

DRY FILM PHOTORESIST: LAMINATION PROCESS

OVERVIEW

This overview will be focused on laminations performed by small companies, universities, and research and development departments. Required equipment and materials for this procedure: laminator with temperature/speed/pressure controls, lamination board, substrate, and dry film. Typical substrates used for laminations are silicon wafers, copper, and glass. Differences in substrate thickness will determine changes required in temperature, speed, roller gap and pressure settings. Customer will need to optimize the process to ensure results meet the needs of the application.

PROCESS STARTING RECOMMENDATIONS

EQUIPMENT	<ul style="list-style-type: none">• Set Laminator temperature so substrate reaches a minimum 45°C. Prefer 60°C to 80°C• Recommended pressure and speed: 16kg and 0.3m/min
PRE LAMINATION	<ul style="list-style-type: none">• Ensure lamination board and area is clean.• Remove cover liner of dry film and place resist face down on lamination board.
LAMINATION	<ul style="list-style-type: none">• With wafer and film on the board, start lamination.• The wafer and film should come into contact at the heated laminator roll, not before.
POST LAMINATION	<ul style="list-style-type: none">• Cool wafer by placing board wafer-side down on table until cool to touch.
REMOVE EXCESS RELEASE LINER	<ul style="list-style-type: none">• Remove wafer and dry film sheet off board and place wafer-side down on surface.• Using a sharp blade, cut excess release liner from around wafer.
REMOVE RELEASE LINER FROM WAFER	<ul style="list-style-type: none">• Peel back an edge of the release liner, make sure dry film is still attached to wafer.• Peel back release liner from wafer >90°.