

Flame retardant Poly Butylene Terephthalate (PBT) compounds have been used in the Electrical and Electronic market (E/E market herein after) for many years now.

Properties such as high heat resistance, outstanding insulation as well as a much easier processability in comparison to other moulding compounds such as thermosets, have made PBT compounds the right choice for a wide range of applications within the E/E market for both, domestic and industrial installations. However, despite of all these advantages, PBT compounds have always had a sort of a weak point when a high flammability rating is required, and it is called, the use of brominated flame retardants.

Now, let's go back in time to year 2006 when following the global trend of protecting the environment and safety regulations that two new directives came into play in the E/E market in order to regulate the use of halogenated flame retardant polymer systems. The first directive stated that all electrical and electronic equipment has to be free of brominated substances such as PBBs and PBDEs as well as heavy metals content. This is the very well known **RoHS Directive** – 2002/95/CE.

The second one specified the separated collection and recycling or disposal of all materials used in the E/E market containing brominated compounds. We're talking about the Waste Electrical and Electronic Equipment directive, **WEEE Directive** – 2002/96/CE.

Today, and following the RoHS and the WEEE directives, **Taro Plast S.p.A.** has been able to fill in the existing gap of PBT

compounds regarding the use of brominated flame retardants by launching into the E/E market its brand new range of **PBT halogen free compounds TAROLOX GFR®**



The new range of halogen free compounds **TAROLOX GFR®** (available from 0 to 30% fibre glass reinforced) have been specially designed for those application in which not only a very good temperature and electrical shock resistance performance are required, but also when good mechanical and chemical resistance properties are a must.



**TAROLOX GFR®** most innovative feature is its halogen free flame retardant system which shows great efficacy against almost any kind of fire hazard by achieving the **UL94 V0** at **0,7 mm** as well as a **GWIT** at **775°C** in terms of flammability ratings, while complying at the same time with both, the RoHS and WEEE directives.

Furthermore, **TAROLOX GFR®** compounds are not only halogen free and antimony free but also avoid high separation and disposal costs.

On the other hand, **TAROLOX GFR®** compounds, thanks to their high thermal stability, can be processed by

standard injection moulding methods granting lower mould and equipment metal corrosion as well as lower smoke toxicity creation (no HBr, HCl are developed at all).

**TAROLOX GFR®** compounds don't show any migration effect; therefore, they grant an excellent colourability as well as permanent laser marking.

**TAROLOX GFR®** compounds have lower density (8% less), excellent tracking resistance values (**CTI** up to **600V**), and higher UV stability over other halogenated products. They also show good chemical resistance, fast crystallization allowing optimum cycle times, high shape retention and dimensional stability (low water absorption) compared to PA compounds.

This unique property profile make **TAROLOX GFR®** compounds suitable and ready for the new generation of electrical and electronic components such as large and small appliances, lamp holders, motor housings, plugs, switches, relays, sockets, fuse holders, mini circuit breakers (MCB), connectors and capacitors, among many other applications available in the E/E market.



**More information about Taro Plast's products, services and contacts can be found on our web site:**

**[www.taroplast.com](http://www.taroplast.com)**