

# AMBROID WISDOM

By George White

Paul Grabski, our local Ambroid Acolyte, was quick to come to the defense of good old Ambroid after reading the article concerning it in the previous issue of this rag. He says, in the first place, that Ambroid was introduced in the 1920's and has always been the same color. Interestingly, Lee Campbell also read the article and sent me a website address describing the origins of the stuff (it's really not a glue, but a cement). For an interesting read on the subject take a look at [http://www.ottertooth.com/Canoe\\_pages/ambroid.htm](http://www.ottertooth.com/Canoe_pages/ambroid.htm). It seems it started as a cement used to repair birch bark and canvas canoes, and in fact is still sold for that purpose. Camphor is used as a plasticizer for the cellulose from which it is made, and it has always been amber in color. As incorrectly stated in the previous article on Duco/Ambroid, Ambroid is not amber in color because of the addition of oil of mustard, which was added to some cements in the 70's allegedly to discourage "sniffing." The name is actually a joining of the words Amber and Celluloid, which was one of, if not the first, cellulose based plastic.

The article piqued Paul's curiosity as to which glue weighed the less, once dried. He applied .500gm each of Ambroid, Duco and Titebond Original glues to a surface, using his electronic scale which measures in hundredths of a gram. He made three samples of each, just to level out any variances which might occur. After letting each sample dry for 24 hours and weighed them, and then weighed them again after a month, here are the results:

## After 24 Hours Drying

	Sample 1	Sample 2	Sample 3	Total	Average
Ambroid	.120gm	.125gm	.123gm	.368gm	.123gm
Duco	.152gm	.157gm	.153gm	.462gm	.154gm
Titebond Original	.257gm	.251gm	.249gm	.757gm	.252gm

## After Drying One Month

Average of 3 Samples	% Reduction After 1 Month
.112gm	8.9%
.143gm	7.1%
.245gm	2.7%

Thus, Ambroid seems to be 20% lighter than Duco and 51% lighter than Titebond Original. In practical use these weights presume the same amount of cement/glue is applied to the bonded joint and Paul's experiment doesn't cover bonding strength. In the case of those who dilute Duco with acetone, these weights would almost surely be different. However, not being a chemist, I have no idea what diluting a carefully formulated cement with acetone does to the makeup of the cement or its bonding strength, although it would certainly seem that it would alter it. I would never use diluted Duco, as discussed in the previous article, without double gluing the joint. Perhaps the only advantage to be gained in using diluted, double glued Duco is a bit quicker drying. The above conclusions also don't take into account that the very careful application of any glue/cement to a joint rather than slathering it on, may be as important to the weight of a glue joint as the specific weight of the glue itself.