

Improved aesthetic structural thermoplastics

Key benefits:

- Better appearance than similar products available on the market;
- Excellent mechanical, fatigue and creep properties necessary for structural uses;
- Low humidity absorption, comparable to highly reinforced PAs;
- Favorable price/performance ratio;
- Moulding possible with no particular tool nor processing condition.

The steadily growing demand of thermoplastic compounds dedicated to structural metal replacement is actually promoted by new market requirements imposed to plastic engineers.

Nowadays no compromise is any longer accepted: outstanding mechanical performance has to match flawless surface finish, despite of relevant amount of reinforcing fibers normally used in structural compounds.

The brand new LATIGLOSS™ family offers unequaled surface finish, totally free of all typical issues deriving from compounded glass and carbon fibers, as well as first class mechanical properties allowing high-end metal replacement activities.

LATIGLOSS™ 66 and 6 compounds can outcast not only metals as zamak, diecast and aluminum, but even more expensive thermoplastics, specially very good looking PPA, PAA and other aromatic polyamides. As a matter of fact, they offer even more economic advantages thanks to user-friendly processing conditions (mould and barrel temperatures are the same of PAs).

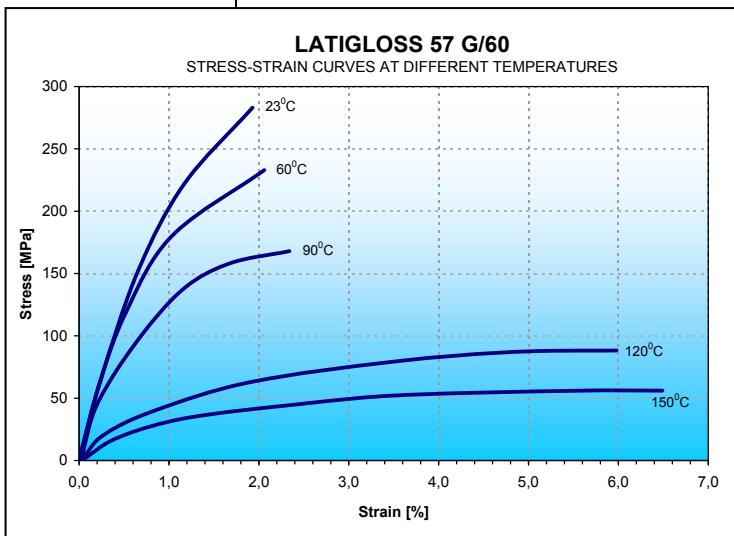
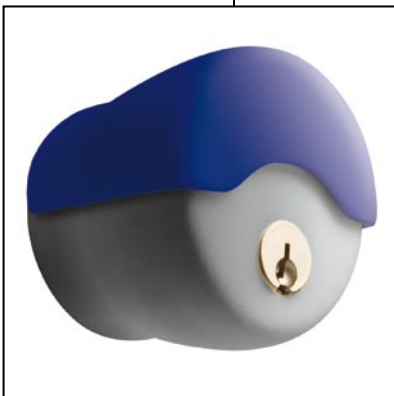
THE FAMILY

All LATIGLOSS™ grades are PPA, PA66 or PA6 based compounds featuring a proprietary special formulation that leads to excellent aesthetics even in case of massive fiber content.

The most popular LATIGLOSS™ grades feature 50-60% glass fibre or 30% carbon:

- LATIGLOSS 66 H2 G/50 and G/60: polyamide 66, 50 and 60% glass fibre reinforced
- LATIGLOSS 66 H2 K/30: polyamide 66, 30% carbon fibre reinforced
- LATIGLOSS 57 G/60: PPA (semi-aromatic polyamide), 60% glass fibre reinforced

Tailor-made LATIGLOSS™ can be produced in any case to satisfy specific requirements.



MECHANICAL PERFORMANCE

LATIGLOSS™ compounds are suitable for most metal replacement applications thanks to high reinforcement fibre content. Outstanding results can be obtained by choosing the PPA based LATIGLOSS 57, whose mechanical performance stands on top of most thermoplastic compounds.

High fiber content allows excellent creep and fatigue performance as well, therefore success of long-term applications can be easily found without relying on metal or thermoset products.

Natural moisture absorption of polyamides is not a problem and mechanical excellence is maintained even on conditioned parts

| DRY AS MOLDED (dry as molded 24 hours, 50% RH) | Elastic modulus (MPa) | Stress at break (MPa) | Elongation at break (%) |
|--|---------------------------------|---------------------------------|-----------------------------------|
| LATIGLOSS 66 H2 G/50 | 16000 | 220 | 2,5 |
| LATIGLOSS 66 H2 G/60 | 21000 | 230 | 2,0 |
| LATIGLOSS 66 H2 K/30 | 22000 | 225 | 1,7 |
| LATIGLOSS 57 G/60 | 23400 | 275 | 2,7 |
| LATAMID 66 H2 G/50 | 16000 | 210 | 2,5 |
| LATAMID 66 H2 G/60 | 21000 | 235 | 2,1 |
| LATAMID 66 H2 K/30 | 22000 | 225 | 1,8 |
| LARAMID G/60 | 23400 | 290 | 2,6 |

| CONDITIONED (equilibrium as per ASTM) | Elastic modulus (MPa) | Stress at break (MPa) | Elongation at break (%) | Moisture absorption (%) |
|---|---------------------------------|---------------------------------|-----------------------------------|-----------------------------------|
| LATIGLOSS 66 H2 G/50 | 13500 | 165 | 3,3 | 1,3 |
| LATIGLOSS 66 H2 G/60 | 17000 | 170 | 3,4 | 1,1 |
| LATIGLOSS 66 H2 K/30 | 15500 | 160 | 2,5 | 1,8 |
| LATIGLOSS 57 G/60 | 22500 | 240 | 3 | 0,8 |
| LATAMID 66 H2 G/50 | 10500 | 150 | 3,5 | 1,3 |
| LATAMID 66 H2 G/60 | 13000 | 155 | 3,2 | 1,2 |
| LATAMID 66 H2 K/30 | 13500 | 166 | 2,6 | 2 |
| LARAMID G/60 | 25000 | 280 | 2,8 | 0,6 |

AESTHETIC GRADES

No other commercially available structural compound can offer such a good performance vs. price ratio as LATIGLOSS™ grades do.

Molded parts show a smooth, glossy and homogeneous finish, free of typical streaks and marks due to floating fibers. This feature gives new success opportunities to the market of:

- Power tools
- Leisure goods
- Automotive
- Mechanics
- Furniture an design

and wherever an excellent aesthetic can make the difference on the market.

LATIGLOSS™ compounds can be **chrome plated** thanks to the very good and even quality of the surface: further metal replacement chances are thus achieved by the mean of this very peculiar opportunity.



WORK IN PROGRESS

- LATIGLOSS™ compounds are produced in **any desired color** shade and the same remarkable surface finish; the quality of the surface is not affected in any case.
- **Water contact approvals** are available as well, according to the most well-known regulations
- **Flame retardant** grades are already available and can provide full compliance to the most restrictive regulations.

As any other LATI product, all LATIGLOSS™ grades are fully conform to RoHS rules.



Values shown are based on testing of injection moulded laboratory test specimens, conditioned according to the practice and represent data that fall within the standard range of properties for non-coloured material. As they may be subject to variations, these values do not represent a sufficient basis for any part design and are not intended for use in establishing values for specification purposes. Properties of moulded parts can be influenced by a wide range of factors including, but not limited to, colorants, part design, processing conditions, post-treatment and environmental conditions. This information and technical assistance are provided as a convenience for informational purposes only and are subject to change without notice. The customer shall always ensure that the latest release is at his own disposal. Lati S.p.A. extend no warranties or guarantee, including a warranty of merchantability, and make no representations as to the accuracy, suitability, reliability, completeness and sufficiency of the information provided, and assume no responsibility regarding the consequences of its use or for any printing errors. It is the customer's responsibility to inspect and test our products in order to determine to his own satisfaction whether they are suitable for his intended uses and applications or used in conjunction with third-party materials. This application-specific analysis shall at least include preliminary testing to determine the suitability for the customer's particular purpose from a technical as well as health, safety, and environmental standpoint. Such testing has not necessarily been done by us as the manner in which the customer use and the purpose to which utilise our products are beyond our control. Lati S.p.A. does not accept and hereby disclaims liability for, any damages whatsoever in connection with the use of or reliance on this information. No one is authorised to make any warranties, issue any immunities or assume any liabilities on behalf of Lati S.p.A. except in a writing signed by a specifically authorised Lati S.p.A. executive. Unless otherwise agreed in writing, the exclusive remedy for all claims is replacement of the product or refund of the purchase price at Lati's option, and in no event shall Lati S.p.A. be liable for special, consequential, incidental, punitive or exemplary damages. No information herein can be considered as a suggestion to use any product in conflict with intellectual property rights. Lati S.p.A. disclaim any liability that may be claimed for infringement or alleged infringement of patents. Unless specifically stated in writing, the products mentioned herein are not suitable for applications in the pharmaceutical, medical or dental sector, in contact with foodstuff or for potable water transportation. For any other issues Lati S.p.A. Conditions of Sales apply. Copyright © LATI S.p.A. 2008