



Uber's Plastic Surface Vs Phenolic Film

Uber's plastic surface

Uber's plastic surface is a proprietary low surface energy and repairable full engineering plastic material which has a Hardness Rockwell of 85. Phenolic has a value of approx 90. This means it is as hard as phenolic and this hardness measures the indentation of the material when a certain force is applied. But as our plastic is much thicker than phenolic film, it can experience more impact force.

One main difference Vs phenolic coated paper is that ours is a full plastic material and plastic do not get thinner during the concrete debonding process. **(see fig 1)** It gets thinner when you scratch it or grind it. Our low surface energy plastic means that it is very difficult for concrete to stick to and unlike phenolic paper, debonding is very easy even without the presence of formoil.

Furthermore, our plastic is repairable which means as long as the board is still in good condition, the surfaces can always be renewed with a simple welding process.

Thus the lifespan of the board can be controlled by the user.

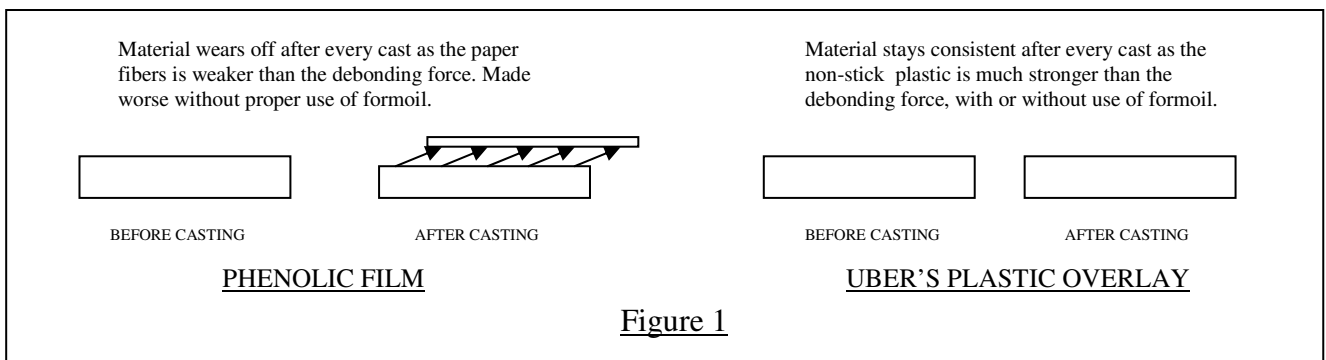
Phenolic Film

Phenolic film is a paper which has been pre-coated with a plastic resin called phenolic. Phenolic is a very hard and scratch resistant plastic. Upon manufacturing, the coated paper hardens and becomes brittle and scratch resistant.

This coating goes by weight, 120gram/sqm, 240gram/sqm, 360, 450, depending on the plywood manufacturer. 1 layer of film weighs 120g/sqm and 2 layers becomes 240g/sqm.

As the material is primarily paper, continuous usage will wear off the paper, exposing the raw plywood beneath. After every concrete casting, the paper somewhat gets thinner during debonding from the concrete surfaces. This is a natural consequence as phenolic has a very high surface energy and tends to stick to things easily. Formoil will help in prolonging the lifespan of the film as it acts as a barrier between the concrete and phenolic film but the correct oil and proper application and care must be made, if not the oil will not behave as intended. Onsite, it is a challenge for this to happen. **(see fig 1)**

No matter what you do, it is always a matter of time before the paper wears out.



Summary

Uber's plastic material is a different material class compared with phenolic film. One is a full plastic while the other is a paper coated with plastic. With Uber's plastic surface, the lifespan can be controlled by the user through the process of surface renewal and care of the board.