

## Acrylic Sheets Properties

The Sheets of acrylic plastic are produced in several formulations to provide specific physical properties required for various types of applications and taking on a general note the physical characteristics of acrylics are transparency. Via transparency we mean that in colorless form acrylic plastic is as clear as the finest optical glass. The total white light transmittance is about ninety two percent which is the highest transmittance physically possible of any material. Second property is breakage resistance. Acrylic sheets have from 6 to 17 time's greater impact resistance than ordinary glass in thicknesses of .125" to .250". While acrylic is subjected to blows beyond its resistance, its sheets reduce the hazard of injury because it breaks into large relatively dull edged pieces which disperse at low velocity, due to the light weight of the material. The Acrylic is weather Resistant, if exposed to actual outdoor conditions; acrylic in a wide variety of applications has proven its weather resistance and its resistive properties cannot be matched by any other transparent plastic material, also acrylic plastic has excellent resistance to most chemicals, including solutions of inorganic alkalis and acids such as ammonia and sulfuric acid, and aliphatic hydrocarbons such as hexane, octane and VM&P naphtha.

Simply few chemicals can attack acrylic and those chemicals include gasoline, chlorinated hydrocarbons such as ethylene chloride, solvent cement widely used, and carbon tetrachloride, aromatic solvents such as turpentine, benzene, and toluene, ethyl and methyl alcohol, organic acids such as acetic acid, phenols, and Lysol, lacquer thinners and other esters, ketenes, and ethers. Some other physical property of acrylic is that it is light in weight. The sheet of acrylic is less than half as heavy as glass and it is forty three percent as heavy as aluminum and seventy percent as heavy as magnesium. The acrylic is dimensional stable; an acrylic sheet is notable for its freedom from shrinking and deterioration through long periods of use. The drawing instruments requiring exact dimensional stability have been fabricated from Plexiglas. Another property to take into consideration is combustibility. The sheet of acrylic plastic is a combustible thermoplastic and should be treated as an ordinary combustible material such as wood. The acrylic has self ignition temperature that is spontaneous combustion is between 850 degree Fahrenheit and 869 degree Fahrenheit. It is the temperature at which the material will ignite in the presence of a flame is between 550 degree F and 570 degree F, ignition temperatures of acrylic are higher than that of most woods, and it burns vigorously and generates heat rapidly when involved in fire. The basic products of acrylic combustion are carbon monoxide and carbon dioxide; however, burning acrylic plastic does not produce either excessive quantities of smoke or gasses more toxic than those produced by burning wood or paper.

## About the Author

Savey Bakarne is a professional retail display specialist and teaches store owners how to gain profits from utilizing the proper [Custom Retail Store Displays](#).

Source: <http://www.spivo.com>