

Case Study

GIT coolant pipe made from Durethan® DP 2-2224/30



Figure 1 GIT coolant pipe

MECAPLAST Group was founded in 1955 in the heart of Monaco. By its 50th anniversary the company, which started off with five employees, comprised a workforce of 7,000 in 43 sites across 18 countries. The MECAPLAST Group's main area of activity is the automotive industry. It designs, develops and produces innovative parts and assemblies made from plastic, metal and textiles.

MECAPLAST Group uses technologies appropriate to the product families – for example the GIT process for plastics. GIT stands for gas injection technology. The principle of GIT is to use an inert gas (usually N₂) to displace the plastic core from thick-walled areas during the injection process. GIT helps with the manufacture of molded parts that would be extremely difficult or even impossible to produce using the standard injection molding process. More

Material: Durethan® DP 2-2224/30
Molder: MECAPLAST Group, France
OEM: Toyota
Industry: Automotive

recent applications use the opportunities offered by GIT to manufacture all types of complex molded media pipes (see Figure 1).

The MECAPLAST Group has chosen to manufacture its coolant pipe for Toyota from the LANXESS plastic Durethan® DP 2-2224/30. The material is a mineral- and glass-fiber-reinforced PA 66 grade developed by LANXESS specifically for GIT processes.

MECAPLAST Group chose the product for its excellent and consistent processability and for the impressive surface quality (both internally and externally). Durethan DP2-2224/30 also exhibits an exceptional hydrolysis stability which is a crucial property for coolant pipes.



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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.

Note:

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Page 2 of 2 - this document contains important information and must be read in its entirety | Edition 26.08.2008 | TI 2007-022 US

