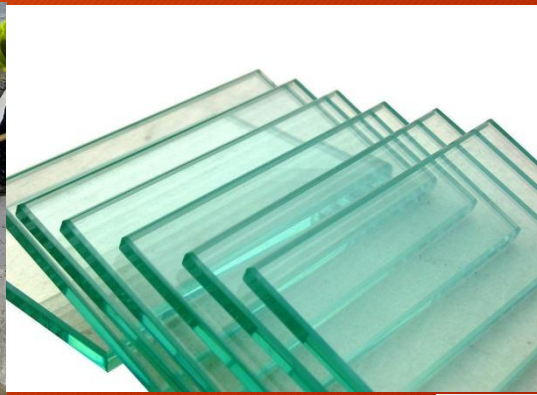


# MODERN BUILDING MATERIALS



# Building Materials

Some of the most important building materials are: timber, brick, stone, concrete, metal, plastics and glass.





# Timber



*Timber* is provided by different kinds of trees. Timbers used for building purposes are divided into two groups called softwoods and hardwoods. Timber is at present not so much used in building construction, as in railway engineering, in mining and in the chemical industry where it provides a number of valuable materials.

However, timber is still employed as a building material in the form of boards. For the interior of buildings plywood and veneer serve a number of purposes.





# Brick



*A brick* is best described as a "building unit". It may be made of clay by molding and baking in kilns, of concrete, of mortar or of a composition of sawdust and other materials. In shape it is a rectangular solid and its weight is from 6 V2 to 9 lb.

There exists variety of bricks for different purposes: ordinary, hollow or porous, lightweight, multicolor bricks for decorative purposes, etc. Bricks are usually laid in place with the help of mortar.

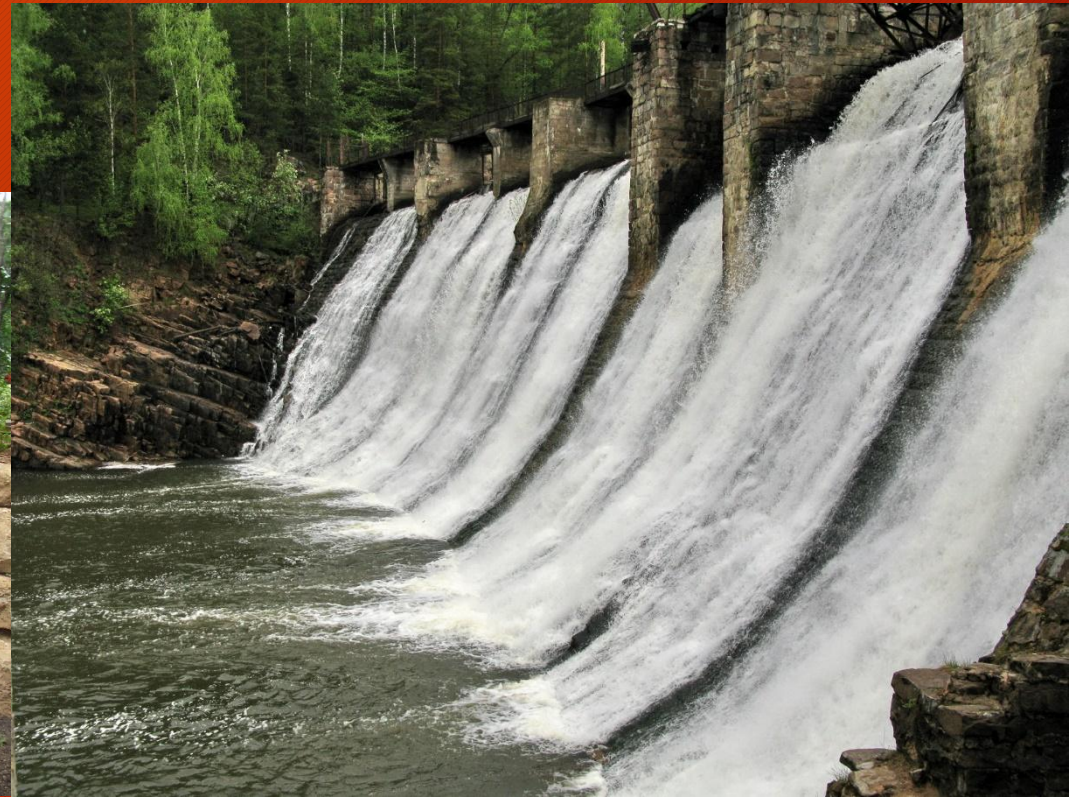
The shape and convenient size of brick enables a man to grip it with an easy confidence and, because of this, brick building has been popular for many hundreds of years.





# Stone

*Natural stone* is used for foundations and for the construction of dams. The main varieties of building stone are basalt, granite, marble, sandstone and limestone.





# Metals

*Metals: Aluminum*, principally in the form of various alloys, is highly valued for its durability and especially for its light weight, while *brass* is frequently used for decorative purposes in facing.

*Steel* finds its use in corrugated sheets for roofing, for girders, frames, etc. Various shapes are employed in construction.





# Plastics



*Plastics* are artificial materials used in construction work for a vast number of purposes. Nowadays plastics, which are artificial materials, can be applied to almost every branch of building, from the laying of foundation to the final coat of paint. Synthetic resins are the main raw material for plastics. Plastics have some good advantages as they are lighter than metals, not subject to corrosion, and they can be easier machined. Besides, they are inflammable, they can take any color and pattern, and they are good electrical insulators. More over, they possess a high resistance to chemical action.

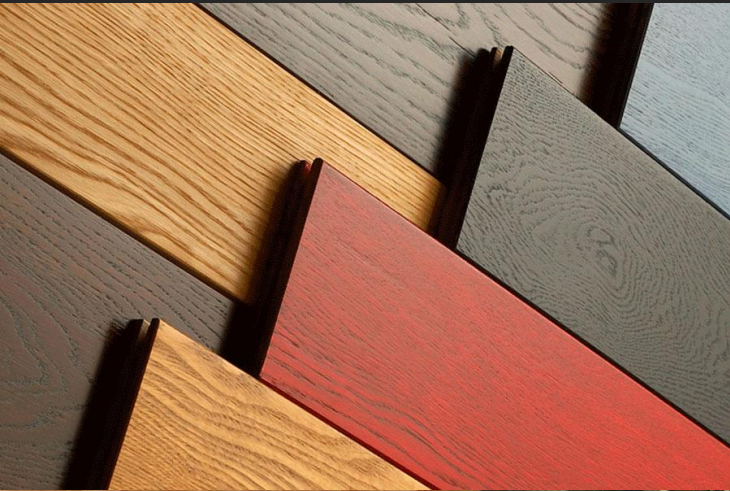
A lot of decorative plastics, now available, have brought about a revolution in interior and exterior design. But plastics are used now not only for decoration.





# Laminate

*Laminate* is a strong material manufactured from many layers of paper or textile impregnated with thermosetting resins. This sandwich is then pressed and subjected to heat. Laminate has been developed for both inside and outside use. It resists severe weather conditions for more than ten years without serious deformation. As a structural material it is recommended for exterior work. Being used for surfacing, laminate gives the tough surface.





# Foamed glass



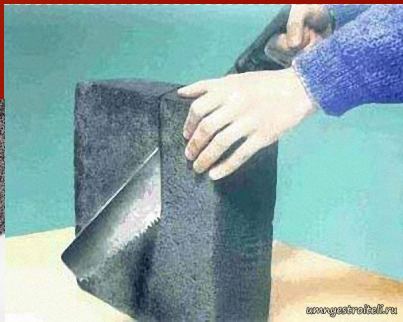
*Foamed glass* is a high-porosity heat insulating material, available in block made of fine-ground glass and a frothing agent.

Foamed glass is widely used in prefabricated house building, to ensure heat insulation of exterior wall panels, and in industrial construction.

Foamed glass has a high mechanical strength, is distinguished by moisture, vapor and gas impermeability. It is non-inflammable, offers resistance to frost, possesses a high sound adsorption, and it is easily sewn and nailed.

Structural foamed glass blocks designed to fill ceilings, and for making interior partitions in buildings and rooms, to ensure heat and sound insulation.

For insulation mineral wool or cinder wool is often resorted to.





# Concrete

*Concrete* is perhaps the most widely spread building material used nowadays. Concrete is an artificial stone, made by thoroughly mixing such natural ingredients or aggregates as cement, sand and gravel or broken stone together with sufficient water to produce a mixture of the proper consistency. It has many valuable properties. It sets under water, can be poured into moulds so as to get almost any desirable form, and together with steel in reinforced concrete it has very high strength, and also resists fire. Prestressed concrete is most widely used at present while prefabricated blocks are employed on vast scale for skeleton structures.





# Key vocabulary / expressions

- consider — рассматривать, обсуждать; обдумывать
- cross-section - поперечное сечение, поперечный разрез, профиль
- derive — получать; извлекать; происходить
- froth — пена; пениться
- handle — брать руками, держать в руках
- impermeability — и непроницаемость; герметичность
- kiln — печь для обжига
- mortar — раствор
- plywood — фанера



# Key vocabulary / expressions

- resist —v сопротивляться
- span — промежуток времени, период времени
- subject — подвергать; подчинять
- tensile — растяжимый
- veneer — шпон, фанера
- mixing — смешивание
- gravel— гравий



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