

TRANSPHAN®

MOST IMPORTANT PRODUCT FEATURES

- Thickness range: 60 µm - 80 µm
- Color: colorless
- Outstanding optical purity
- Very low haze and birefringence
- Excellent stress-crack resistance

MATERIAL

TRANSPHAN® is produced from amorphous polyamide, a special thermoplastic raw material with a balanced ratio of polar and nonpolar components, using the solvent casting process. This combination avoids crystallization, which is common for standard polyamides, resulting in positive optical properties. However, the barrier properties common to polyamides remain intact. TRANSPHAN® combines the properties of partially crystalline polyamides with those of amorphous polymers to form a unique product. With its low density, TRANSPHAN® has the lowest weight per sqm of all films in our product portfolio. The film is manufactured in standard thicknesses of 60 µm to 80 µm, additional thicknesses can be offered upon request.

MECHANICAL PROPERTIES

TRANSPHAN® exhibits high toughness and rigidity. Its high elongation at break, as high as 220 %, is notable. Due to the solvent casting process, the mechanical properties are virtually identical in the longitudinal and lateral directions.

THERMAL PROPERTIES

With a glass transition temperature of approximately 160 °C, heat resistance is greater than that of standard polycarbonate. Due to its amorphous structure, the film has no melt point.

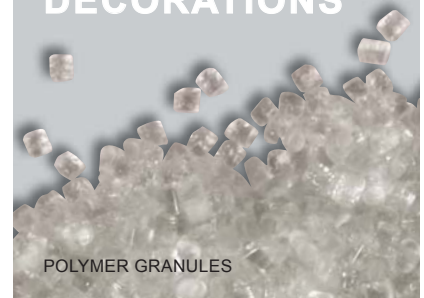
OPTICAL PROPERTIES

Thanks to the extremely low haze values and excellent optical purity, TRANSPHAN® films are very well-suited for optical and display applications. In addition, untreated TRANSPHAN® films exhibit low retardation due to their special

OUR MARKETS

Our broad range of products and ability to realize custom solutions allow us to serve a wide variety of industries and markets:

- DIAGNOSTICS
- ELECTRICS
- ELECTRONICS
- DISPLAYS
- ACOUSTICS
- LABELS
- GRAPHICS
- PRINT
- 3D GLASSES
- OPTICS
- DECORATIONS



TRANSPHAN®

molecular structure. The refined TRANSPHAN® CF type has a specific high retardation for use as lambda quarter film in displays.

CHEMICAL PROPERTIES

TRANSPHAN® exhibits good to conditional resistance to many chemicals such as non-polar media like oils and most organic solvents such as toluol, acetone, etc. In comparison to other transparent films, TRANSPHAN® has very high resistance to stress cracking when exposed to non-polar media like benzine, hexane, etc. and polar media like isopropanol, acetone, etc. The film can be sterilized with water vapor and gamma radiation.

FIRE BEHAVIOR

TRANSPHAN® film is self-extinguishing.

WATER ABSORPTION

In contrast to common polyamides the TRANSPHAN® film exhibits significantly lower absorption of moisture. This has a very positive effect on dimensional stability. At the same time, films of this polyamide type exhibit a very low water vapor transmission rate.

THE ENVIRONMENT

The material is bisphenol-A free and free of all plasticizers. LOFO High Tech Film GmbH has an integrated quality and environmental management system and is certified according to ISO 9001, ISO 14001. In 2012, the company obtained also ISO 50001 certification with the launching of an energy management system.

FURTHER PROCESSING

TRANSPHAN® can be processed with standard adhesives due to its balance of polar and non-polar components. The adhesive force is improved with pre-treatment of the surfaces, such as through corona discharge.

TRANSPHAN® is thermoformable and can be coated with common high-vacuum methods.

COMPLIANCES