

Magnesium Etching Trouble Shooting Guide

PROBLEM / CAUSE

CORRECTION

Exposure and Development Problems

Reversed Text Design Not Clean

Overexposure	Decrease exposure time to obtain the recommended range on Sensitivity Guide
Not fully developed	Check developing time and change developer
Sub-standard negative	Check density of negative and remake
Partially fogged plates	Eliminate white light exposure/ check storage conditions

Weak Fine Detail

Underexposure	Check lamp; Increase length of exposure to obtain recommended range on Sensitivity Guide
Sub-standard negative	Remake negative / check film negative density
Highlight dots too small	Remake negative. L G A standard: .02 thousands, 0.05 microns

Fine Detail Lost During Developing

Processor spray too strong	Reduce spray pressure
Abrasion during or immediately	Refer to LGA processing instructions after tray development

Etching Problems

Pimpling and Dirt

Contaminated developer solution	Check developer in accordance with LGA recommendations: check bath agitation
Inadequate bath circulation	Check circulation pump, pipes, pump screen
Bath run down from plate holder	Wipe plate holder dry around clamps before clamping to plates utilizing wetting agent
Pinholes in negative	Opaque the negative
Etching bath old or contaminated	Dump bath, clean machine and make new bath
Low Acid	Check acid strength and quantity after each etching
Etching bath old or contaminated	Dump bath, clean machine and make new bath
Excessive venting	Restrict machine venting to the etching period

Wide Shoulders

Low paddle speed	Check paddle speed; increase paddle speed, check for too little paddle dip. Check tachometer
Low acid	Check acid strength; check bath formulation in accordance with LGA recommendations
High bath temperature	Check temperature gauge; lower temperature
Insufficient refrigeration	Check refrigeration unit



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PROBLEM / CAUSE

CORRECTION

Etching Problems

Tight Shoulders

High paddle speed	Decrease paddle speed
High acid	Check acid strength; check bath formulation in accordance with LGA recommendations
Low bath temp	Check temperature gauge; raise temperature
Etching bath too old	Dump old bath; build new bath

Undercutting

High paddle speed	Decrease paddle speed. Check paddle speed; check for too little paddle dip. Check tachometer
Low bath temperature	Check temperature gauge; increase temperature
Etching bath too old	Dump old bath; build new bath

Coating Break Through

Too fast etch rate	Lower paddle speed, bath temperature and/or acid strength
Under or overexposure	Check lamp. Revise exposure time to obtain recommended range on the Sensitivity Guide
Dirty printing frame glass	Clean glass
Dirty negative	Clean negatives
No burn-in after dev. (Red Top)	Heat plate to drive off excess solvent
Too long etching time	Reduce time
High bath temperature	Reduce temperature
Left in developer too long	Reduce development time

Slow Etch Rate

Insufficient paddle dip	Adjust bath level
Low or weak acid	Add acid
Low paddle speed	Increase paddle speed; check paddle belts

Excessive Image Loss

Excessive descumming	Refer to LGA descumming recommendations
Underexposure	Increase exposure time to recommended range; check bulb
Too fast an etch rate	Lower paddle speed, bath temperature and/or acid strength
Etching bath too old	Dump old bath; build new bath
Weak negative	Remake negative

