

## Case Study

### Electrical appliance motor housings made from Pocan<sup>®</sup> T 7391



Figure 1 Electric motor housing made of Pocan<sup>®</sup> T 7391

**Rotafil** sells motors for domestic and industrial application all over the world. They are used in power tools, domestic appliances and in industry. All the company's motors are manufactured to universally accepted safety standards and comply with the requirements of TÜV, GS, UL, etc. Figure 1 shows the components of one such electric motor.

The design of the housing and the properties of the material used are crucial to the safe and reliable operation of the motor and hence the functional reliability of the complete assembly. In addition to high stiffness and strength, good dynamic properties are also essential for damping vibrations caused when the motor is in operation. When it came to selecting

**Material:** Pocan<sup>®</sup> T 7391

**Manufacturer:** Rotafil S.R.L., Italy

**Industry:** Electrical/electronic

a material for the housing, Rotafil therefore opted for Pocan<sup>®</sup> T 7391 from LANXESS. Pocan<sup>®</sup> T 7391 is a (PBT+PET) blend which yields a very good surface finish despite its high glass fiber content of 45 %. The product also satisfies all the other requirements of this application:

- high dimensional stability and low distortion
- high heat resistance
- low coefficient of thermal expansion
- good chemical resistance
- little tendency to creep



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#### Typical Properties

Property data is provided as general information only. Property values are approximate and are not part of the product specifications.

#### Health and Safety

Appropriate literature has been assembled which provides information concerning the health and safety precautions that must be observed when handling LANXESS products mentioned in this publication. Before working with these products, you must read and become familiar with the available information on their hazards, proper use, and handling. This cannot be overemphasized. Information is available in several forms, e.g., material safety data sheets (MSDS) and product labels. Consult your LANXESS Corporation representative or contact the Product Safety and Regulatory Affairs Department at LANXESS. For materials that are not LANXESS products, appropriate industrial hygiene and other safety precautions recommended by their manufacturer(s) must be followed.

#### Regulatory Compliance

Some of the end uses of the products described in this brochure must comply with applicable regulations, such as the FDA, NSF, USDA and CPSC. If you have any questions on the regulatory status of any LANXESS engineering thermoplastic, consult your LANXESS Corporation representative or contact the LANXESS Regulatory Affairs Manager.

#### Regrind

Where end-use requirements permit, regrind may be used with virgin material in quantities specified in individual product information bulletins, provided that the material is kept free of contamination and is properly dried (see maximum permissible quantities and drying conditions in product information bulletins). Any regrind used must be generated from properly molded/extruded parts, sprues, runners, trimmings and/or film. All regrind used must be clean, uncontaminated, and thoroughly blended with virgin resin prior to drying and processing. Under no circumstances should degraded, discolored, or contaminated material be used for regrind. Materials of this type should be discarded. Improperly mixed and/or dried regrind may diminish the desired properties of a particular LANXESS product. It is critical that you test finished parts produced with any amount of regrind to ensure that your end-use performance requirements are fully met. Regulatory or testing organizations (e.g., UL) may have specific requirements limiting the allowable amount of regrind. Because third party regrind generally does not have a traceable heat history or offer any assurance that proper temperatures, conditions, and/or materials were used in processing, extreme caution must be exercised in buying and using regrind from third parties. The use of regrind material should be avoided entirely in those applications where resin properties equivalent to virgin material are required, including but not limited to color quality, impact strength, resin purity, and/or load-bearing performance.

#### Color and visual effects

Type and quantity of pigments or additives used to obtain certain colors and special visual effects can affect mechanical properties.

#### Note:

The information contained in this publication is current as of February, 2009. Please contact LANXESS Corporation to determine if this publication has been revised.

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