

# Inks and hardener properties

INK PROPERTIES			Ink ref.	TPC 118	TPC 180	TPC 301	TPC 320	TPC 528	TPC 508	TPC 200	TPC 230	TPC 250	TPC 270	TPC 728	TPC 760	
			System	1-C-Ink	1-C 2-C	1-C 2-C	1-C 2-C	1-C 2-C	1-C 2-C	2-component ink					UV-inks	
			Special	rel. Versatile	versatile	**	versatile	versatile	versatile	versatile	versatile	incr. resistance	ink for glass	sterilizable	500-1000 *	750-1500 *
<b>OPACITY</b>				HD	good/HD ++	good	good /part. hd	good/HD ++.	HD	good /part. hd	good /part. hd	good	good	good	good	
glossy*					x	x	x			x	x	x	x	x		
silk finish				x		x	brilliant	x								
<b>DRYING</b>	touch dry (room temp.)	min	1	2...3	0,5	0,5 ... 1	2...3	1	1	2	15	15	after hardener	after hardener		
	with heat	sec	20	30...60	ca. 5	10	60	30	60	60	60	30	---	---		
	Thorough drying at room temp.	days	1	1	< 1	few hours	1	---	---	---	---	1	---	---		
	oven	C °/min	50/30	140/20	no stoving	140/20	max. 140/30	max. 160/30	140/20	140/20	140/20	140/20	140/20	---	---	
	Pot life bronze ink (h)			6	6	6	6	6	6	6	6	6	6	24	24	
thermodiffusion				---	possible	no stoving	possible	possible	possible	possible	possible	possible	possible	no	no	
<b>CURING</b>	physical		x	x	x	x	x	x	x	x	x	x	x			
	chemical (2-C)	days	(6)	5 ... 6	3	2... 3	5	3	5-6	5-6	5-6	5-6				
	UV-curing													x	x	
	Final cure at roomtemperature (h)													24	24	
over-printing until max.			(15)	12	12	12	15	12	12	12	12	12	12	bevor hardener	bevor hardener	
<b>CHEMICAL resistance (1)</b>	misc. solvents		+/++	++	+	++	+	++	+++	++	+++	++	+++	+++	++	
	alcoholic cleaner		+/++	++	+	++	+	++	+++	++	+++	++	+++	+++	++	
	organic solvents		+/++	++	+	++	+	++	+++	++	+++	++	+++	+++	++	
	oils and fats		+/++		+	++	+	++	+++	++	+++	++	+++	+++	++	
	alkaloids / thinned acids		+/++		+	++	+	+	+	++	+++	+/tri-proof	+++	+++	++	
	petrol		+/++		+	++	+	++	+++	++	+++	++	+++	+++	++	
	washing-up liquid		+/++	++	+	++	+	++	+++	++	+++	++	+++	+++	++	
<b>MECHANICAL resistance</b>			+/++	+	++	+	++	+	++	++	+++	++	++	+++	++	
<b>INK FILM PROPERTIES (2)</b>			dep. on hardener	rough & hard	flexibel			dep. on hardener	slightly rough	rough	very rough	slightly rough			very rough	
<b>WEATHER RESISTANCE (3)</b>			HA = ++	HR = ++	+++	HR=+++	HA= ++	HA = ++	no	no	++/waterproof	+++	+	+		
<b>LIGHT FASTNESS (4)</b>			6-8	7-8	6-8	7-8	6-8	6-8	7-8	7-8	7-8	7-8	6-8	7-8		
<b>STORAGE LIFE (at 20-25°/20-70%)</b>	Inks	years	2	3	1 / 21°C	5	2	2	5	5	5	5	1	1		
	Hardener	years	1	1	1	1	1	1	1	1	1	1	---	---		
	Bronze inks	Monate	6	6	6	6	6	6	6	6	6	6	6	6		

\* Glossy black ink on matt, white underground surface. Measuring angle: 60°, BYK-Trigloss-Measurement Device. Color toes produce the highest values.

HD = high opacity, partially available.

- Chemical properties** test. Number of double strokes with soaked cotton towel as test medium, until a strong alteration to the surface can be seen.
- Mechanical properties** test. Rub test with velvet off-set paper until the surface area changes. Hand rubbed, 20 double strokes.
- Weather resistance:** Combination of raw material data, experience and trials with the weatherometer Q-UV-panel (3000h cycle change test).
- Light fastness:** The fluorescent colours are an exception. Lacquer or white blends reduce the light fastness significantly. Ink color fastness is measured via the blue wool scale after being exposed to UV-light. The scale ranges from poor color fastness (0) to excellent color fastness (8).

+ = good  
 ++ = very good  
 +++ = especially suitable

x = yes  
 \*\* = free of cyclohexanone and condiments

Tri = trichlorin  
 \* = requires UV-Light exposure (mJ/cm²) in order to fully cure the ink.

HARDENER PROPERTIES		HARDENER >	HA	HB	HG	HH	HI	HM	HN	HP	HR	HV	HW
reactivity (+=fast, -=slow)			slow	+++	++	++	++	+++	++	++	++	++	n.b.
<b>TREATMENT</b>	curing temp.	°C / min.	140/20-30	140/20-30	140/20-30	140/20-30	140/20-30	140/20-30	140/20-30	-140/20-30	-140/20-30	160/20-30	---
	room temp.	min >°C	> 20	> 23	no information	> 20	> 20	> 20	> 10	> 15	> 20	> 20	> 20
<b>PROPERTIES</b>	resistance	chemical		++	+++/stoving	+	+++/stoving	+++	++	++	++	+	++
		mechanical		++	++	++	++	+++	++	++	++	+	++
		UV-resist.	+++	+++			+				+++		+++
	gloss			++	++	++	++	++		++	++	++	++
flexibility (+= very good -- = hard)			++	++					--	--	++		
special properties					glass oven curing		combination HH and HG				flexible but hard	glass oven curing	stoving not recommended

You will find our ink list as well as more detailed information concerning ink applications in our ink catalog in our ink catalogue. (order number: 706 100 092)

**PLEASE READ THE TECHNICAL DATA SHEETS ON PAD PRINTING INKS AND ADDITIVES**

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