

## TACPHAN®

### Material

TACPHAN® is manufactured by solvent casting from cellulose triacetate with added plasticisers. The film can be made with either a glossy or a matt surface, depending on the surface of the casting belt. A film matt on both sides may be produced by laminating two films each having a single matt side.

### Mechanical properties

TACPHAN® is a rigid film with high stiffness and tear resistance. Due to the solvent casting process the film is nearly isotropic with identical mechanical properties in MD and TD.

### Thermal properties

TACPHAN® withstands temperatures ranging from -10°C to +110°C and can withstand brief exposure to higher temperatures, short term stability is up to 185°C.

### Optical properties

TACPHAN® is very highly transparent. Special grades are suitable, for example, for the use in LCD screens or as photographic film base.

### Chemical properties

TACPHAN® is resistant to oils, greases, petrol and aliphatic hydrocarbons.

TACPHAN® has no resistance to or is soluble in chlorinated hydrocarbons, ketones, alcohols, aromatic solvents and bases.

### Bonding and welding

TACPHAN® is readily bonded not only with solvents such as acetone or methylene chloride but also with solvent based adhesives.

TACPHAN® may be welded by thermal impulse welding.

### Flammability

TACPHAN® is self-extinguishing due to its plasticiser content.

### Printability

TACPHAN® can be printed with special inks using common printing processes (e.g. offset, rotogravure and screen printing). As with all plastics, when printing TACPHAN®, care must be taken to ensure proper drying of the inks before stacking and stacks must be kept low.

### Water absorption

Being derived from the natural material cellulose, TACPHAN® exhibits a certain degree of water absorption depending upon ambient humidity. Maximum water absorption is approx. 3%.

### Film storage and processing conditions

When stacking film sheets or blanks, it is advisable not to exceed a height of 50 cm. Sheets and rolls should remain packed in the original packing until usage. The storage temperature should be between 15 and 25 °C with relative atmospheric humidity between 45 and 55%. Rapid and frequent changes in temperature and humidity should be avoided. If storage conditions differ from those prevailing in production areas, the materials should be taken out of storage at least 24 hours, if possible 48 hours, before processing to allow for acclimatisation. Where possible, TACPHAN® should only be processed in air-conditioned areas. We recommend 45-55% relative atmospheric humidity at temperatures of 18-22 °C. If air-conditioning is unavailable, sufficient humidification must be provided in the processing areas when heating is being used. Excessively cold or dry air in production areas complicates the processing of TACPHAN®. Moreover, a humidified atmosphere greatly reduces the risk of electrostatic charging. Packages and reels which have been opened should be carefully rewrapped if not fully used at once.

### **Cutting and die cutting**

TACPHAN<sup>®</sup> is readily cut and punched. High-speed cutter blades should be ground for use with "hard material" in accordance with the manufacturer's instructions. The clamping bar pressure should be kept as low as possible. Interleaving paper always facilitates cutting. Conventional board cutting machines are suitable for cutting and punching. If several layers are to be cut together, paper should be interleaved.

### **Environment**

TACPHAN<sup>®</sup> is environmentally neutral. Production scrap and uncontaminated waste are reused in the production process. The solvents used in the production process are recovered and recycled in a closed circuit system. When dumped or incinerated, TACPHAN<sup>®</sup> produces no highly toxic or highly corrosive gases.

The entire company is certified to ISO 9001 and 14001.

TACPHAN<sup>®</sup> does not comply with BGA (German Federal Health Office) recommendations and NDA/BGA regulations.

### **Applications**

- Polarizer base-film for LCD-panels and sunglasses
- animation film
- transfer print (e.g. rubber industry)
- protective visors
- release film for PCB production
- splice leader for film development
- graphic arts

The aforementioned data are given most conscientiously but without any obligation.

Any processing details are provided merely for guidance: it is the user's responsibility to check the suitability of the product for the intended application.