

TPA/GLN 2 - Component Ink, Semi-gloss ink

Application:

For glass, duroplastics, ceramics, metals including chromium and nickel-plated, gilded or rhodium coated surfaces.

Properties:

Ink type TPA/GLN is a slow drying ink with good opacity and has a semi-glossy appearance. TPA/GLN is not elasticity and should not be printed on substrates that will be stretched or flexed. TPA/GLN inks show high mechanical resistance and resistance against many organic solvents, chemicals, diluted alkalines and acids, oil and grease.

Excellent water resistance is achieved with hardener TPWH/GL and air drying. Resistance to various solvents, however, is limited.

By using hardeners TPWH-02/GL and oven-curing at 140°C (284°F) for 20 minutes will result in very good resistant properties. Prints made with TPWH-02/GL show a higher degree of gloss.

Adjustments:

Pad Printing:

Ink type TPA/GLN is adjusted with 15-30% Thinner depending on temperature and humidity. Thinners normally used when pad printing: TPWB, POS/B and CA262

TPA/GLN is a 2-component ink system and requires hardener to be added.

Mixing ratio for ink type TPA/GLN: hardener TPWH/GL, TPWH-02/GL or TPWH-03/GL is mixed 20 parts ink : 1 part hardener (parts by weight).

Pot life of ink after adding hardener is approximately 8 hours. After this time adhesion and resistance might be reduced, even if the ink still seems to be liquid and processable.

Screen Printing:

Ink type TPA/GLN is adjusted with 15-20% thinner (primarily TPWD solvent). More thinner can be added if drying speed is too fast for the printing conditions.

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NOTE: All of the below thinners can be blended to create different solvent evaporation speeds to suit your printing requirements.

Thinner Types:

Type	Evaporation Rate	Suitable inks	Characteristics
TPWA	1.0	All "K" ink -line pad printing inks.	Universal. Suitable for all pad printing inks.
TPWB	0.5	All "K" ink -line pad printing inks.	Fast drying solvent. Suitable for automatic production.
TPFA	5.0	All "K" ink -line pad printing inks.	Slow drying solvent.
POS/B	0.25	All "K" ink -line pad printing inks.	Very fast drying solvent also used with high speed automation printing.
TPWC	1.0	All "K" ink -line pad printing inks.	Aggressive solvent.
TPWD	25.0	All "K" ink -line pad printing inks.	Retarder. Used primarily in screen printing applications. 25 times slower than TPWA solvent.
CA262	0.6	Single component ink systems. With the exception of TPA/GL and TPA/GLN two component inks.	Fast drying solvent primarily used when printing on Acrylic, styrene or other plastics that have a tendency to craze or crack with other solvents.

/00 at the end of any of the solvents. Example: TPWA/00	Same as the original.	Same as the original.	Improves oxidation effect on metal cliché and or metal parts to be printed. NOTE: These thinners are only made on special requests and delivery time is longer.
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Hardener Types:

Type	Characteristics	Remarks
TPWH/GL	Good water and chemical resistance.	This hardener needs to be oven-cured at 140°C (284°F) for 20 minutes
TPWH-02/GL	This hardener has a higher chemical resistance after oven-cure.	This hardener needs to be oven-cured at 140°C (284°F) for 20 minutes
TPWH-03/GL	Relatively good chemical and water resistance.	This hardener is the only hardener for TPW/GLN inks that can be air cured.

Drying:

TPA/GLN 2-component pad printing ink mixed with TPWH/GL or TPWH-02/GL dry chemically/physically. At room temperature (20-25°C; 68-77°F) drying time is approximately 10-15 minutes. Heat application and air circulation will reduce drying time to approximately 40-60 seconds. (NOTE: Oven-cure for 20 minutes is recommended to meet full potential of the resistant properties)

When air drying the prints they will require 5-6 days of cure time to meet mechanical and chemical resistance.

Adhesion and abrasion tests need to be done after 5-6 days from printing to ensure proper curing.

Cleaning:

For cleaning the stencils and tools our KJ-1525 cleaning thinner is suitable. KJ-1525 is also used for cleaning the stencils and tools when hardener is added to TPA/GLN ink.

Packaging:

TPA/GLN inks are available in 1 liter (approximately 1.06 quarts) cans.

Color matched inks are packaged as 1 kg./cans only.

Shelf Life:

Non opened cans of TPA/GLN inks are good for 5 years. Each can will have a mixed and recommended use by date printed on the label.

Risk Information:

Read material safety data sheets prior to processing.

The material safety data sheets according to 91/155/EWG contain marking in compliance with the regulation on dangerous working materials as well as instructions for precautions when processing, handling, waste disposal and storing as well as first aid.

TPA/GLN ink type color shades contain no heavy metals in their pigmentation and comply with the provisions of EN 71, part 3, safety of toys, migration of particular elements.

Application Technology:

If you have any further print or application-related questions, our application engineering team will be happy to help. Contact by E-mail: info@diverprint.com or call the home office: 704-583-9433.

Standard Colors

Standard Colors					
Citric yellow	TPA/GLN-280	Pink	TPA/GLN-385	Light green	TPA/GLN-680
Medium yellow	TPA/GLN-281	Light Blue	TPA/GLN-580	Brilliant green	TPA/GLN-682
Dark yellow	TPA/GLN-282	Medium blue	TPA/GLN-581	Dark brown	TPA/GLN-881
Orange	TPA/GLN-285	Ultra blue	TPA/GLN-582	White	TPA/GLN-100
Ochre yellow	TPA/GLN-287	Turquoise	TPA/GLN-584	Black	TPA/GLN-105
Light red	TPA/GLN-380	Blue violet	TPA/GLN-586		
Red right	TPA/GLN-381	Violet	TPA/GLN-587		
** Other color shades can be manufactured subject to our special ink shade regulations**					

C-MIX 2000 Colors (12 color matching system)				
Primrose	TPA/GLN-Y30		Violet	TPA/GLN-V50
Golden yellow	TPA/GLN-Y50		Blue	TPA/GLN-B50
Orange	TPA/GLN-O50		Green	TPA/GLN-G50
Scarlet	TPA/GLN-R20		Black	TPA/GLN-N50
Red	TPA/GLN-R50		White	TPA/GLN-W50
Magenta	TPA/GLN-M50		Clear varnish	TPA/GLN-E50

Process Colors (according to Europe Scale)	
Yellow	TPA/GLN-200
Magenta	TPA/GLN-201
Cyan	TPA/GLN-202

The statements in our leaflets and safety data sheets are based on our present experiences, however they are no assurance of product properties and do not justify a contractual legal relationship. They serve to advise our business associates, but it is absolutely necessary to make your own printing tests under local conditions, with regard to the intended purpose prior to starting the job. - All former leaflets are no longer valid. April 2000 - Version No.1

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