

## Case Study

### Engine cover made of Durethan® DP BM 26 X H2.0 EF



Figure 1 Engine cover for the IVECO Daily

**Martinplast S.p.A.**, a company based in San Martino Alfieri, Italy, manufactures the cover for the engine of the Iveco Daily from the LANXESS resin Durethan® DP BM 29 X H2.0 EF, a member of the innovative EasyFlow family. EasyFlow means above all longer flow paths compared with the corresponding standard product, and it also means less stress on the production machines. The EasyFlow product line has a number of other beneficial properties, such as:

- very good surface quality,
- reduction of clamping forces,
- a wider processing window and
- good mechanical and thermal properties.

With its good injection molding performance, its isotropic shrinkage behavior (ensuring low warpage), and its material-saving potential, the manufacturer had no doubt that Durethan® DP BM 29 X H2.0 EF

**Material:** Durethan® DP BM 29 X H2.0 EF 900116

**OEM:** IVECO, Italy

**Molder:** Martinplast S.p.A., Italy

**Industry:** Automotive

was the right product for this application. Compared with the previous material (standard PA 6 with glass fiber and mineral reinforcement), the cycle time was reduced by around 20 %. With this EasyFlow grade, Martinplast was also able to lower the processing temperature and thereby work more economically overall. The customer is very satisfied, and particularly appreciates the good flow properties and wide processing window, which provide numerous options for adjusting the melt temperature, the mold temperature and the pressure.

EasyFlow also produces an attractive surface, which should not be ignored even when used for a cover under the engine hood. Compared with the standard product, it has fewer flow lines which means that Durethan® DP BM 29 X H2.0 EF also makes a good optical impression.



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#### Developmental Product

Any product designated as a developmental product is not considered part of the LANXESS Corporation line of standard commercial products. Complete commercialization and continued supply are not assured. The purchaser/user agrees that LANXESS Corporation reserves the right to discontinue this product without prior notice.

#### 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 August, 2008. Please contact LANXESS Corporation to determine if this publication has been revised.

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