



NEWSLETTER

INTRODUCTION Building Interiors and Shopping Centres



Passage of shopping centre in Rotterdam



weight sandwich ceiling element of
Carbon/phenol > 18 m², total weight 175 kg,
including support frame. Total structure is self
supporting and carry two persons

Over the past few years national authorities are demanding more strict requirements concerning fire retardancy and heat resistance of applied materials in interior parts for public areas and public transportation. This follows the disasters all throughout Europe (*London Underground fire at King Cross Station, tunnel inferno France/Switzerland, Volendam and Enschede the Netherlands, and the tunnel blaze in Austria, etc.*). More and more industries such as the transportation, marine, construction and civil industries are confronted with and are required to meet these higher demands. For the interior component supply industry it becomes more difficult and more expensive to meet with these higher demands.

It is now possible to make highly advanced light weight interior parts, with a newly developed production technique combined with a new developed phenolic resin, which meets the highest standards on fire retardancy/resistance (*class 0/1 fire classification, click [Fire Certificates](#)*) for construction, marine, defence and civil industrial applications. This new technique also has additional advantages, which differentiates it from all other known materials.

Advantages of interior part in case of fire (click for [Fire Certificates](#)).

- An exceptional level of fire performance, for example - fire class NEN 1076 class 1, BS 476 part 6 & 7 class 0/1. The material has no contribution to fire, it only carbonises. (click [Fire Certification](#))
- Minimal smoke development.
- No auto - propagation of fire
- No release of flammable vapours
- Very low to almost none toxic fume emission.
- Very high fire insulation values and very low heat release.

All this means, that in case of fire there is more time for evacuation because the fire propagates considerably more slowly. Evacuation is easier and leads to less casualties because there is a very low smoke development (*one of the most hazardous problems with fire*) and due to the fact that there is almost no emission of toxic vapour which in combination with smoke is the cause of suffocation and lung injuries.





Light weight columns and beams. columns and beams are approx. 8 m. long and have a U circumference of 1,2m. Columns and Beams are made of a sandwich glass/phenol laminate.

Columns and Beams have a graffiti proof granite/stone surface structure, weigh 75 kg and are besides interior part also a protection part against fire/heat and high impact of steel columns and beams



Fire retardant tunnel lining

Interior parts are not only components to benefit from this technology but also heat shields to protect the steel/concrete columns, beams and roof/floor structures. Due to the high insulation values incorporated within the structures, they considerably extend the resistance time for exposure against inferno fires so that the steel /concrete structures maintain there strength and do not collapse.

It is also possible to incorporated anti ballistic / impact armour within the parts (see also composite armour page). This is especially interesting not only for interior parts but also for exterior parts as wall panels, doors etc.

Simply a much safer environment in case of fire, for the shopping customers, the firemen who evacuate, save people and put out the fire, but also for the owner (risk, insurance etc.)

Commercial Advantages

(click for [fire retardant composites](#))

- Parts are lightweight and have an enormous specific strength (high strength low weight ratio).
- Parts can be manufactured in large single pieces and can have integrated fixing points moulded in during construction. Parts can be quickly and simply mounted and are easy to handle because of their low weight. Think of all those small and heavy parts to be mounted around columns, beams and not to mention the floor and ceiling panels. This is not necessary now with our new technology and product design approach.
- Excellent design freedom for architects and industrial designers. Double curved parts, many different of surface textures, finishes and colours - you name it.
- Graffiti and hooligan proof - no corrosion. Therefore cheaper to maintain
- Simple replacement of components
- Costs can be reduced due to modern production technology compared to other more traditional materials - especially over the product life cycle.
- Further financial advantages can be gained because to lower insurance costs.

Lightweight Composites based on phenolic resin are the product of choice in areas where public safety is important.

Contact

If you need safer interiors and public areas, coupled cutting edge design please do not hesitate to contact us.

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