

# Tough Tex

**The specialty offset-ink for printing on non-porous surfaces.**

Tough Tex inks have been specially formulated for printing in offset on non-porous substrates, such as foils, plastics, self-adhesive vinyl materials and transparents, which are offset-prepared. Tough Tex can also be used on chromolux, or conventional coated paper, when the drying properties of standard quickset inks are insufficient.

Tough Tex will anchor to most materials which do not have a fibrous structure and as such do not absorb ink and fountain water.

The special varnishes of this series help it dry by oxidation to a hard finish.

Tough Tex inks are free from aggressive solvents, which could harm inkrollers, rubberblankets or the surface of the substrate. Tough Tex inks are suitable for offset presses with a separated ink/dampening system.

Tough Tex is available from stock in the Basic Colours of the PANTONE® Matching System and process colours.

Also available Tough Tex LR, its unique blend offers the most fade-resistant pigments available. Ideal for printing material which will be used outdoors or requires special after-treatment.



# Tough Tex & Tough Tex LR

## Properties

Tough Tex inks have been formulated to dry by oxidation and contain special varnishes that will bind the ink to a wide variety of non-porous stocks.

Tough Tex inks do not contain any solvent, nor are they aggressive, which could harm e.g. inkrollers, rubberblankets or the surface of the substrate.

Tough Tex inks do not contain mineral oil.

Tough Tex LR is a high lightfast range with the same performance as Tough Tex.

## Printing Presses

Tough Tex inks are suitable for single- and multi-colour presses, with a separated ink/dampening system.

## Plates

Tough Tex inks are best used with metal plates, to avoid an excess of fountain water, which could influence the drying time of the ink.

## Fountain Solution

Use of fountain solution has to be minimised as much as possible, due to the lack of absorption capacity of the substrate, especially during makeready activities on the press. Otherwise a too high a degree of emulsification will disturb drying properties of the first couple of hundred sheets.

Printing non-absorbing substrates does not require the use of a fountain solution, which is prepared as an "anti-piling solution" for paper fibres. The anti-piling additives will remain in the ink-layer after printing and will disturb the drying process. Also alcohol-substitution additives have a negative influence on drying speed.

Adding isopropyl alcohol to the fountain solution mixture, with a buffering capacity of pH 4.8 to 5.5, will optimize the wetting capacity of the fountain solution on the plate. It will stimulate the evaporation time of the water out of the ink-layer and will offer the highest contribution in reduction of the drying time of the inks.

## Drying

Tough Tex inks dry very fast by oxidation. If a press stop is longer than half an hour, the ink-rollers and blankets need to be cleaned.

If ink refreshment on the rollers is very low, stronger emulsification of the ink is possible and drying speed can decrease. If drying of the ink-film must be accelerated, adding 3-4% Multidrier (V4210 or V4215) is recommended, as well as the use of Anti Set-Off Powder. If the Multidrier is not properly mixed with the ink before filling the ink-duct, the functionality of the drier is insufficient, causing a negative result.

Due to the enormous number of different types of substrates in the market, as well as the possible deviations in production quality of these materials, it is always necessary to check the drying affinity between substrate and ink before using the actual stock. A simple method is to fingertip a small amount of ink on the substrate and let it dry in the pile. Drying and anchoring of the ink must be completed after one working day.

Accelerated drying by means of IR- or UV-equipment is not recommended, as the accumulated heat in the pile will slowdown the drying time.

## Substrates

Tough Tex inks have been formulated for printing on offset-prepared, non absorbent materials, such as plastics, metal damped foils, self-adhesive vinyl materials, transparencys and likewise.

Deformation of the substrate can occur. At all times this has to be tested out, specially before using unknown qualities of substrate.

Tough Tex can also be used on chromolux and conventional coated paper stocks, when drying properties are insufficient, using normal quickset inks.

Tough Tex LR inks have been developed for material which will be used outdoors, or requires special after-treatment.

## Colour Range

The tabel states all the colours which are available from stock. In addition, colours from the PANTONE® colour guide or special matches are available through the Special Colour Service department.

Vacuum Tin 1 kg	Lightfastness	Nitro Cellulose Varnish Resistance	Calendering Ability	Alkaline Resistance	
<b>Tough Tex</b>					
Process Yellow	VS 496	5	+	+	+
Process Magenta	VS 497	5	+	+	-
Process Cyan	VS 498	8	+	+	+
Process Black	VS 499	8	-	-	-
Metallic Silver	VS 491	7	-	-	-
Metallic Gold	VS 492	5	-	-	-
Universal Black	VS 494	8	-	-	-
Opaque White	VS 44111	8	+	+	+
<b>Tough Tex PANTONE® Colours</b>					
Yellow	VS 44100	3	+	+	+
Warm Red	VS 44101	3	-	-	-
Rubine Red	VS 44102	5	+	+	-
Rhodamine Red	VS 44103	4	-	-	-
Purple	VS 44104	4	-	-	-
Reflex Blue	VS 44105	3	-	-	+
Process Blue	VS 44106	8	+	+	+
Green	VS 44107	8	+	+	+
Transparent White	VS 44108	n/a	+	+	+
Black	VS 44109	8	+	+	+
Violet	VS 44110	4	-	-	-
Yellow 012	VS 44112	5/6	+	+	+
Orange 021	VS 44113	6	+	+	+
Red 032	VS 44114	6/7	+	+	+
Blue 072	VS 44115	4	-	-	+
<b>Tough Tex LR</b>					
Process Yellow	VS 3310	7	+	+	+
Process Magenta	VS 3311	6/7	+	+	+
Process Cyan	VS 3312	8	+	+	+
Process Black	VS 3313	8	+	+	+
<b>Tough Tex LR Basic Colours</b>					
Violet	VS 33100	7	+	+	+
Yellow	VS 33101	6	+	+	+
Warm Red	VS 33102	6	+	+	+
Rubine Red	VS 33103	7	+	+	+
Rhodamine Red	VS 33104	6/7	+	+	+
Purple	VS 33105	6/7	+	+	+
Reflex Blue	VS 33106	8	+	+	+
Process Blue	VS 33107	8	+	+	+
Green	VS 33108	8	+	+	+
Transparent White	VS 33109	n/a	+	+	+
Black	VS 33110	8	+	+	+

\*Pantone, Inc.'s check-standard trademark for color.



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