

Grade	Grammage [g/m ²]	Thickness [µm]	Archivability [years]	Sensitivity ¹⁾	Resistance	UV-offset-printable	Special features	Typical applications
KL 49	108	113	15	4	++	✓		<ul style="list-style-type: none"> travel tickets for buses and trains admission tickets for cinemas, theatres, sports and other cultural events parking tickets for carparks and parking spaces
KL 410sB+	123	124	15	4	++	✓	<ul style="list-style-type: none"> improved reverse-side printability high reverse-side brightness very good flatness under changing climatic conditions 	<ul style="list-style-type: none"> travel tickets for buses and trains admission tickets for cinemas, theatres, sports and other cultural events tags (non self-adhesive) data-carriers for logistical purposes boarding passes
KL 412sB+	144	145	15	4	++	✓	<ul style="list-style-type: none"> improved reverse-side printability high reverse-side brightness very good flatness under changing climatic conditions 	<ul style="list-style-type: none"> travel tickets for buses and trains admission tickets for cinemas, theatres, sports and other cultural events parking tickets for carparks and parking spaces tags (non self-adhesive) data-carriers for logistical purposes boarding passes
KL 415sB+	179	185	15	4	++	✓	<ul style="list-style-type: none"> improved reverse-side printability high reverse-side brightness very good flatness under changing climatic conditions 	<ul style="list-style-type: none"> travel tickets for buses and trains admission tickets for cinemas, theatres, sports and other cultural events parking tickets for carparks and parking spaces tags (non self-adhesive) data-carriers for logistical purposes boarding passes
KL 421	225	235	15	4	++	✓		<ul style="list-style-type: none"> admission tickets for cinemas, theatres, sports and other cultural events tags (non self-adhesive) data-carriers for logistical purposes
KL 421mB	225	235	15	4	++	✓	<ul style="list-style-type: none"> for magnetic strips in slurry-form 	<ul style="list-style-type: none"> travel tickets for buses and trains
KL 423mB	253	270	15	4	++	✓	<ul style="list-style-type: none"> for magnetic strips in slurry-form 	<ul style="list-style-type: none"> travel tickets for buses and trains
KL 515sB+	179	185	15	5	++	✓	<ul style="list-style-type: none"> improved reverse-side printability high reverse-side brightness very good flatness under changing climatic conditions designed for 300 dpi thermal printers 	<ul style="list-style-type: none"> admission tickets for cinemas, theatres, sports and other cultural events travel tickets for buses and trains boarding passes
KL 515PR	166	144	15	5	++	✓	<ul style="list-style-type: none"> superior image quality optimal reverse-side printability (illustration printing quality, matt) designed for 300 dpi thermal printers 	<ul style="list-style-type: none"> admission tickets for cinemas, theatres, sports and other cultural events
KL 520PR	215	195	15	5	++	✓	<ul style="list-style-type: none"> superior image quality optimal reverse-side printability (illustration printing quality, matt) designed for 300 dpi thermal printers 	<ul style="list-style-type: none"> admission tickets for cinemas, theatres, sports and other cultural events
KL 69	104	110	15	6	++	✓		<ul style="list-style-type: none"> cashless gaming tickets lottery and other gambling tickets
KLS 44B	57	63	12	4	+	✓	<ul style="list-style-type: none"> protection against external influences from the reverse side 	<ul style="list-style-type: none"> self-adhesive labels composite materials (laminates)
KLS 46	74	82	12	4	+	✓		<ul style="list-style-type: none"> self-adhesive labels linerless labels lottery and other gambling tickets baggage tags parking tickets for carparks and parking spaces travel tickets for buses and trains composite materials (laminates) bank statements
KLS 46(NP)	75	82	25	4	++	✓		<ul style="list-style-type: none"> self-adhesive labels linerless labels lottery and other gambling tickets baggage tags parking tickets for carparks and parking spaces travel tickets for buses and trains composite materials (laminates) bank statements
KLS 46B	74	81	12	4	+	✓	<ul style="list-style-type: none"> protection against external influences from the reverse side 	<ul style="list-style-type: none"> self-adhesive labels composite materials (laminates) baggage tags
KLS 56	76	82	12	5	+	✓	<ul style="list-style-type: none"> designed for 300 dpi thermal printers 	<ul style="list-style-type: none"> travel tickets for buses and trains self-adhesive labels linerless labels composite materials (laminates) bank statements
KLS 56B	74	82	12	5	+	✓	<ul style="list-style-type: none"> protection against external influences from the reverse side designed for 300 dpi thermal printers 	<ul style="list-style-type: none"> self-adhesive labels composite materials (laminates)
KLSG 57	81	87	12	5	+	✓	<ul style="list-style-type: none"> designed for 300 dpi thermal printers 	<ul style="list-style-type: none"> lottery and other gambling tickets
KLT 410sB	123	124	12	4	++	✓	<ul style="list-style-type: none"> improved reverse-side printability very good flatness under changing climatic conditions stampable and therefore validation-capable 	<ul style="list-style-type: none"> travel tickets for buses and trains
KLTU 410sB	123	124	12	4	++	✓	<ul style="list-style-type: none"> security fibres and under UV light visible fibres improved reverse-side printability very good flatness under changing climatic conditions stampable and therefore validation-capable 	<ul style="list-style-type: none"> travel tickets for buses and trains with security features
KLR 44	59	63	15	4	++	✓	<ul style="list-style-type: none"> heat-resistant 	<ul style="list-style-type: none"> digital tachographs
KLIR 46B	75	82	15	4	++	✓	<ul style="list-style-type: none"> IR-readable thermal image protection against external influences from the reverse side 	<ul style="list-style-type: none"> self-adhesive labels composite materials (laminates)
KLRB 46B	74	80	10	4	+	✓	<ul style="list-style-type: none"> two-colour, red-black thermal image protection against external influences from the reverse side 	<ul style="list-style-type: none"> self-adhesive labels linerless labels composite materials (laminates) boarding passes
KL-LI 45	67	73	12	4	+		<ul style="list-style-type: none"> not suitable for thermal printers without a release coating 	<ul style="list-style-type: none"> linerless labels
KF 48	48	53	7	4			<ul style="list-style-type: none"> writable and stampable 	<ul style="list-style-type: none"> vouchers and receipts fax applications data records POS
KF 50	54	61	7	5			<ul style="list-style-type: none"> writable and stampable 	<ul style="list-style-type: none"> vouchers and receipts fax applications data records POS
KFR 48	48	53	10	4			<ul style="list-style-type: none"> writable and stampable 	<ul style="list-style-type: none"> vouchers and receipts fax applications data records POS

1) Key: 6 very high sensitivity, 5 high sensitivity and 4 standard sensitivity, ++ very good resistance, + good resistance, ✓ possible and (✓) possible with limitations.
The above-listed values for physical characteristics are average values. Samples and current technical datasheets are available on request.

All our products are bisphenol free or phenol free.

(Exceptions are marked)

Grade	Grammage [g/m ²]	Thickness [µm]	Archivability [Jahre]	Sensitivity ¹⁾	Resistance	UV-offset-printable	Special features	Typical applications
KP 460	70	78	7	4			<ul style="list-style-type: none"> stampable and therefore validation-capable 	<ul style="list-style-type: none"> self-adhesive labels parking tickets for carparks and parking spaces travel tickets for buses and trains composite materials (laminates) vouchers and receipts
KP 465	79	86	7	4			<ul style="list-style-type: none"> stampable and therefore validation-capable 	<ul style="list-style-type: none"> self-adhesive labels parking tickets for carparks and parking spaces travel tickets for buses and trains composite materials (laminates) vouchers and receipts
KP 460(NP)	71	80	12	4	+	(✓)	<ul style="list-style-type: none"> stampable and therefore validation-capable 	<ul style="list-style-type: none"> self-adhesive labels parking tickets for carparks and parking spaces travel tickets for buses and trains composite materials (laminates) vouchers and receipts
KPR 440	53	61	10	4			<ul style="list-style-type: none"> stampable and therefore validation-capable 	<ul style="list-style-type: none"> self-adhesive labels composite materials (laminates) long-term archivable data records data records POS
KPR 460	70	80	10	4			<ul style="list-style-type: none"> stampable and therefore validation-capable 	<ul style="list-style-type: none"> self-adhesive labels composite materials (laminates) long-term archivable data records data records POS
KPR 460B	70	80	10	4			<ul style="list-style-type: none"> protection against external influences from the reverse side stampable and therefore validation-capable 	<ul style="list-style-type: none"> self-adhesive labels composite materials (laminates)
KPR 470	89	101	10	4			<ul style="list-style-type: none"> stampable and therefore validation-capable 	<ul style="list-style-type: none"> lottery and other gambling tickets admission tickets for cinemas, theatres, sports and other cultural events travel tickets for buses and trains
KPR 490	103	112	10	4			<ul style="list-style-type: none"> stampable and therefore validation-capable 	<ul style="list-style-type: none"> travel tickets for buses and trains admission tickets for cinemas, theatres, sports and other cultural events parking tickets for carparks and parking spaces lottery and other gambling tickets
KPR 410	112	120	10	4			<ul style="list-style-type: none"> stampable and therefore validation-capable 	<ul style="list-style-type: none"> travel tickets for buses and trains admission tickets for cinemas, theatres, sports and other cultural events parking tickets for carparks and parking spaces tags (non self-adhesive) data-carriers for logistical purposes
KPR 412	133	142	10	4			<ul style="list-style-type: none"> stampable and therefore validation-capable 	<ul style="list-style-type: none"> travel tickets for buses and trains admission tickets for cinemas, theatres, sports and other cultural events parking tickets for carparks and parking spaces tags (non self-adhesive) data-carriers for logistical purposes boarding passes
KPR 415	175	185	10	4			<ul style="list-style-type: none"> stampable and therefore validation-capable 	<ul style="list-style-type: none"> travel tickets for buses and trains admission tickets for cinemas, theatres, sports and other cultural events parking tickets for carparks and parking spaces tags (non self-adhesive) data-carriers for logistical purposes boarding passes
KPR 540	53	61	10	5			<ul style="list-style-type: none"> stampable and therefore validation-capable 	<ul style="list-style-type: none"> long-term archivable data records data records POS
KPO 440	56	60	10	4	+	✓	<ul style="list-style-type: none"> stampable and therefore validation-capable 	<ul style="list-style-type: none"> vouchers and receipts
KPO 460	72	80	10	4	+	✓	<ul style="list-style-type: none"> stampable and therefore validation-capable 	<ul style="list-style-type: none"> vouchers and receipts travel tickets for buses and trains lottery and other gambling tickets
KPO 490	104	115	10	4	+	✓	<ul style="list-style-type: none"> stampable and therefore validation-capable 	<ul style="list-style-type: none"> travel tickets for buses and trains admission tickets for cinemas, theatres, sports and other cultural events parking tickets for carparks and parking spaces
KPO 410sB+	120	120	10	4	+	✓	<ul style="list-style-type: none"> improved reverse-side printability high reverse-side brightness very good flatness under changing climatic conditions stampable and therefore validation-capable 	<ul style="list-style-type: none"> travel tickets for buses and trains admission tickets for cinemas, theatres, sports and other cultural events tags (non self-adhesive) data-carriers for logistical purposes boarding passes
KPO 412sB+	140	142	10	4	+	✓	<ul style="list-style-type: none"> improved reverse-side printability high reverse-side brightness very good flatness under changing climatic conditions stampable and therefore validation-capable 	<ul style="list-style-type: none"> travel tickets for buses and trains admission tickets for cinemas, theatres, sports and other cultural events tags (non self-adhesive) data-carriers for logistical purposes boarding passes
KPO 415sB+	180	185	10	4	+	✓	<ul style="list-style-type: none"> improved reverse-side printability high reverse-side brightness very good flatness under changing climatic conditions stampable and therefore validation-capable 	<ul style="list-style-type: none"> travel tickets for buses and trains admission tickets for cinemas, theatres, sports and other cultural events tags (non self-adhesive) data-carriers for logistical purposes boarding passes
KPW 460	71	80	25	4	+	(✓)	<ul style="list-style-type: none"> very good resistance to heat very good wet rub stability good resistance to light good resistance under extreme climatic conditions stampable and therefore validation-capable 	<ul style="list-style-type: none"> parking tickets for carparks and parking spaces travel tickets for buses and trains
KPW 490	104	112	25	4	+	(✓)	<ul style="list-style-type: none"> very good resistance to heat very good wet rub stability good resistance to light good resistance under extreme climatic conditions stampable and therefore validation-capable 	<ul style="list-style-type: none"> parking tickets for carparks and parking spaces travel tickets for buses and trains
KPW 412	134	142	25	4	+	(✓)	<ul style="list-style-type: none"> very good resistance to heat very good wet rub stability good resistance to light good resistance under extreme climatic conditions stampable and therefore validation-capable 	<ul style="list-style-type: none"> parking tickets for carparks and parking spaces travel tickets for buses and trains boarding passes
KPW 415	175	185	25	4	+	(✓)	<ul style="list-style-type: none"> very good resistance to heat very good wet rub stability good resistance to light good resistance under extreme climatic conditions stampable and therefore validation-capable 	<ul style="list-style-type: none"> parking tickets for carparks and parking spaces boarding passes
KPW 417	192	215	25	4	+	(✓)	<ul style="list-style-type: none"> very good resistance to heat very good wet rub stability good resistance to light good resistance under extreme climatic conditions stampable and therefore validation-capable 	<ul style="list-style-type: none"> parking tickets for carparks and parking spaces tags (non self-adhesive) data-carriers for logistical purposes
KPW 421	220	235	25	4	+	(✓)	<ul style="list-style-type: none"> very good resistance to heat very good wet rub stability good resistance to light good resistance under extreme climatic conditions stampable and therefore validation-capable 	<ul style="list-style-type: none"> parking tickets for carparks and parking spaces tags (non self-adhesive) data-carriers for logistical purposes
KPW 423	247	265	25	4	+	(✓)	<ul style="list-style-type: none"> very good resistance to heat very good wet rub stability good resistance to light good resistance under extreme climatic conditions stampable and therefore validation-capable 	<ul style="list-style-type: none"> parking tickets for carparks and parking spaces data-carriers for logistical purposes travel tickets for buses and trains

All our products are bisphenol free or phenol free.

(Exceptions are marked)

Selection of recommended printing inks

Manufacturer	Ink series	KP/KPR grades	KPO/KPW grades	All Topcoated grades
Flint Group	Water Based Flexo			
	Thermokett TC	■	■	■
	UV Flexo			
	Flexocure FORCE	■ ¹	■ ¹	■ ²
	Flexocure GEMINI	■ ¹	■ ¹	■ ²
	Flexocure ANCORA (LM)	■ ¹	■ ¹	■ ²
	Flexocure ANCORA 50 (LM)	■ ¹	■ ¹	■ ²
	UV Offset			
	Lithocure Premium		■ ³	■
	Lithocure ANCORA LP (LM)		■ ³	■
	UV Letterpress			
	Lithocure Premium		■ ³	■
Lithocure ANCORA LP (LM)		■ ³	■	
GSB-Wahl	Water Based Flexo			
	Thermo Label Series TL	■	■	■
	UV Flexo			
	UV Labelflex Series 81 MA (LM)	■ ¹	■ ¹	■
hubergroup	UV Flexo			
	NewV flex UF4000	■ ¹	■ ¹	■
	UV Offset			
Jänecke+Schneemann	UV Offset			
	Supra UV Series 569920-923		■ ³	■
	Supra UV Series 570160-163		■ ³	■
RODATZ FarbenFabrik	Water Based Flexo			
	Inkseries 4 WT (with cross-linker 21010)	■	■	■
Siegwerk	Water Based Flexo			
	Aqualabel HK (with cross-linker)	■	■	■
	UV Flexo			
	SICURA Flex 39-8	■ ¹	■ ¹	■
	SICURA Nutriflex 10 (LM)	■ ¹	■ ¹	■
	SICURA Nutriflex LEDTec (LM-LED)	■ ¹	■ ¹	■
	UV Offset			
	SICURA Litho Nutriplast 2 (LM)		■ ³	■
UV Letterpress				
SICURA Typo 41-2		■ ³	■	
ZELLER+GMELIN	UV Letterpress			
	UVFLEX Y80	■ ¹	■ ¹	■
	UVFLEX Y81 (LM)	■ ¹	■ ¹	■
	UV Offset; UV Letterpress			
	UVALUX U40		■ ³	■
UVALUX U41 (LM)		■ ³	■	

LM = Low Migration

These specifications are recommendations by the ink manufacturers. We can assume no liability for their accuracy.

¹ With UV-flexo ink on Non-Topcoated materials (KP, KPR, KPO and KPW), discolouration may occur, appearing even weeks or months after printing. Here we strongly recommend pretests. Complete drying, means cross-linking of the ink, must be guaranteed.

² Through addition of the additive FLINT GROUP UAA00117, ink adhesion can be improved. Please consult the manufacturer's specification.

³ The UV-offset printability of KPW grades is limited. The result depends essentially on the layout, the machine settings and conditions. Printing tests are necessary.

For product analyses and comparisons or detailed information on the processing of thermal papers, please do not hesitate to contact us. We will be glad to be of service.

Intelligent Paper

■ ■ ■ ■ ■ Survey of products 2022

Nomenclature of our thermal papers

For a better understanding of how our products are named, the nomenclature of our thermal papers is explained here:

