

Low weight bringing great benefits

Contemporary architecture loves glass. Large-size glass panels allow architects to design glazings of impressive dimensions and appearance that provide for perfect light saturation. If you wish, however, that the glazed walls are also fire-tight partitions, there arises the question of weight. The larger surface of the panel and higher fire-resistance class, the more crucial the question is. Why?

Fire-resistant glass, regardless the technology, is laminated glass made of two or more panes with fire-resistant layer of film or gel (hard or soft), which is of varied composition. If you wish to improve the EI class of laminated glass (i.e., time, in minutes, the glass resists fire), you need to add up another pane and film, which means significantly higher weight.

POLFLAM[®] glass is made according to advanced hydrogel technology. It is the gel, filling the space between two float glass panes that is responsible for the unit's fire-resistant properties. The EI class of the unit is closely related to the thickness of the gel layer. POLFLAM's proprietary formula for the gel has allowed the Company to create glass of exceptionally light weight. This property is particularly noticeable in glass of higher EI classes. Compared with other technology solutions, POLFLAM[®] glass is much lighter.

Structural calculations

Engineers always consider the weight of construction materials as a substantial parameter in their calculations. Lower weight is always welcome as it means definitely lower linear and concentrated load on the building's structure. Therefore, even if architects want to have large-size fire-resistant glazing in their design (e.g., in a high lobby), such glazed wall will not require any extra structural



POLFLAM[®] fire-resistant glass's low weight allows the company to make large-size panes that do not provide excessive load on the structure of the building.

In the photo: POLFLAM[®] EI 30, dimensions 5900 x 3100 mm, fire resistance test at the ift Rosenheim institute, Germany

reinforcement and will not complicate the design or, consequently, the construction work.

Financial benefits

Low weight is also beneficial to investors. They do not need to reinforce the structure which translates into lower cost. The cost of the wall itself is lower, too. Lighter glass panel means less fittings and less mounting system elements that are necessary to stabilize the partition; it means lighter and easier, thus, faster mounting. The cost of logistics related to delivery on site, should also be taken into consideration. All these factors provi-

de for interesting savings on the entire project.

Additional benefits

POLFLAM[®] glass of higher EI classes is not only lighter but also thinner, comparing to other technology. And, thanks to particular properties of the fire-resistant gel (based on proprietary formula), it has an exceptionally high transparency factor, Lt, which normally goes down in line with the fire-resistance class going up.

More information about our products on: www.polflam.com.