



Thermography

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- ◆ Thermography or thermographic printing is a printing process that causes text or graphics to be slightly raised from the substrate.
- ◆ The resulting visual effect is interesting, making this a technique that is commonly used on wedding invitations, letterheads, business cards, greetings cards, gift wrap, diplomas and packaging.
- ◆ Since it is also a tactile effect thermography can be used to print braille text.

GRAPHICS

The thermographic printing process

Thermography combines a traditional printing method with a specific type of finishing. It can be done in a fairly manual fashion or using a completely automated system.

- Press sheets are printed using a regular offset press and a special type of ink that does not immediately dry.
- When working in a more manual fashion the printed sheets are then dipped into a powdered polymer or resin. This polymer sticks to the wet ink.
- The excess powder is removed by holding the sheets vertically and tapping their back.

- The same process can also be automated by having a machine dust the sheets with the colorless resinous powder. A vacuum system then removes the excess powder from the uninked areas.
- The sheets are then fed into a small oven that melts the polymer and fuses it to the ink. This takes just a few seconds. A cheaper but more manual option is to use a heat gun that blows hot air to achieve the same effect.

Process

- ◆ Thermography is a specialized process that combines offset printing ink with a powdered resin which is baked so that the resin rises to give the ink a raised, textured effect.
- ◆ The image is first offset printed with a slow drying ink.
- ◆ Next, the wet printed sheets travel through a tunnel that dusts them with resin, the areas with ink are covered with the resin and the excess is vacuumed off.
- ◆ Heat is then applied which melts the resin to form a raised, glassy and slightly enlarged image. There are several types of powder used in thermography: fine, medium and coarse, dull, matte and gloss.
- ◆ The powders are transparent so they take on the colour of the underlying ink. It is also possible to use a transparent ink which will make a transparent or “blind”

Applications

- ◇ The most common use for thermography printing is for business cards and business stationery.
- ◇ It is also used for wedding invitations, greeting cards, report covers and other printed items.
- ◇ You can also apply thermography to specific portions of the sheet only, thereby creating a special effect that is not achievable using any other means

Colours

- ◇ Most applications would call for a clear powder so that the raised area takes the colour of the printed ink.
- ◇ However, for special applications, different coloured powder are also available: white, gold, silver, copper and even glow-in-the-dark

Advantages

- ◆ Raised printing looks professional and eye-catching.
- ◆ Thermography is a much cheaper alternative to engraving or embossing.
- ◆ It literally adds another dimension to the printed piece. Because the ink is heated and dried after passing through the heat tunnel, the printed piece is completely dry and can be trimmed or packaged immediately.

Dis Advantages

- ◆ The raised ink cannot go across a fold or bleed as it would crack when folded or cut.