance – focused on all kinds of paper materials. Prints small barcodes and text in high resolution.

B 110 A T 449 Sw

low high

Premium wax/resin quality for a huge range of applications and with good resistance against chemicals. The resolution of fine elements is excellent both on smooth surfaces and on rough papers.

T 433 Sw

low high

Very flexible thermal transfer ribbon with a high resolution and broad range of applications. High smear resistance and good resistance against diesel and oil. High sensitivity.

T 454 Sw

low high

All-round premium wax/resin grade for difficult label materials. Good mechanical resistance.

resist T 506 Sw

low high

Our best-selling standard resin quality with excellent all-round properties in print quality, flexibility and resistance.

resist+ T 555 Sw

low high

resist+ is a very sensitive and versatile resin quality that can be used for all kinds of label materials. The printed image is very dark.

B 110 CR T 518 Sw

low high

A particularly high-grade thermal transfer ribbon with a broad range of applications. High resolution – good for 600 dpi printers – and very good resistance. Also suitable for printing on relatively rough papers.

T 507 Sw

low high

Exceptional standard resin quality for universal application with good mechanical and chemical resistance. Prints in very good quality on all materials - from vellum to PET. Good price/performance ratio.

T 559 Sw

low high

Standard resin ribbon with an interesting price that displays a very good print quality on all kind of materials - from paper to PET.

T 549 Sw

low high

Premium resin quality with very good mechanical and excellent chemical resistance. Suitable for demanding industrial applications because of its remarkable resistance against alcohol, gasoline, brake fluid and hydraulic oil.

T 649 Sw

low high

Flat-head resin quality for textile label materials (Nylon taffeta and polyester satin) with high resistance against washing, dry-cleaning and ironing.

T 741 Sw

low high

The solution for heat-resistant printing on paper – up to 200°C. Very good print quality on coated papers.

T 845 Sw

low high

High-performance resin quality with exceptional durability. Best mechanical resistance, withstands temperatures of over 200°C and all chemicals with the exception of organic solvents. Not flexible – needs very smooth synthetic label materials. Good for PVC cards.

T 850 Sw

low high

For high resolution printing and exceptional chemical resistance. Resistant even against organic solvents, when printed on special label materials. Very resistant print on heat-shrinking tubes for wire marking and demanding sterilisation applications.

T 742 Sw

low high

Resin thermal transfer ribbon with extremely high resistance against various chemicals, also against organic solvents like acetone, toluene, MEK, hexane, etc. if printed on dedicated label materials. For the highest requirements in laboratories and chemical industry.

Near-edge

WAX

W/R

RESIN

ecoNE N 102 Sw

low high

Dark near-edge wax-grade quality for good print results on coated paper labels and applications where mechanical durability is not the priority.

N 448 Sw

low high

Universal wax/resin near-edge quality particularly suitable for difficult and rough paper materials. For near-edge label printers and direct printing systems.

perfect N 407 Sw

low high

perfect is the perfect wax/resin quality for near-edge label printers and direct printing systems. The finest resolution and high contrast are what determine the very good print image.

direct N 402 Sw

low high

Wax/resin quality for almost any near-edge application. Especially suitable for use on direct printing systems on packaging film. It also works for most label applications.

N 408 Sw

low high

A special quality for direct printing systems that can be used at very high printing speeds, whilst nevertheless ensuring high-resolution and high contrast prints. A small overall thickness allows large ribbon lengths.

N 452 Sw

low high

Universal near-edge quality for direct printing systems and label printing. High printing speed and very good resistance.

B 120 EC N 501 Sw

low high

Resin thermal transfer ribbon for near-edge and flat-head printers with very good resistance against smearing and scratching. High temperature resistance. For durable labels and nameplates.

resistNE N 544 Sw

low high

Near-edge resin quality for universal use on different materials with good resistance. Resistant to boiling and steam sterilisation. Can be used on smooth paper labels and cardboard tags. Also suitable for flat-head printers.

N 508 Sw

low high

Flexible resin quality for near-edge and flat-head printers with very good resistance against chemicals and good mechanical resistance.

N 564 Sw

low high

The strength of this quality lies in its suitability for a wide range of materials that can be printed in excellent quality. It allows printing at higher speeds and can be used on flat-head printers.

PRODUCT RANGE

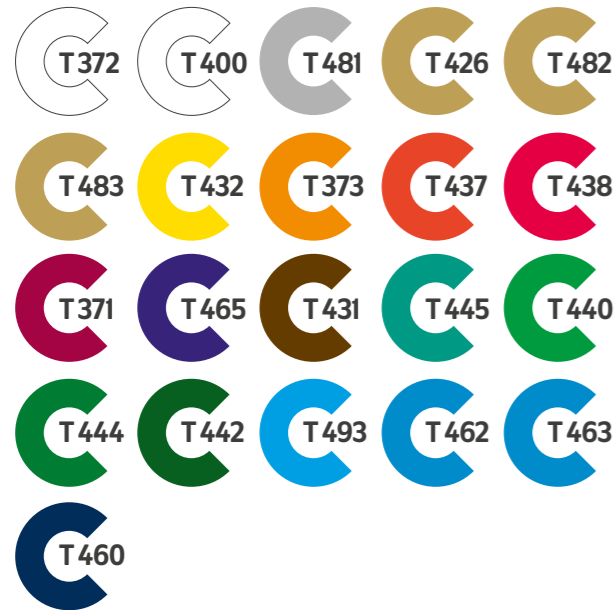
Coloured thermal transfer ribbons

Flat-head

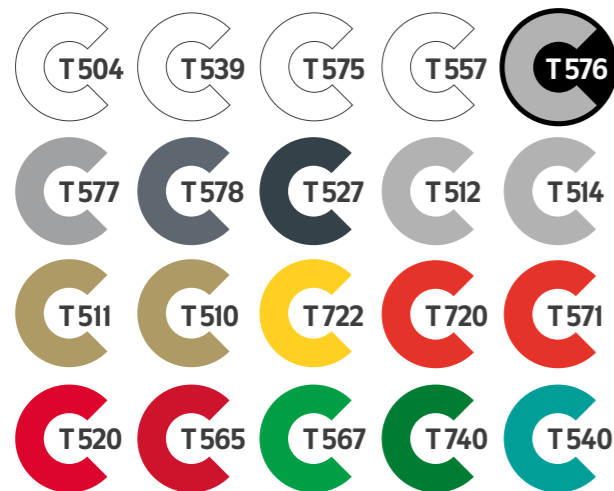
WACHS



Quality	Pantone	Net width	Price group
T170 Red	192 C	880 mm	5
T171 Green	3405 C	880 mm	5
T172 Brown	4695 C	880 mm	5
T173 Green	376 C	680 mm	5
T174 Blue	7462 C	680 mm	5
T200 White	White	670 mm	30
T201 Grey	Cool Gray 9C	680 mm	10
T211 Gold	874 C	660 mm	50
T222 Orange	Warm Red C	680 mm	10
T242 Green	3308C	680 mm	10
T259 Blue	286 C	880 mm	5
T263 Light Blue	299 C	680 mm	10
T269 Dark Blue	288 C	680 mm	10



Quality	Pantone	Net width	Price group
T371 Bordeaux	208 C	680 mm	30
T372 White	White	680 mm	55
T373 Orange	Orange 021	680 mm	30
T400 White	White	660 mm	30
T426 Gold	872 C	680 mm	50
T431 Dark Brown	1545 C	680 mm	30
T432 Yellow	109 C	680 mm	30
T437 Red	1788 C	680 mm	30
T438 Red	199 C	680 mm	30
T440 Grass Green	355 C	675 mm	50
T442 Moss Green	357 C	660 mm	30
T444 Green	356 C	680 mm	30
T445 Green	Green C	680 mm	30
T460 Night Blue	289 C	660 mm	30
T462 Blue	Process Blue C	680 mm	30
T463 Royal Blue	Reflex Blue C	680 mm	30
T465 Violet	2685 C	680 mm	40
T481 Silver	Metal Silver	610 mm	75
T482 Gold	Metal Gold	610 mm	75
T483 Gold	Metal Gold	620 mm	75
T493 Cyan	Cyan C	680 mm	30



Quality	Pantone	Net width	Price group
T504 White	White	880 mm	60
T510 Gold	Metal Gold	880 mm	55
T511 Gold	871 C	630 mm	80
T512 Silver	877 C	640 mm	80
T514 Silver	Metal Silver	880 mm	55
T520 Red	186 C	880 mm	60
T527 Grey	432 C	680 mm	45
T539 White	White	660 mm	55
T540 Green	3275 C	880 mm	60
T557 White	White	640 mm	55
T565 Red	186 C	680 mm	55
T566 Blue	2935 C	680 mm	55
T567 Green	354 C	680 mm	55



Quality	Pantone	Net width	Price group
T570 Blue	Blue C	680 mm	40
T571 Red	032 C	680 mm	40
T572 Green	Green C	680 mm	40
T573 Cyan	Cyan C	680 mm	40
T575 White	White	680 mm	40
T576 Grey	Grey/White*	680 mm	40
T577 Grey	422 C	680 mm	40
T578 Grey	431 C	680 mm	40
T720 Red	032 C	880 mm	40
T722 Yellow	116 C	880 mm	40
T740 Light Green	356 C	880 mm	40
T760 Blue	286 C	880 mm	40
T762 Blue	655 C	880 mm	40



Quality	Pantone	Net width	Price group
N415 Metal Silver	877 C	660 mm	70
N416 Metal Gold	871 C	660 mm	70
N427 Gold	872 C	680 mm	45
N443 White	White	660 mm	50
N446 Green	3278 C	660 mm	20
N447 Red	Warm Red	680 mm	20
N458 White	White	980 mm	30
N466 Blue	Reflex Blue C	660 mm	20
N470 Green	354 C	660 mm	20
N471 Green	357 C	680 mm	20
N472 Blue	300 C	660 mm	20
N490 Cyan	Cyan C	660 mm	20
N491 Magenta	Magenta C	660 mm	20
N492 Yellow	Yellow C	660 mm	20
N900 Blue	Reflex Blue C	680 mm	20
N901 Blue	541 C	680 mm	20
N902 Violet	259 C	680 mm	20
N903 Blue	280 C	680 mm	20
N904 Yellow	116 C	680 mm	20
N910 Red	185 C	680 mm	20
N911 Orange	158 C	680 mm	20
N912 Bordeaux	220 C	680 mm	20
N916 Brown	1405 C	680 mm	20
N920 Green	3278 C	680 mm	20
N921 Grass Green	355 C	680 mm	20
N930 White	White	680 mm	30



Quality	Pantone	Net width	Price group
N950 Gold	872 C	680 mm	50
N951 Blue	Blue C	680 mm	40
N952 Red	032 C	680 mm	40
N953 Green	Green C	680 mm	40
N954 Blue	281 C	680 mm	40
N955 Grey	425 C	600 mm	40
N956 Grey	Cool Grey 7 C	680 mm	40

◇ Red for GHS labeling
⦿ Food packaging
UL UL-certified
 * Depending on the label material
△ Developed for outdoor use
compact Compact standard articles available: minimum quantity 5 ribbons (standard dimensions on page 8-9)
made to measure Roll productions made to measure: minimum quantity 200 m²
special Special qualities, no stock, will be coated for your order

RESIN

WAX/RESIN

Near-edge

RESIN

PRODUCT LINE

„special“ For special applications

Due to our long-standing experience with thermal transfer ribbons, we can develop ribbon qualities to suit your specific requirements – that display particular properties for unusual applications. For label printing as well as for other applications.

At limited additional expense, we can adapt existing colours on the basis of the PANTONE system according to customer-specific requirements – the minimum quantity is smaller than you may think!

Tailor-made qualities with exactly defined properties.

Special applications also in addition to label printing

We define, develop and produce new recipes and coatings.

Special colours

for existing qualities for order volumes of 10,000 m² upwards.



CARD PRINTING

- Special resin ribbons in black and monochrome colours for TT card printers exclusively for OEM customers
- The print has a high resistance against smearing and scratching, rubbing, sweat and chemicals

Qualität	Pantone
T 858 Sw	black
T 524 We	white
T 521 Ro	185 C
T 542 Gr	356 C
T 562 BI	300 C
T 574 BI	2747 C

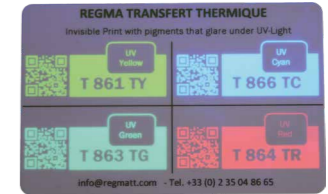


COUNTERFEIT PROTECTION

- Thermal transfer security ribbons help protecting brands by using two operating principles:
 - 1) Nearly invisible print glares with cyan blue, yellow, green or red fluorescence under UV illumination
 - 2) Black print glares with neon bright fluorescence under UV illumination

Resin qualities for flat-head printers

Product	Print	UV-Light
T 865 SY	black	yellow
T 861 SY	transparent	yellow
T 863 TG	transparent	green
T 864 TR	transparent	red
T 866 TC	transparent	cyan-blue



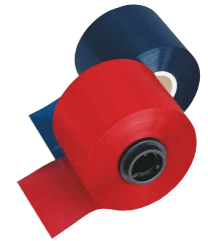
Wax/resin quality for near-edge printers

Product	Print	UV-Light
N 451 FG	black	yellow-green

FRANKING SYSTEMS

- Ribbon qualities specially designed for printing on a wide variety and very rough paper materials used for envelopes – exclusively for franking system manufacturers

Product	Colour
P 322 Ro	Franking red
P 362 BI	Franking blue
P 323 RF	Fluorescent red
P 363 BI	Franking blue



OUTDOOR

- 5 different colours in durable resin quality for outdoor labels and signs
- Made with highly UV-resistant pigments and tested according to DIN EN ISO 11341

Product	Pantone
T 720 Ro	032 C
T 722 Ge	116 C
T 740 Gr	356 C
T 743 Gr	562 C
T 760 BI	286 C
T 762 BI	655 C



GREY AND WHITE RESIN QUALITIES

- for high quality labels and nameplates
- 6 different shades of grey
- 6 qualities in white with different properties
- mainly for flat-head, but also for near-edge printers

Product Grey	Pantone
T 527 Ga	432 C
T 576 Ga	Grey on black
T 577 Ga	422 C
T 578 Ga	431 C
N 955 Ga	425 C
N 956 Ga	Cool Grey 7 C



SPECIAL COLOURS

- In 2021, we have developed 4 resin qualities for outdoor use based on very UV-resistant pigments.

Product (Laboratory number)	Pantone
22109	Yellow
22108	Magenta
22101	Cyan
12006	Black



TWO COLOURS

- Black for clear codes with high readability
- Orange as a signal colour can be printed on request
- Other colours or width distributions are possible
- High minimum order quantities

Product	Colour1	Colour2	Max. Width
P 324 BR	17 mm	17 mm	34 mm
N 914 OS 68	9 mm	59 mm	68 mm
N 914 OS 112	9 mm	103 mm	112 mm



63 STANDARD DIMENSIONS

For flat-head printers

T

BLACK	
MOQ: 1 box	
ROLLS ON 1/2" CORE	
74 M coated side outside V24	
Width (mm) 57	
Rolls/box 12	
74 M coated side outside V08	74 M quality ratio
Width (mm) 55 65 85 110	Width (mm) 55 65 85 110
Rolls/box 6 6 6 6	Rolls/box 44 44 44 44

COLOURS	
MOQ: 5 ribbons	
74 M coated side outside V08	
Width (mm) 110	
Rolls/box 6 (min. quantity)	

PRINTERS	
Overview	
 <p>For: Zebra TLP 2824, TSC TTP-225</p>  <p>For: Zebra GC/GK/GX 420/430, TLP 2844, TSC TA-Serie, TTP-245, TTP-247; core = 110 mm</p>	

ROLLS ON 1" CORE	
220 M coated side inside K26	
Width (mm) 60 110	
Rolls/box 36 24	
300 M coated side inside 1DI	
Width (mm) 60 76 90 110 165	
Rolls/box 30 30 20 20 10	
300 M coated side outside (core 118 mm) T52	
Width (mm) 60 85 110	
Rolls/box 10 10 10	
300 M coated side outside (core 240 mm) T85	
Width (mm) 120 160 220	
Rolls/box 10 10 10	
300 M coated side outside 3VA	
Width (mm) 40 50 60 70 80 90 100 104 110 135 150 170 220	
Rolls/box 30 30 30 30 20 20 20 20 20 10 10 10 10	
360 M coated side inside FAR	
Width (mm) 38 50 64 76 90 102 110 114 152	
Rolls/box 30 30 30 30 20 20 20 20 10	
450 M coated side inside UBI	
Width (mm) 38 50 60 76 85 100 110 130 150 165 220	
Rolls/box 24 24 24 24 16 16 16 8 8 8 8	
450 M coated side outside ZE2	
Width (mm) 40 50 60 70 80 90 100 104 110 140 154 170 220	
Rolls/box 24 24 24 24 16 16 16 16 8 8 8 8 8	

300 M coated side inside 1DI	
Width (mm) 60 90 110	
Rolls/box 30 20 20	
300 M coated side outside 3VA	
Width (mm) 60 90 110	
Rolls/box 30 20 20	

 <p>For: Intermec E4, PFix</p>	
 <p>For different flat-head printers: Avery Ax, TTX, CAB, Datamax, Novexx</p>	
 <p>For: Tec B-452, B-544T; core = 118 mm; 1 empty core / box</p>	
 <p>For: Tec B-852; core = 240 mm; 1 empty core / box</p>	
 <p>For different flat-head printers: Delna, Citizen, C-I/OH, Valentin, TEC B-442, B-SV4T, Zebra</p>	
 <p>For different flat-head printers: Avery Ax, TTX, CAB, Datamax, Novexx</p>	
 <p>For different flat-head printers: Intermec EasyCoder, PD4, PD4L, PD42, PM44, PK41, PK61, PA30, Datamax, SATO CL</p>	
 <p>For: Zebra ZT, Xi, S4M, S6M, Z4M, Z6M, ZM400, ZM600, Z4000, Z6000, 105.SL, TSC Mx, TTP-268M, ME-240</p>	

PRODUCT LINE

„compact“
The standard articles

For all standard compact qualities we propose the following compact standard ribbons dimensions, sorted by length and coated side (inside first). Within a ribbon type you will find the standard widths and the corresponding packaging unit as well as a list of some common printers that can operate using this ribbon type. Special widths of a given 1" core roll type are available at an extra charge for order quantities of 50 rolls upwards.

35 STANDARD DIMENSIONS

For near-edge printers

N

BLACK	
MOQ: 1 box	
300 M coated side outside 3VA	
Width (mm) 50 90 110 135 150	
Rolls/box 30 20 20 10 10	
300 M coated side outside (core 229 mm) T87	
Width (mm) 160 220	
Rolls/box 10 10	
450 M coated side inside K01	
Width (mm) 55 110	
Rolls/box 32 16	
600 M coated side inside SMK	
Width (mm) 30 55	
Rolls/box 25 20	
600 M coated side inside NOV	
Width (mm) 55 80 110 130 165	
Rolls/box 20 10 10 5 5	
600 M coated side outside T57	
Width (mm) 55 70 80 85 90 102 110 114 135	
Rolls/box 20 10 10 10 10 10 10 10 5	
900 M coated side inside SM9	
Width (mm) 55	
Rolls/box 12	
1000 M coated side outside SOD	
Width (mm) 55	
Rolls/box 12	

COLOURS	
MOQ: 5 ribbons	
300 M coated side inside 1DI	
Width (mm) 55 60 90 110	
Rolls/box 30 30 20 20	
300 M coated side outside 3VA	
Width (mm) 55 60 90 110	
Rolls/box 30 30 20 20	
600 M coated side inside NOV	
Width (mm) 55 84 110	
Rolls/box 20 10 10	
600 M coated side outside T57	
Width (mm) 55 84 110	
Rolls/box 20 10 10	

PRINTERS	
Overview	
 <p>For: Avery 64-xx, TTX 450, 650, 950, 1050, TDI, ALX 720, Novexx Lion, Puma, Tiger</p>	
 <p>For: Valentin Optimo, Spectra, DPM</p>	
 <p>For: TEC B 672, 682, 872, SX6; core = 229 mm; centred; 1 empty core / box</p>	
 <p>For direct printing systems: Easyprint, Smart Date II, III, IV, V; plastic core; 1 empty core / box</p>	
 <p>For direct printing systems: Smart Date II, III, IV, V; plastic core; 1 empty core / box</p>	
 <p>For: Avery 64-xx, TTX 450, 650, 950, 1050, TDI, ALX 720, Novexx Lion, Puma, Tiger</p>	
 <p>For: TEC SX4, SX5, B 372, 472, 572; 1 empty core / box</p>	
 <p>For: Smart Date III; plastic core; 1 empty core / box</p>	
 <p>For: Videojet Dataflex, Zodiac; plastic core; 1 empty core / box</p>	



Our Profile

Locations

Baesweiler (Germany) and Arques la Bataille (France)

Staff

50 employees

Production quantity

>100.000 ribbons/month

Specific equipment

3 coating lines, 1 hot-melt, 2 solvent-based lines,
7 high-speed converting machines

Stock

Ø 20.000 standard ribbons ready to ship

Certificates



ISO 9001:2015

Our processes and quality management system are certified according to the latest version of 2015.



RoHS 3

All our qualities meet the limiting values of the European Directive 2015/863.



REACH SVHC

None of our qualities contain substances included in the SVHC list dated July 2019.



Food packaging

Numerous qualities are suitable for printing food packaging.



UL

Some qualities are UL/CSA certified on particular label stock.



BS 5609

Some qualities are certified according to BS 5609 Section III (Seawater resistance) for the labelling of chemicals on particular label stock.

CALOR

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