CALOR

A Todaytec Group Company

THERMAL TRANSFER RIBBONS

The right ribbon for every purpose

CALOR

The experts in thermal transfer ribbons

Since CALOR was founded start 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 taking over the coating division of REGMA (Normandy) in 2002, we have been coating our own grades and are also able to develop new products. This enables us to generate unique solutions and we are happy to support you in developing solutions for your customers' specific applications. Since 2025, we have been part of the Todaytec Group and are thus one of the world's second-largest coaters of thermal transfer film, with an annual volume of 1.7 billion square metres.

As a true global player, Todaytec invests in production facilities (currently in Germany, France, Great Britain, the USA, Canada, China, Mexico, Brazil and India), in research and development, in customer satisfaction and service.

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. Benefit from our nearly 40 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.

CALOR AT A GLANCE

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

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.

Product Range

Advantage Range

**Product line „Advantage Range"
Available from stock**

- Universally applicable top qualities for FH and NE printers
- 400 roll dimensions available from stock
- Most favourable prices

compact

**Product line „compact"
The standard range**

- Selected, proven qualities
- 100 standard dimensions
- Short lead-times, bestsellers from stock

made to measure

**Product line „made to measure"
The flexible roll production**

- A comprehensive product range with solutions also for difficult materials
- Ribbons made to order in all dimensions

special

**Product line „special"
Solutions for special applications**

- Ribbon qualities for card and sign printing, security printing, franking systems, ...
- The development of customised ribbon qualities and special colours

world of colours

The widest range of colours

- More than 100 different colours in 5 quality levels
- 15 standard dimensions available in small quantities starting from 5 rolls

PRODUCT RANGE
Black thermal transfer ribbons

Flat-head | WAX | WAX/RESIN | RESIN

Advantage Range	Compact	Made to measure	UL certified	BS 5609 certified	Food Packaging	
TDW108	ratio	T 152 Sw			✓	The thermal transfer ribbon par excellence for all standard paper applications! Excellent price-performance ratio.
TDW136	brilliant+	T 154 Sw			✓	This Wax+ quality combines excellent printing properties on all label materials with good mechanical resistance.
	prima	T 151 Sw			✓	Classic wax quality, very sensitive, very high resolution and high blackness even on vellum.
	brilliant	T 143 Sw			✓	Premium wax quality with deepest black print, print head friendly due to highsensitivity), highly versatile for use on all printers and many materials.
TDM200	mix	T 459 Sw			✓	Universally applicable wax/resin quality with excellent price-performance ratio.
TDM242	T 450 Sw	T 450 Sw	UL		✓	Premium wax/resin quality, compatible with all label materials, highest resolution of fine elements, and very good smudge resistance.
	vario+	T 455 Sw			✓	Versatile thermal transfer ribbon with high smudge resistance and resistance against IPA and brake fluid.
	ideal	T 456 Sw	UL		✓	Universal quality with good durability, especially for paper surfaces. Prints small barcodes and texts in highest resolution.
	B 110 A	T 449 Sw	UL		✓	The Premium W/R quality with a wide application range and high resistance to chemicals. Excellent resolution.
		T 454 Sw			✓	Premium wax/resin thermal transfer ribbon for difficult surfaces. Very good mechanical resistance.
TDR345		T 530 Sw	UL		✓	Flexible, very durable and sensitive standard resin quality for deep black printing and high resolution.
	resist	T 506 Sw	UL	⚠	✓	The best-selling resin quality with excellent properties in terms of print quality, flexibility, and durability.
	resist+	T 555 Sw	UL	⚠	✓	Particularly dark and flexible standard resin quality with high sensitivity. Prints also on smooth paper surfaces.
	B 110 CR	T 518 Sw	UL		✓	Premium resin quality for use on a wide variety of label materials. High-resolution printing and very good durability.
		T 507 Sw			✓	An exceptional, universally applicable resin quality with high mechanical and chemical resistance. Suitable for all materials.
		T 549 Sw	UL			Premium resin quality with very high resistance to alcohol, gasoline, brake fluid, and hydraulic oils for industrial applications.
		T 645 Sw				Resin quality for printing textile labels and film materials. Resistant to washing, ironing, and dry cleaning.
		T 649 Sw	UL			Resin quality for printing textile labels made of nylon taffeta and polyester satin. Resistant to washing, ironing, and dry cleaning.
		T 700 Sw		⚠		Resin quality for signage printing with good mechanical resistance.
		T 741 Sw			✓	The problem solver for heat-resistant printing on paper surfaces. Excellent printing results on coated papers.
		T 845 Sw	UL	⚠		Extremely durable high-performance quality, resistant to temperatures up to 200°C and to numerous chemicals.
		T 847 Sw				Extremely mechanically and chemically resistant high-performance quality for long-term labeling. Extremely high temperature resistance.
		T 850 Sw				High-resolution and extremely durable resin quality – resistant even to organic solvents on special materials!
		T 742 Sw	UL			Special resin quality with maximum chemical resistance on certain label materials!

Near-edge | WAX | WAX/RESIN | RESIN

Advantage Range	Compact	Made to measure	UL certified	BS 5609 certified	Food Packaging	
	ecoNE	N 102 Sw				ecoNE – A dark near-edge wax quality with very good suitability for coated papers.
TDM227					✓	High-performance wax/resin quality – Suitable for all label materials and packaging films. Designed for both desktop printers and direct printing systems.
TDM227X					✓	TDM227 on 4.0 µm basefilm – Same quality as NEX10 but on 4.0 µm base film. The reduced overall thickness allows longer ribbon rolls with the same diameter.
	N 420 Sw	N 420 Sw			✓	Excellent price-performance ratio – Wide range of applications, including difficult and rough paper surfaces. Produces highly contrasting prints.
	direct	N 402 Sw			✓	The most versatile near-edge quality, designed for use in direct printing systems but also suitable for all label applications.
	perfect	N 407 Sw			✓	Low energy requirement – Due to high sensitivity. High-resolution and high-contrast printing.
		N 452 Sw			✓	TTO quality – Specifically for TTO applications on film with very high print speeds. Provides very good durability.
TDR540					✓	NE resin – For high print speed and durability – ideally suited for inline coding and desktop applications.
	B 120 EC	N 501 Sw	UL		✓	Resin quality for NE and FH printers – Offers very good mechanical and high temperature resistance. Suitable for durable labels and nameplates.
	resistNE	N 544 Sw	UL		✓	Near-edge resin quality – Universal use on various materials with good durability. Also suitable for flat-head printers.
		N 508 Sw	UL	⚠	✓	Flexible NE quality – Very durable and also usable on FH printers. Offers good mechanical and very good chemical resistance.
		N 564 Sw			✓	Universal quality – Suitable for a wide spectrum of materials. Designed for higher print speeds and compatible with FH printers.

Material

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

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

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

Printers

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.

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.
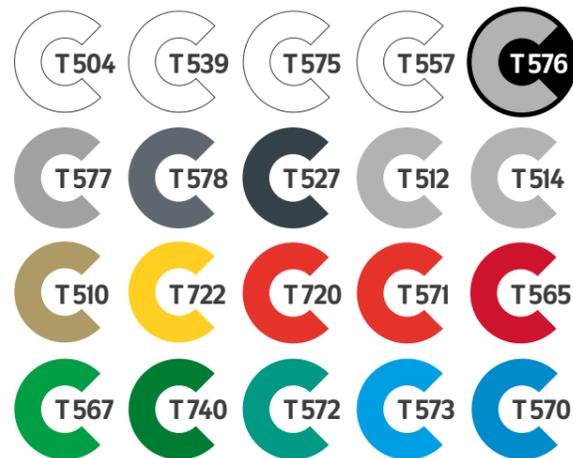
PRODUCT RANGE
Coloured thermal transfer ribbons

Flat-head

WAX

T 200 | T 201 | T 222 | T 170 | T 172
T 173 | T 171 | T 242 | T 263 | T 259
T 174 | T 269

Quality	Pantone	Net width	Price group	
T 170 Red	192 C	880 mm	5	
T 171 Green	3405 C	880 mm	5	
T 172 Brown	4695 C	880 mm	5	
T 173 Green	376 C	680 mm	5	
T 174 Blue	7462 C	680 mm	5	
T 200 White	White	670 mm	30	
T 201 Grey	Cool Gray 9 C	680 mm	10	
T 222 Orange	Warm Red C	680 mm	10	
T 242 Green	3308C	680 mm	10	
T 259 Blue	286 C	880 mm	5	✐
T 263 Light Blue	299 C	680 mm	10	
T 269 Dark Blue	288 C	680 mm	10	

WAX/RESIN

T 372 | T 481 | T 426 | T 482 | T 483
T 432 | T 373 | T 437 | T 438 | T 371
T 465 | T 431 | T 445 | T 444 | T 442
T 493 | T 462 | T 463

Quality	Pantone	Net width	Price group	
T 371 Bordeaux	208 C	680 mm	30	✐
T 372 White	White	680 mm	55	
T 373 Orange	Orange 021	680 mm	30	
T 426 Gold	872 C	680 mm	50	
T 431 Dark Brown	1545 C	680 mm	30	
T 432 Yellow	109 C	680 mm	30	
T 437 Red	1788 C	680 mm	30	
T 438 Red	199 C	680 mm	30	◇
T 442 Moss Green	357 C	660 mm	30	
T 444 Green	356 C	680 mm	30	
T 445 Green	Green C	680 mm	30	
T 462 Blue	Process Blue C	680 mm	30	
T 463 Royal Blue	Reflex Blue C	680 mm	30	
T 465 Violet	2685 C	680 mm	40	
T 481 Silver	Metal Silver	610 mm	75	
T 482 Gold	Metal Gold	610 mm	75	
T 483 Gold	Metal Gold	620 mm	75	
T 493 Cyan	Cyan C	680 mm	30	

RESIN

T 504 | T 539 | T 575 | T 557 | T 576
T 577 | T 578 | T 527 | T 512 | T 514
T 510 | T 722 | T 720 | T 571 | T 565
T 567 | T 740 | T 572 | T 573 | T 570

Quality	Pantone	Net width	Price group	
T 504 White	White	880 mm	60	UL ✐
T 510 Gold	Metal Gold	880 mm	55	
T 512 Silver	877 C	640 mm	80	
T 514 Silver	Metal Silver	880 mm	55	
T 527 Grey	432 C	680 mm	45	
T 539 White	White	660 mm	55	
T 557 White	White	640 mm	55	
T 565 Red	186 C	680 mm	55	
T 566 Blue	2935 C	680 mm	55	
T 567 Green	354 C	680 mm	55	
T 570 Blue	Blue C	680 mm	40	
T 571 Red	032 C	680 mm	40	◇
T 572 Green	Green C	680 mm	40	
T 573 Cyan	Cyan C	680 mm	40	
T 575 White	White	680 mm	40	
T 576 Grey	Grey/White*	680 mm	40	

RESIN

T 566 | T 760 | T 762

Quality	Pantone	Net width	Price group	
T 577 Grey	422 C	680 mm	40	
T 578 Grey	431 C	680 mm	40	
T 720 Red	032 C	880 mm	40	⚠
T 722 Yellow	116 C	880 mm	40	⚠
T 740 Light Green	356 C	880 mm	40	⚠
T 760 Blue	286 C	* 880 mm	40	⚠
T 762 Blue	655 C	880 mm	40	⚠

Near-edge

WAX/RESIN

N 930 | N 443 | N 458 | N 415 | N 416
N 427 | N 492 | N 904 | N 911 | N 910
N 491 | N 912 | N 902 | N 916 | N 921
N 920 | N 446 | N 471 | N 490 | N 900
N 903 | N 901

Quality	Pantone	Net width	Price group	
N 415 Metal Silver	877 C	660 mm	70	
N 416 Metal Gold	871 C	660 mm	70	
N 427 Gold	872 C	680 mm	45	
N 443 White	White	660 mm	50	
N 446 Green	3278 C	660 mm	20	
N 458 White	White	980 mm	30	
N 471 Green	357 C	680 mm	20	
N 490 Cyan	Cyan C	660 mm	20	✐
N 491 Magenta	Magenta C	660 mm	20	✐
N 492 Yellow	Yellow C	660 mm	20	
N 900 Blue	Reflex Blue C	680 mm	20	
N 901 Blue	541 C	680 mm	20	
N 902 Violet	259 C	680 mm	20	✐
N 903 Blue	280 C	680 mm	20	
N 904 Yellow	116 C	680 mm	20	
N 910 Red	185 C	680 mm	20	
N 911 Orange	158 C	680 mm	20	✐
N 912 Bordeaux	220 C	680 mm	20	
N 916 Brown	1405 C	680 mm	20	
N 920 Green	3278 C	680 mm	20	
N 921 Grass Green	355 C	680 mm	20	
N 930 White	White	680 mm	30	

RESIN

N 956 | N 955 | N 950 | N 952 | N 953
N 951 | N 954

Quality	Pantone	Net width	Price group	
N 950 Gold	872 C	680 mm	50	
N 951 Blue	Blue C	680 mm	40	
N 952 Red	032 C	680 mm	40	◇
N 953 Green	Green C	680 mm	40	
N 954 Blue	281 C	680 mm	40	
N 955 Grey	425 C	600 mm	40	
N 956 Grey	Cool Grey 7 C	680 mm	40	

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

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

Quality	Pantone
T 858 Sw	black
T 524 We	white
T 521 Ro	185 C
T 542 Gr	356 C
T 562 Bl	300 C
T 574 Bl	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 Bl	Franking blue
P 323 RF	Fluorescent red
P 363 Bl	Franking blue

OUTDOOR
- 6 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 Bl	286 C
T 762 Bl	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

NEW COLOURS
- In 2024, we developed four new colours in highly durable resin quality for sign printing based on highly UV-resistant pigments.

Product (Lab number)	Pantone
22109	Yellow
22108	Magenta
22101	Cyan
22402	300 C Ocean Blue

TWO COLOURS
- Black for clear codes with high readability
- Red or orange as a signal colour can be printed if required – or not
- T 202 SR red/black also available in small quantities
- Other colours and width distributions are possible

Product	Colour 1	Colour 2	Max. Width
T 202 SR	35mm	97mm	134mm
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	COLOURS MOQ: 5 ribbons	PRINTERS Overview

ROLLS ON 1/2" CORE

74 M *coated side outside V24*
Width (mm)	57
Rolls/box	12

For: Zebra TLP 2824, TSC TTP-225,

74 M *coated side outside V08*
Width (mm)	55	65	85	110
Rolls/box	6	6	6	6

74 M *quality ratio*
Width (mm)	55	65	85	110
Rolls/box	44	44	44	44

74 M *coated side outside V08*
Width (mm)	110
Rolls/box	6 (min. quantity)

For: Zebra GC/GK/GX 420/430, TLP 2844, TSC TA-Serie, TTP-245, TTP-247; core = 110 mm

ROLLS ON 1" CORE

220 M *coated side inside K26*
Width (mm)	60	110
Rolls/box	36	24

For: Intermec E4, PFxx

300 M *coated side inside IDI*
Width (mm)	60	76	90	110	165
Rolls/box	30	30	20	20	10

300 M *coated side inside IDI*
Width (mm)	60	90	110
Rolls/box	30	20	20

For different flat-head printers: Avery Ax, TTX, CAB, Datamax, Novexx

300 M *coated side outside (core 118 mm) T52*
Width (mm)	60	85	110
Rolls/box	10	10	10

For: Tec B-452, B-SA4T; core = 118 mm; 1 empty core / box

300 M *coated side outside (core 240 mm) T85*
Width (mm)	120	160	220
Rolls/box	10	10	10

For: Tec B-852; core = 240 mm; 1 empty core / box

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

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

For different flat-head printers: Delna, Citizen, C-ITOH, Valentin, TEC B-442, B-SV4T, Zebra

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

For different flat-head printers: Avery Ax, TTX, CAB, Datamax, Novexx

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

For different flat-head printers: Intermec EasyCoder, PD4, PD41, PD42, PM4i, PX4i, PX6i, PA30, Datamax, SATO CL

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

For: Zebra ZT, Xi, S4M, S6M, Z4M, Z6M, ZM400, ZM600, Z4000, Z6000, 105 SL, TSC Mx, TTP-268M, ME-240

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	COLOURS MOQ: 5 ribbons	PRINTERS Overview

300 M *coated side inside IDI* (COLOURS)
Width (mm)	55	60	90	110
Rolls/box	30	30	20	20

For: Avery 64-xx, TTX 450, 650, 950, 1050, TDI, ALX 720, Novexx Lion, Puma, Tiger

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 3VA* (COLOURS)
Width (mm)	55	60	90	110
Rolls/box	30	30	20	20

For: Valentin Optima, Spectra, DPM

300 M *coated side outside (core 229 mm) T87*
Width (mm)	160	220
Rolls/box	10	10

For: TEC B 672, 682, 872, SX6; core = 229 mm; centred; 1 empty core / box

450 M *coated side inside K01*
Width (mm)	55	110
Rolls/box	32	16

For direct printing systems: Easyprint, Smart Date II, III, IV, V; plastic core; 1 empty core / box

600 M *coated side inside SMK*
Width (mm)	30	55
Rolls/box	25	20

For direct printing systems: Smart Date II, III, IV, V; plastic core; 1 empty core / box

600 M *coated side inside NOV*
Width (mm)	55	80	110	130	165
Rolls/box	20	10	10	5	5

600 M *coated side inside NOV* (COLOURS)
Width (mm)	55	84	110
Rolls/box	20	10	10

For: Avery 64-xx, TTX 450, 650, 950, 1050, TDI, ALX 720, Novexx Lion, Puma, Tiger

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

600 M *coated side outside T57* (COLOURS)
Width (mm)	55	84	110
Rolls/box	20	10	10

For: TEC SX4, SX5, B 372, 472, 572; 1 empty core / box

900 M *coated side inside SM9*
Width (mm)	55
Rolls/box	12

For: Smart Date III; plastic core; 1 empty core / box

1000 M *coated side outside SOD*
Width (mm)	55
Rolls/box	12

For: Videojet Dataflex, Zodiac; plastic core; 1 empty core / box

Our profile

	Germany	Europe	Worldwide
Locations	Headquarters in Baesweiler	Sites in Germany, France, England, and the Netherlands	3 coating plants and more than 20 subsidiaries across all continents
Global Presence	Serving over 400 customers	More than 1,000 customers	Over 10,000 reselling customers in more than 100 countries worldwide
Employees	25	80	More than 600
Production Output	25 million m² per year	120 million m² per year	Over 1.7 billion m² per year
Machinery	4 converting machines	10 converting machines, 1 hot-melt coater, 2 solvent coaters	More than 100 converting machines and 30 coating lines
Inventory	Over 20,000 ribbons in stock	More than 200,000 standard items available	

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 June 2025.

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.

Todaytec Group Europe

CALOR · REGMA · TTS Thermal Transfer Solutions | European Coating & Converting Operations

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