Glass application in real life

The physical and in particular the optical properties of glass make it suitable for technological applications such as windows, containers (bottles, jars, bowls), optics, optoelectronics and laboratory equipment. The ease of formability, and its aesthetic features, such as transparency and pigmentation, renders glass a common art medium.

General properties:

The most obvious characteristic of ordinary glass is that it is transparent to visible light, hence its wide application in everyday use. This transparency is due to an absence of electronic transition states in the range of visible light. The homogeneity of the glass on length scales greater than the wavelength of visible light also contributes to its transparency as heterogeneities would cause light to be scattered, breaking up any coherent image transmission. Many household objects are made of glass. Drinking glasses, bowls and bottles are often made of glass, as are light bulbs, mirrors, cathode ray tubes, and windows. Volcanic glasses, such as obsidian, have long been used to make stone tools, and flint knapping techniques can easily be adapted to mass-produced glass.

Glass in building:

Glass is commonly used in buildings as transparent windows, internal glazed partitions, and as architectural features. It is also possible to use glass as a structural material. Glass in buildings can be of a safety type, including wired, heat strengthened and laminated glass. Glass fiber insulation is common in roofs and walls. Foamed glass, made from waste glass, can be used as lightweight, closed-cell insulation. As insulation, glass is also used. In the form of long, fluffy-looking sheets, it is commonly found in homes

Technological application:

Glasses used for making optical devices are categorized using a six-digit glass code. Glass polymerization is a technique that can be used to incorporate additives that modify the properties of glass that would otherwise be destroyed during high temperature preparation.

Glass ingredients:

Pure silica (SiO_2) has a "glass melting point" (at a viscosity ? = 100 Poise) of over 2,300°C (4,172°F). While pure silica can be made into glass for special applications (see fused quartz), other substances are added to common glass to simplify processing. One is sodium carbonate (Na_2CO_3), which lowers the melting point to about 1,500°C (2,732°F) in soda-lime glass; "soda" refers to the original source of sodium carbonate in the soda ash obtained from certain plants. However, the soda makes the glass water soluble, which is usually undesirable, so lime (calcium oxide (CaO), generally obtained from limestone), some magnesium oxide (MgO) and aluminum oxide are added to provide for a better chemical durability. The resulting glass contains about 70 to 74 percent silica by weight and is called a soda-lime glass. Soda-lime glasses account for about 90 percent of manufactured glass.

About the Author

av furniture and entertainment center furniture:Arranged by Future Glass.

Source: http://www.tntarticles.com