

LATIGEA - bioplastic based compounds



The LATIGEA family features compounds reinforced with natural and traditional fibres, blends with PC and polyesters etc.

R&D and Marketing focused just on some specific grades of PLA, whose formulation ought to feature only components guaranteeing a very low or no impact at all on the environment.

For this reason, among the bioplastic based compounds, LATI is today proud to merchandise an outstanding flame retardant grade: the **LATIGEA B01-VOHF**.

INTRODUCTION

The growing interest concerning biopolymers has been carried to LATI directly by End Users and OEMs who are looking for a sustainable way to engineer new products.

The demand for plastics obtained from renewable assets is growing indeed, and the introduction of a material range featuring bioplastics is thus mandatory for a reference compounder as LATI.

LATIGEA is the brand name of the newborn family of bioresin based compounds, featuring PLA - a polymer obtained from corn starch - among the matrixes chosen for a range of injection mouldable thermoplastics, still under development but very promising yet.

This material is engineered in order to feature no substance that may harm human health or the environment.

The LATIGEA B01-VOHF it is fully RoHS compliant and halogen, red phosphorous, antimony and zinc free.

No other plastic resin besides the sustainable and decomposable PLA matrix is introduced in the formula of **LATIGEA B01-VOHF**.

This aspect increases actual chances for the material to be considered as eco-friendly as possible, although compostability is still under evaluation.

Flame behaviour of the LATIGEA B01-VOHF is very interesting and results concerning flammability, ignition temperature and current tracking index are exciting.

UL94 tests evidence a V0 behaviour at 0.8 and 1.5 mm, GWIT is as high as 800°C at 1 and 2 mm and GWFI shows a top value of 960°C at 1 and 2 mm as well.

Current tracking index is outstanding as well, peaking up to 600V.

Mouldability is excellent, not requiring dedicated tools or peculiar procedures. LATIGEA B01-VOHF can be coloured too, as the natural shade of the compound is white.

As evident, FR properties boost LATIGEA B01-VOHF behavior close to the very best halogenated FR compounds obtained by not renewable resins as PP, PBT and PAs.

These characteristics turn out to be a real asset, above all for the electrical and electronic industry, where the LATIGEA B01-VOHF can be adopted as material to mould boxes, housings, covers etc.

CONCLUSIONS

Thermal performances of the compound are still under development but applications up to 60°C can already be engineered.



CHARACTERISTICS OF LATIGEA		
	Latigea B01 NAT	Latigea B01-VOHF
Density (ISO 1183)	1,26 g/cc	1,34 g/cc
Notched izod (ASTM D256-A)	25 j/m	17 j/m
Unnotched charpy (ISO 179-1eU)	18 kj/m ²	11 kj/m ²
Notched charpy (ISO 179-1eA)	1,4 kj/m ²	1,3 kj/m ²
Elongation at break (ISO 527)	4,60%	1,10%
Load at break (ISO 527)	55 MPa	40 MPa
Elastic modulus (ISO 527)	3050 MPa	4100 MPa
HDT (0,45 MPa) (ISO 75)	54 °C	55 °C
Flammability 3/1,5/0,75 mm (UL94)	na	V2/V0/V0
GWFI 1/2 mm (IEC 695-2-12)	na	960/960 °C
GWIT 1/2 mm (IEC 695-2-13)	na	825/800 °C
CTI	na	600 V