

Thermo-Jet

1 Component Ink, Gloss ink

Application:

Multi-purpose, glossy screen and pad printing ink to print on rigid and soft PVC, artificial leather, acrylics, polycarbonate and pre-treated polyester. Good weather resistance. Printed on thermoplastic materials, Thermo-Jet is vacuum formable and high frequency sealable.

Properties:

Thermo-Jet ink type is a quick drying ink system with a glossy appearance. Thermo-Jet ink has very good elasticity properties and is thermo-formable as well as hf-weldable with the exception of 944 White Opaque. The mechanical resistance and chemical resistance of Thermo-Jet inks are good but will improve with the addition of Hardener #2. However by adding hardener the flexibility and thermo forming properties are hindered greatly. Thermo-Jet inks have good opacity and has very good printability when pad printed. Thermo-Jet inks are also very good screen printing inks.

Weather Resistance:

When printing on suitable substrates Thermo-Jet shows excellent weather resistance. To ensure outdoor durability screen printing mesh should not be any finer than 77 threads/cm (195 threads/inch). When pad printing the ink layer will be thinner thus the outdoor life expectancy will be shorter. The thicker the ink layer the better with the exception of white ink. A high concentration of standard white 945 and 944 opaque white ink can cause chalking when used in outdoor purposes. Thermo-Jet 940 is specially pigmented with improved resistance to chalking for the white shade itself as well as mixing with other colors.

Adjustments:

Pad Printing:

Thermo-Jet inks are adjusted with 25-35% thinner depending on temperature and humidity.

Screen Printing:

Thermo-Jet inks are adjusted with 15-20% thinner (primarily slow thinners).

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

Thinner Types: *(recommended for pad printing)*

Type	Suitable inks	Characteristics
6601	All "P" series inks	Very fast solvent, primarily used in automation or with inks that have slow drying speeds.
SK90	All "P" series inks	Fast solvent. Suitable for automatic production.
2090	Norilit CS, Noriprint PS, Thermo-Jet, ZK ink	Medium / Fast solvent evaporation
U90	All "P" series inks	Medium / Fast solvent evaporation. Most common solvent used with pad printing applications.

Thinner Types: *(recommended for screen printing)*

Type	Suitable inks	Characteristics
VZ	All "P" series inks	Slow solvent, normally used for screen printing. VZ can also be added to the recommended pad printing solvents to help with tacking.
VZ2	All "P" series inks	Very slow solvent used primarily for screen printing. Normally used in low humidity and or high temperature conditions.
K97	All "P" series inks	Very slow solvent used primarily for screen printing. Normally used in low humidity and or high temperature conditions.

In order to meet higher demands regarding mechanical and chemical resistance as well as adhesion, Thermo-Jet inks may also be used as a 2-component printing ink.

Mixing ratio for Thermo-Jet inks: hardener #2 is mixed 10:1 parts by weight.

Pot life of ink after adding hardener is approximately 6 hours. After this time adhesion and resistance might be reduced, even if the ink still seems to be liquid and processable.

Drying:

Thermo-Jet is a physically drying ink system which dries by evaporation of solvents in a jet air dryer. Rack drying is also possible.

With heat application and air circulation the drying time is reduced to 30-60 seconds.

It will take approximately 24 hours to completely cure even when adding heat.

If processed as a 2-component ink, mechanical and chemical resistance will only be achieved after 3-4 days. This amount of time is required to achieve total evaporation of solvents from the 2-component ink system.

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 Thermo-Jet ink.

Packaging:

Thermo-Jet 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 Thermo-Jet inks are good for 4 years on all colors except for gold and silver. Gold and silver inks have a shelf life of 12 months.

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.

Thermo-Jet ink 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.

Basic Colors

Clear	093	Red Transparent	368	Green Transparent	669
Citron	102	Red Violet	429	White	945 * ³
Yellow * ²	104	Pink Transparent	467	Black	948
Orange * ²	207	Violet	472		
Red	312	Blue Transparent	566		

Standard Colors

Light Yellow	101	Violet	417	Dark Green	615
Dark Yellow	115	Light Blue	518	Loud Green	627
Ochre	135	Ultra Blue	520	Light Green	628
Orange	209	Medium Blue	521	Brown	836
Dark Red	314	Marine Blue	522	White	940 * ³⁺⁸
Medium Red	315	Dark Blue	523	Opaque White	944 * ³
Light Red	320	Medium Green	610	Brilliant Black	950

Special Colors

Yellow Transparent	171	Silver	733	Copper	864
Red Orange	211/010	Rich Gold	861	Bright White	945/102
Red Transparent	371	Rich Pale Gold	862	Tarpaulin White	945/102
Oblitering Silver	747	Pale Gold	863	Black Opaque	952 * ⁷

Process Colors (satin gloss)

(according to Europe Scale)

Process Yellow	156	Process Cyan	558	Process Paste	099
Process Magenta	357	Process lack	949		

Highly Opaque Colors For Pad Printing					
Yellow High Opaque	156	Red High Opaque	332	Blue High Opaque	532
Green High Opaque	632				

*2= Not to be used for printing on soft PVC or plastics containing high amounts of plasticizers.

*3= Not suitable for printing tarpaulins/awnings as the high-pigmented ink is not elastic enough.

*7= Not suitable for pad printing. Contains magnetizable pigments.

*8= Specially pigmented white with improved resistance to chalking.

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.

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