

# Roller Blind Films

## Quality films to meet the highest demands



### THE PROBLEM

High-quality architecture requires quality solutions to every detail. This also applies substantially to the embossing methods for the films used as solar and glare protection. The films used should have a surface that is as flat as possible, with an optimal transparency. This is especially important for the film roller blinds that cover relatively large areas of glazing under one sheet. A roller blind film that is not flat would undesirably alter the optical properties of the façade of a building. The film irregularities could easily be seen from the outside under the reflected light. Another desired requirement of the film is minimal disturbance to the outside view – whilst maintaining good contrast characteristics.

### THE SOLUTION

These demands on solar and glare protection films can only be met by using an embossed film. On this basis, a flat sheet embossing plant, unique in its size, has been installed, so that all of the films used in MULTIFILM roller blinds can be manufactured using this flat sheet embossing technique.

The important advantages of the MULTIFILM quality films are:

- Flat surfaces
- The best façade optical properties
- Highest transparency
- Excellent contrast characteristics

Film type 30SiAt meets the requirements of the Fire Classification B 1 "hardly combustible" according to ÖNORM B 3800, Part II.



**MULTIFILM®**

*Perfection for windows*

# Roller Blind Films

## Flat sheet embossing technique



### THE PRINCIPLE

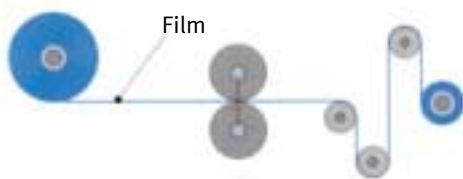
To ensure that the light entering the room is diffusely spread as much as possible, and the film does not act as a mirror to the outside, the film must be embossed. MULTIFILM offers flat sheet embossed films to meet the highest standards of quality. The film is hereby laid out flat, as a whole drawn in, heated and embossed. The film remains absolutely flat and drawn in until it has fully cooled down. As a result of this technique and energy intensive embossing process, very great flat-ness, an improved stability of the film within the roller blind, and an excellent transparency are achieved.

The milky side effect of the calender embossing process is thereby prevented. Flat sheet embossed films are distinguished by their very high transparency and good contrast characteristics.

The flat sheet embossing process allows film widths of up to 1.83 m. At MULTIFILM all films used in roller blinds up to a height of 1.75 m are only cut transversely. This reduces the so-called dish effect that is apparent in longitudinally cut films.

### CALENDER EMBOSSING

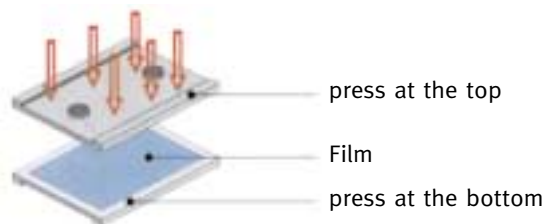
The highly heated film is speedily passed between two rollers that emboss the film.



After embossing, the film is cooled down immediately giving insufficient time for it to stabilised. This results in a distorted surface that is not flat. The distortion could become visible (as small waves) in medium-sized films. Additionally, the transparency of calender embossed films suffers from the high pressure effect of the pressure rollers.

### FLAT SHEET EMBOSSING

In the flat sheet embossing process the sheet film is heated and then gently embossed by a die with a low embossing pressure over a period of time.



During the subsequent cooling phase the film is held absolutely flat on the table by means of a vacuum, until it is fully stabilized.

The film is maintained tension-free in the entire process, so that no distortion can develop within the film.



Perfection for windows  
are available from:

### MULTIFILM

Sonnen- und Blendschutz GmbH

Hohensteiner Straße 30 und 32

09212 Limbach-Oberfrohna

Tel.: 0049-37 22/77 05-0 · Fax: 0049-37 22/77 05-77

e-mail: multifilm@aol.com · www.multifilm.de