TGLASS

TECHNICAL SPECIFICATIONS

PRODUCT DESCRIPTION
TGLASS ink is a non-CMR two-component solvent ink.

APPLICATIONS
Glass, non-ferrous metals, aluminum, ceramics.

The aforementioned substrates may vary depending on their origin and manufacturing process.
It is therefore essential to carry out preliminary tests.

PRINTING
Manual, semi-automatic, 3/4 automatic, and automatic machines.

MAJOR ADVANTAGES
- Very glossy, allowing marking and decoration of substrates considered difficult to print on.
- Ink/hardener mixture can be used for up to 48 hours (closed containers).
- Quick drying.
- High resistance to chemicals and household washing.
- Good flexibility of the ink film.

APPEARANCE
Very glossy.

Substrate	Glass, non-ferrous metals, aluminum, ceramics.
Mesh	200 to 365 threads/inch (79 to 140 threads/cm)
Emulsion	All types of solvents resistant emulsions
Squeegee	65shA or 75shA
Drying	Solvent evaporation
Diluent and additive	Thinner MP201 Retarder MP203
Cleaning	77 BIO
Storage	5 years stored between +5°C et +35°C

COLOR RANGES & PACKAGING

BASIC COLORS	
TG 102 WHITE	1 K
TG 404 ORANGE	1 K
TG 406 GOLDEN YELLOW	1 K
TG 501 LEMON YELLOW	1 K
TG 612 GREEN	1 K
TG 701 VIOLET	1 K
TG 719 PERMANENT BLUE	1 K
TG 801 RED	1 K
TG 810 CARMINE	1 K
TG 811 PINK	1 K
TG 902 BLACK	1 K

STANDAR COLORS	
TG 526 MEDIUM YELLOW	1 K
TG 531 RICH YELLOW	1 K
TG 638 BRILLIANT GREEN	1 K
TG 722 BRILLIANT BLUE	1 K
TG 727 BLUE	1 K
TG830 BRIGHT RED	1 K

OPAQUE BLACK / WHITE	
TG 905 OPAQUE BLACK	1 K
TG 103 OPAQUE WHITE	1 K
VARNISHES	
TG 003 CLEAR VARNISH	1 K
DILUENTS AND ADDITIVES	
PG/TG 201 POLYGLOSS/TGLASS THINNER	1 L
PG/TG 203 POLYGLOSS/TGLASS RETARDEUR	100 - 500 CC
PG/TG 291 GLASSBOND IMPROVER	100 - 500 CC
77.23G GEL RETARDEUR	1 KG

INSTRUCTIONS FOR USE

SCREEN
All types of mesh from 79 to 120 threads per centimeter.
The emulsions or films used must be resistant to solvents.

SQUEEGEE
Polyurethane with a hardness of 75 shA.

PERFORMANCE
With a 120 threads per centimeter fabric, 1kg will cover 45 to 50 m².

DILUTION
Once the mixture is prepared, TGLASS inks are diluted exclusively with the diluent PG/TG 201 and the retarder PG/TG 203, or a combination of both depending on the printing speed. In case of high ambient temperature, or if the inks tend to dry in the screen, only use the retarder PG/TG 203 or the gel retarder 77.23G for fine detail printing.

PREPARATION OF THE SUBSTRATE
Ensure that the substrates to be printed are free from oxidation or grease. The printing surface should be cleaned, if necessary, by sandblasting, and then thoroughly dried. Never use solvents or gasoline, but rather ethyl alcohol.

BASE-VARNISH
To reduce the intensity of colors or obtain semi-transparent effects, the overprint varnish base TG 003 can be added, but this will proportionally affect the light resistance.

OPACITY-APPEARENCE
TGLASS inks are opaque and have a glossy appearance. The pigments used do not migrate, and the colors are superimposable.

HARDENER
At the time of use, add 10% by weight of hardener PG/TG 291 (Glassbond Improver) into the ink, then tightly close its bottle. Ideally, prepare the mixture 20 minutes before printing.

ADHESION-RESISTANCE
At ambient temperature, the final curing allowing the adhesion test is achieved after 8 days. After drying in the tunnel, a temperature rise allows for immediate complete curing: for example, 5 to 10 minutes at 180°C or 25 to 30 minutes at 120°C (yellowing of the TG.103 white color may occur if it is polymerized for more than 10 minutes at a temperature above 120°C). The adhesion test is only possible when the reaction is complete, usually after 48 hours. The ink film, very flexible, can be folded. TGlass inks have good resistance to water (soaking and dishwasher washing) as well as common cosmetics and detergents. The best resistances are obtained after curing the ink.

Many glass containers are coated with a hot or cold coating (CEC) to improve scratch resistance and transportation. Therefore, to achieve good ink adhesion on certain glasses, a surface pretreatment by flaming, Pyrosil, or Uvitro™ will be necessary.

DRYING
It is only after printing and drying, through solvent evaporation, that the chemical reaction between the two components begins.
At ambient temperature: printed substrates are manipulable after 10 to 15 minutes, dry to the core after 48 hours, depending on the ambient temperature and humidity.
With forced air: the drying time in the tunnel depends on the temperature, the fineness of the fabric, the printed material, etc...
Curing for 5 to 10 minutes at 180°C or 25 to 30 minutes at 120°C (yellowing of the TG.103 white color may occur if it is polymerized for more than 10 minutes at a temperature above 120°C).

PRODUCT PROPERTIES
On substrates with low surface energy, the treatment must be higher than 41 dynes/cm.
After the support has completely cooled to room temperature, the printed ink film must withstand the 3M810 tape test after gridding.

HANDLING
Homogenize before use.

SCREEN CLEANING
Cleaning with the 77BIO bio solvent is recommended.
The screen should be cleaned after use, as the hardener would make it impossible to dissolve the ink after drying in the screen.

WASTE MANAGEMENT

Packaging contaminated with hazardous substances.
Do not dispose into the environment.
VFP Ink Technologies encourages all users to develop a responsible environmental policy.

HEALTH AND SAFETY

Refer to the MSDS.
We recommend that you wear Personal Protective Equipment recommended by the MSDS and follow its handling precautions.

STORAGE

5 years in its original packaging stored between +5°C and +35°C