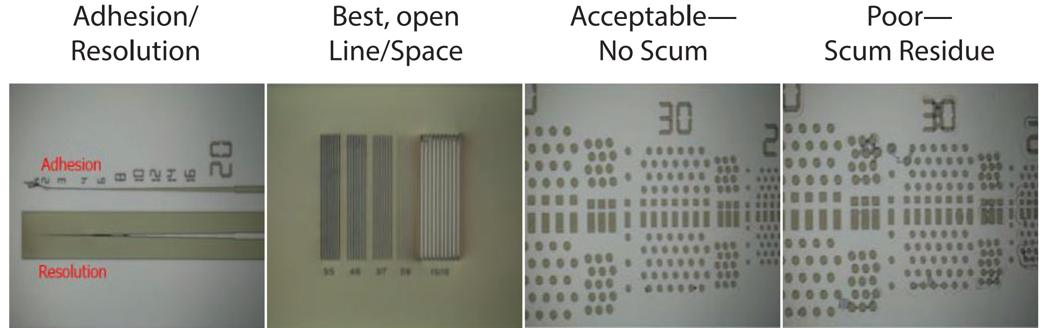
Technical Note

DRY FILM PHOTORESIST: DEVELOPMENT

INTRO

This Technical Note will focus on the development of features following UV exposure with special consideration paid to solvent developers and process options. Solvent developer clearing and photo resist adhesion will be the critical focus. Users will need to optimize the development process to ensure results meet the needs of their application with adequate removal and adhesion of the resist to the substrate.

SOME OF THE CRITERIA UTILIZED FOR ASSESSING DEVELOPMENT



SOLVENT OPTIONS

Below is an example/reference utilizing our 50µ Dry Film.

FILM THICKNESS (µ)	SOLVENT	SOLVENT RATIO	RESOLUTION/ FEATURE SIZE (@50µ XNESS)	BEST ADHESION (@50µ DF XNESS)	SCUM (@50µ DF XNESS)	NOTES (@50µ DF XNESS)
50µ	CYCLOHEXANONE	NA	10	3	NEGLIGIBLE	CONTROL
	EB-ACETATE : IPA	3:1	8	3	NEGLIGIBLE	SIMILAR TO CONTROL
	EB-ACETATE : MEK	3:1	10	4	PRESENT	ACCEPTABLE FOR FEATURE SIZES >20µ. THICKNESS DEPENDENT
	PGMEA : IPA	3:1	20	4	PRESENT	
	PGMEA : MEK	3:1	20		PRESENT	

These solvent and associated ratios are based upon internal work utilizing a general reference mask. Undiluted cyclohexanone is the recommended solvent for use with the Nagase Chemtex dry films. If an application's resolution size does not demand <20µ features, then some of the other blends might be acceptable.

Nagase ChemteX America

ISO 9001:2015 Certified
IATF 16949:2016 Certified

100 Innovation Court
Delaware, OH 43015

Tel: 740.362.4444

nagasechemtex.com