

Architonic.com; Material Research; 2005

## GLASS

Glass has been one of the most innovative materials in the past decade. Advanced joining technologies including high tech glues gave way to important developments in structural glass engineering. The properties of glass can be more and more controlled by special coatings and can be customized for every specific need. Screen printing, colouring, etching and many other technologies render new possibilities for design applications. Colour is an important tool of design nowadays. Glass can be screenprinted with any motive, it can be laminated with coloured foils. Colouring with metal oxides is the most traditional technology. The international BAU 2005 fair in Munich, which took place in January showed clearly the trend for glass as an innovative future material. „Glaskon“ a congress on glass, architecture and technology showed latest developments. This MaterialLetter has chosen for you the most striking novelties.



### Climatic Glass Panels

A layer of salt crystals inside the glass panels is able to store solar energy and to transmit it if temperature drops. Additionally a prismatic surface lets the sun rays pass through only at a very low angle - which is the case in winter. In summer the sun rays are stopped by the tiny prisms and the room is protected from overheating. Thus a building element of a high aesthetic value has been created which is able to store, heat and cool at the same time.



### Glass Curtains

The glass curtain is designed to be a versatile alternative to textile curtains or blinds. It is produced to customized specifications from toughened 6 mm safety glass and is finished with whatever colour, printing and grinding is requested. The glass does not fade, is hygienic and easy to clean. It attracts little dust compared with textile surfaces, which makes it an interesting solution for people suffering from allergies.



#### Curved Fire-Resistant Glass

Special monolithic, fully toughened borosilicate glass which was developed for rounded walls. The curved glass has high fire resistance E 30 and can be used for partitions, skylights, doors, windows or elevator glazings.



#### Glass Flooring with Integrated Lighting

Laminated glass flooring with 6 mm security glass. A 3 mm sound absorbing layer ensures good acoustic performance. The material is available in 12 standard colours and 6 multicoloured designs. The flooring is fire resistant, antistatic, free of odour and emissions. Standard dimensions are 496 x 496 mm and 496 x 96 mm. It is possible to enhance the performance by integrating sensors and LED`s. So the floor can react to its surrounding or become a signage system.



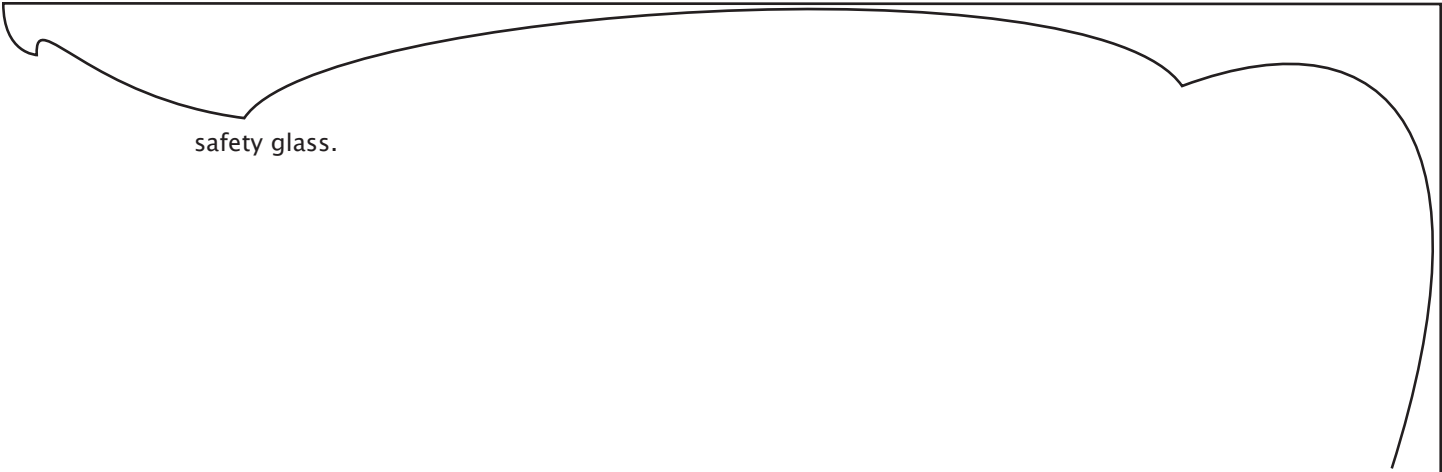
#### Screen-Printed Radiator Covering

The radiator covering is produced from 6 mm safety glass. Different colours and motives are available. The heat resistant screen print is easy to clean and abrasion resistant. The glass transfers the heat towards the room and the warm air can circulate between the radiator and the glass panel. The size can be adapted to all common radiator measurements. All fasteners are hidden behind the glass.



#### Sandwich Glass

A perforated and folded aluminium foil is sandwiched between two 2 mm float glass screens. The metal is structural and serves as a sun protective and light directing element. A special glue between glass and aluminium is able to compensate the different expansions of the materials. The panels are currently tested as prototypes and show remarkably good results: It can take four times more load than a usual 4 mm glass screen. In case of mechanical impact the material has similar properties like



safety glass.