

BUILDING MATERIALS

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COURSE NAME: BUILDING MATERIALS
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ABSTRACT OF MATERIALS SELECTION FOR INTERIOR DESIGN PROJECT

We will highlight in this subject the development and uses of materials (smart) to enhance the economical, functional, technical and aesthetic side as well.

We discussed in the study the classification of materials used in the design of interior architecture, and the relationship between the environment and the impact on the health of occupants and the use of less harmful materials.

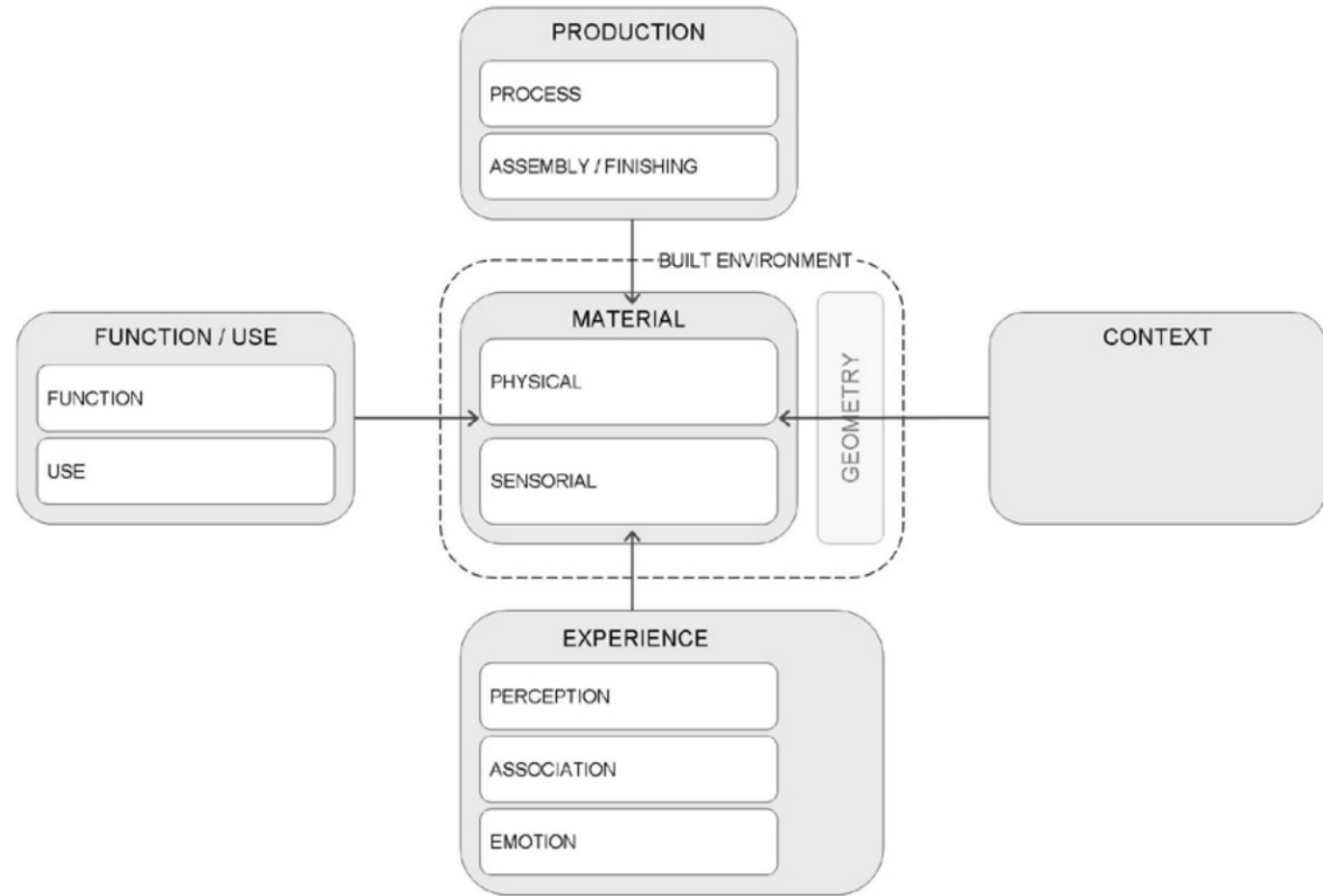
The effect of reducing the use of materials' amounts is important in economic terms, by choosing the appropriate material and put it in the right place.

It is also necessary to know the specifications and properties of the physical and chemical materials for optimization of its use. The understanding of this stage can enhance interior design in the future.

Taking advantage of the types of materials used in interior design that can be recycled and re-manufactured reflects its beneficial effect on the environment and also reduces the consumption of agricultural original materials.

We pointed to the bamboo as an example of the kinds of agricultural materials used in interior design and the possibility to develop this types of which Bio composite and Hybrid bamboo- glass fibers composites.

SMART MATERIAL



Natural Materials & Synthetic Materials

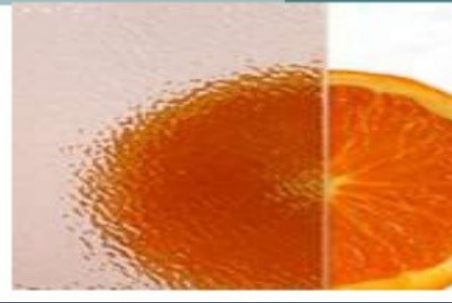
technical function
practical function
aesthetic function

- stone,
- glass,
- tiles
- concrete and cement based materials,
- Ceramics
- woods---- wood composites and veneers,
- plaster and plaster composites,
- metals--- iron, copper, steel, aluminum, synthetics,
- plastics, rubber, linoleum, resins,
- fabrics ----leather and suede,
- wall and window finishes,
- paints, varnishes
- lacquers

GLASS



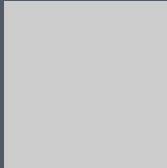
STAINED GLASS



TEXTURED GLASS



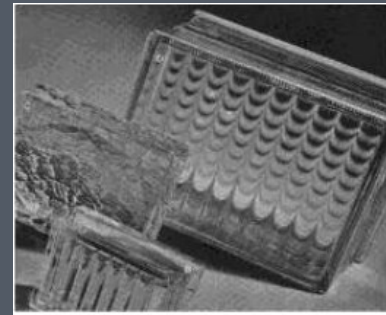
LAMINATED GLASS



ANNEALED GLASS



PATTERNED GLASS

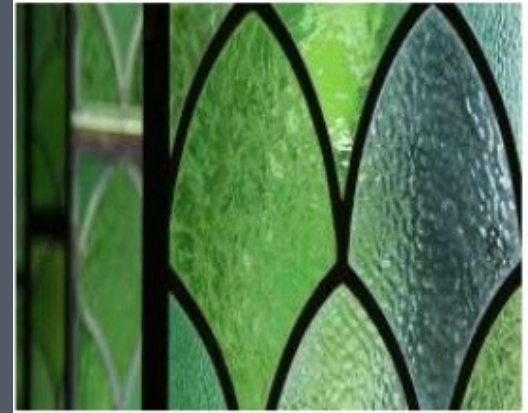


GLASS BLOCK

GLASS



TOUGHENED GLASS



DECORATIVE GLASS



19 MM THK FLOAT GLASS

G L A S S

Glass is a chemically inert, brittle, hard but transparent construction material.

**Glass is an element that helps us to achieve this goal of creating an empty space.
It's the optimal solution for room that receive too little light.
making your home look spacious**

Beauty &Versatility

Visibility & Light Transmission

Energy Conservation

Noise Resistant

Bullet Resistant

Non Load-Bearing

LAMINATED GLASS

- Laminated glass is a type of safety glass that holds together when shattered.
- In the event of breaking, it is held in place by an interlayer, typically of polyvinyl butyric (PVB), between its two or more layers of glass.
- The interlayer keeps the layers of glass bonded even when broken, and its high strength prevents the glass from breaking up into large sharp pieces.
- Windshields —when cracked produces a characteristic “ spider web ” cracking pattern when the impact is not enough to completely pierce the glass.

Used where security is concern like for high grade construction, curtain wall, architectural ceiling, elevator parapet, skylights.

Specification : standard glass comes in 4-25mm thickness

LAMINATED GLASS



- Glasswall curtain - weather proof
- UV protection
- Acoustic insulation

- Huge range of colours available
- Coloured laminated glass–
- Transparent and translucent



Balustrade

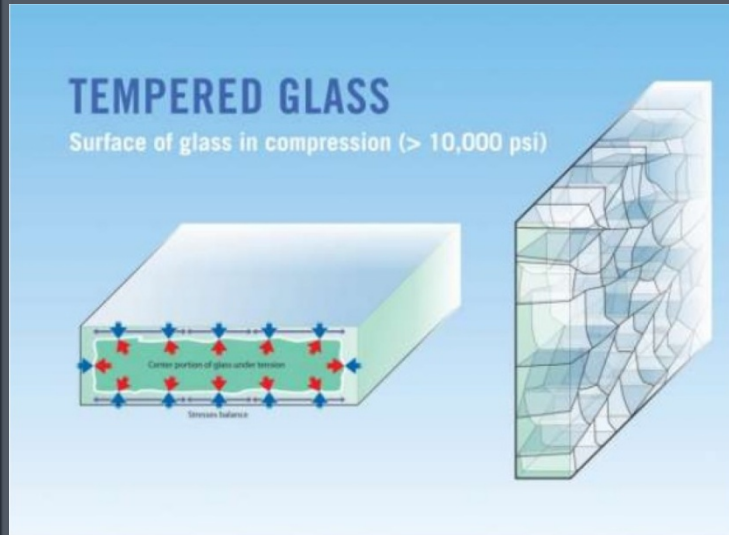


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TOUGHENED GLASS (TEMPERED GLASS)

Toughened or tempered glass is glass that has been processed by controlled thermal or chemical treatments.

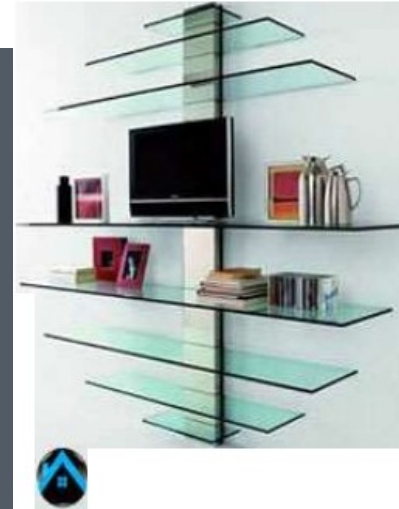
It has increased strength compared with normal glass and will usually shatter into small fragments, rather than sharp shards, when broken.



TOUGHENED GLASS (TEMPERED GLASS)



The ellipse table has a walnut wood base and a barrel-shaped tempered glass top.



LAMINATED/ TOUGHENED GLASS

- The use for laminated glass ranges from entrance doors and glass floors to aquariums and display cases
- Tempered glass is almost 5 to 10 times stronger when compared to its untempered counterpart. One very noticeable quality of this type is that it breaks down into small granular pieces rather than sharp shards.
- [tempered glass](#) can take a higher load and deflects further before breaking. However once the glass is toughened it cannot be reworked.
- Polishing and drilling holes into the glass needs to be done pre-toughening.
- Ground level doors and windows made from laminated glass are a safe bet. This is also the most susceptible area when it comes to breaking and entering.

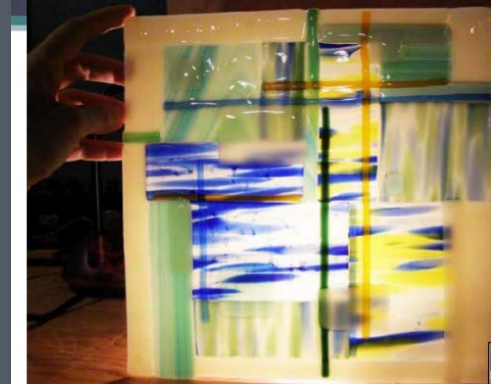
FUSION GLASS

Fused glass is a term used to describe glass that has been fired (heat-processed) in a kiln at a range of high temperatures from 593° C (1100°F) to 816° C (1500°F).

There are 3 main distinctions for temperature application and the resulting effect on the glass.

Fused glass consists mainly of silica.

While the precise origins of glass fusing techniques are not known with certainty



FLOAT GLASS

Float glass is a sheet of glass made by floating molten glass on a bed of molten tin.

This method gives the sheet uniform thickness and very flat surfaces. Modern windows are made from float glass.

Most float glass is soda-lime glass, but relatively minor quantities of specialty borosilicate and flat panel display glass are also produced using the float glass process.



FLOAT GLASS



FEATURES

- Precise Surface Flatness
- Fire Polished Surface
- Excellent Light Transmittance
- Heat Absorption
- Glare reduction
- Aesthetic look

SPECIFICATIONS

LENGTH	WIDTH	THICKNESS	COLOR
6.0 ft.		2.0mm	
8.0 ft.	4.0 ft.	3.0 mm	Clear
10.0 ft.	6.0 ft.	5.0 mm	Bronze
12.0 ft.	7.0 ft.	6.0 mm	Grey
		8.0 mm	Dark Grey
		10.0 mm	Emerald
		12.0 mm	

APPLICATIONS: Construction & Architectural Design



Curtain Wall, Partition, Door Panel, Table Top Window Glazing

- Most widely used type of glass
- Monolithic and highly transparent
- Manufactured in two main varieties, i.e.; clear and tinted.
- Used in mirrors, windows, curtain walls and doors.
- float glass can be toughened, a process that creates safety glass out of annealed glass.
- Available in thicknesses 2-19 mm
- Can be coloured during manufacturing



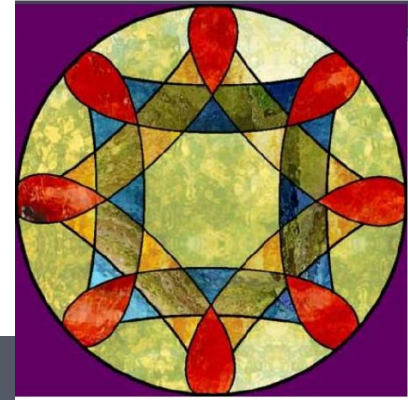
STAINED GLASS

As a material the term stained glass generally refers to glass that has been coloured by adding metallic salts during its manufacture.

The coloured glass is crafted into stained glass windows in which small pieces of glass are arranged to form patterns or pictures, held together (traditionally) by strips of lead and supported by a rigid frame.

Painted details and yellow stain are often used to enhance the design.

The term stained glass is also applied to windows in which all the colours have been painted onto the glass and then annealed in a furnace.



ETCHED GLASS

- Etching refers to the technique of creating art on the surface of glass by applying acidic, caustic, or abrasive substances.
- Glass with excellent finish to match your interiors.



DECORATIVE GLASS

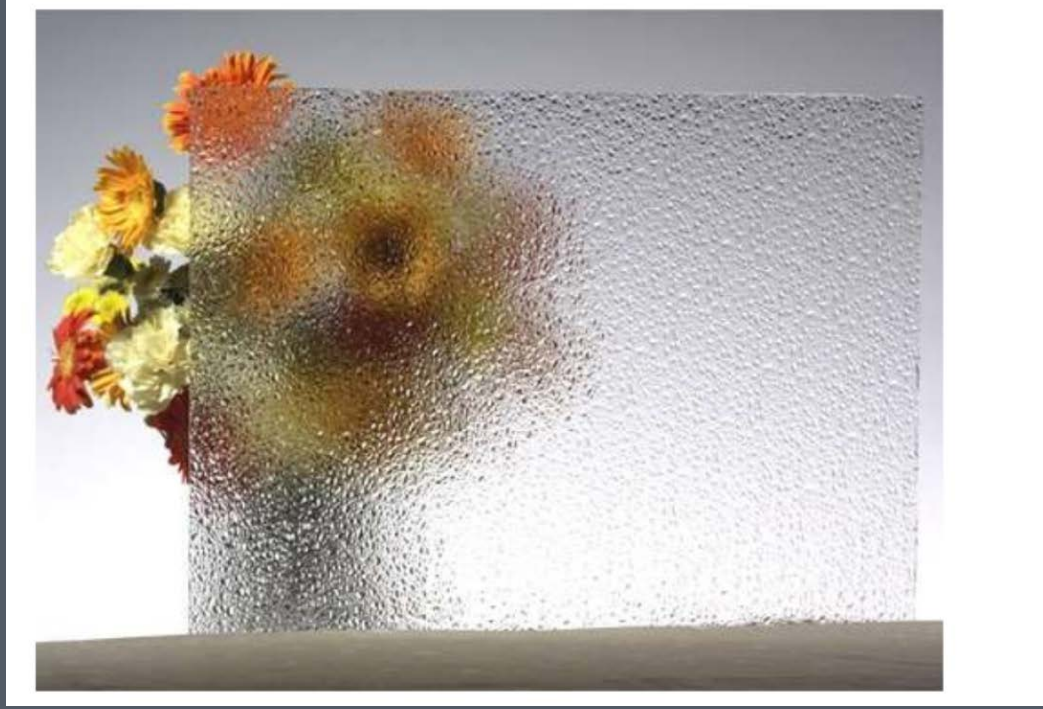


Coloured glass



patterned glass

TEXTURED GLASS



TEXTURED GLASS

- These are hollow glass units or blocks of glass shaped to work as bricks

- Joined with the help of silicon sealants to obtain seamless finish

- The two outer, exposed surface: may be smooth or textured.

- Glass bricks provide visual obscuration while admitting light

- fire resistant.

- Standard blocks : 10x20cm (4x8 in , 15x15cm (6x6in) , 20x20cm (8x8in)



BUBBLE



BROMO



CLEAR



DIAMOND



ICEBERG



OCEAN VIEW



PRISTAL



QUADRA



WAVE



THANKS