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C E L L U L O I D

Requests are frequently received by the Bureau for information concerning the composition of celluloid, methods of working it into various shapes, and means for polishing and coloring the finished product. A few words on this subject, therefore, may not be out of place.

Celluloid consists of a mixture of properly nitrated cellulose, camphor, or a similar material, and a suitable amount of solvent, such as amyl acetate.

At ordinary temperatures, this material is hard and may be given a high polish, but when heated to a temperature of about 75°C (167°F) it becomes soft and plastic and may easily be worked into various shapes. The process usually employed in the making of celluloid toys and similar hollow objects consists in blowing the celluloid into molds and allowing it to cool.

If it is desired to alter the shape of one of these articles, this may be done by heating the celluloid until it becomes soft enough to work. This operation should be performed with care, because at a temperature but little higher than the boiling point of water, celluloid takes fire and burns very rapidly. For this reason, celluloid should never be heated over a flame and even the temperature of hot steam pipes may be sufficiently high to ignite it.

Celluloid is colored by the addition of pigments, dyestuffs, and similar materials. In case a color is to be added to a finished object, this may be done by dissolving the dye in denatured alcohol and coating the piece with the solution. The alcohol will slightly soften the celluloid, allowing the dye to penetrate the surface.

Celluloid may be burnished by brushing it with glacial acetic acid. If it is desired to give a slight plasticity to the material when hard, without heating it, this may be done by rubbing it with a small amount of castor oil.

Pieces of celluloid are stuck together by applying glacial acetic acid to the joint in the same way that mucilage is applied, after which the two parts are pressed firmly together. Amyl acetate will answer for this purpose, but is not as satisfactory as the acid.





