

## 60202 Amber

*(from "Pitman's Common Commodities and Industries, GUMS & RESINS – by Ernest J. Parry, London; Printed by Sir Isaac Pitman & Sons, Ltd, Bath, England, v-(1465E))*

Amber is the fossil resin derived from *Pinites succinifer* and is collected principally near the Prussian Baltic coast. Amber is the hardest known resin, being a brittle substance breaking with a conchoidal fracture. The colour varies from pale yellow to dark brown and even almost black. Some varieties are nearly transparent, others are cloudy and even opaque, the markings on the polished amber often being very beautiful. It polishes well, and possesses the character of being very easily electrified negatively when melted.

Amber is used to a considerable extent for the manufacture of ornamental articles: for example, cigar holders, the mouthpieces of pipes, etc.. Formerly the darker varieties and smaller pieces are used to make amber varnish, which for fine work, such as carriage varnishing, is about the finest and hardest that can be made.

Very little of the varnish labelled "amber varnish" today, however, contains any amber. In the working of amber, a considerable quantity of shavings is produced. These are amalgamated again with the assistance of enormous pressure. Sometimes other resins, such as copal, are worked in. This product, of course, has nothing like the wearing qualities of the natural amber, and is known as "imitation amber".

The varieties of amber recognised in commerce are as follows:

1. Succinite. This is the most important variety and forms pale yellow or yellowish-brown brittle lumps, either transparent or opaque and melting at 250°C to 300°C.
2. Gedanite is so called "soft amber". This is of a whitish-yellow colour, easily fractured, and melting at 150°C to 180°C.
3. Glessite is of a darker colour and is usually opaque. It melts at 250°C to 300°C.
4. Beckerite. This is a brown, opaque variety.

When amber is used for varnish manufacture, it is first melted and a certain amount of volatile oil is distilled off. This is the true oil of amber or *oleum succini*. True oil of amber has a specific gravity of about 0.950 and an optical rotation of +15° to +25°. Nearly all the oil of amber of commerce however is not, in fact, distilled from amber at all, but is the product of the distillation of other resins, including colophony.

Pure amber has the following properties:

Acid value:	15 - 35
Ester value:	70 - 95

Genuine amber can easily be distinguished from the imitation amber described above by means of polarized light. When examined between crossed nicol prisms, it shows only very faint colours, whereas the lack of homogeneity in the manufactured article causes it to show brilliant colours.