

Delamination problems

Delamination is where the metallized film is laminated to something else, usually another polymer, and after initial adhesion the layers begin to separate.

This is a related problem to the metal adhesion problem described in adhesion FAQ. Most frequently delamination relates to a problem of the low molecular weight material migrating to the surface. Often when any surface treatment is done it is only one side that is treated. This treated surface is cleaned of contaminant but the opposite surface remains contaminated. This low molecular weight material because it is mobile is easily transferred across from one surface to another so that as the metallized film is re-wound the back surface can contaminate the freshly metallized surface. In addition if there are any pinholes in the metallized layer more low molecular weight material can migrate through these.

If the polymer film has not been treated then the amounts of low molecular weight material can be greater and the problems of delamination worse.