FUJIFILM

X-FLEX

FILMING AGENT FOR THE ETCHING OF PRESENSITIZED FLEXOGRAPHIC MAGNESIUM PLATES

DESCRIPTION

X-Flex is a filming agent formulated especially for production of high quality flexographic magnesium plates. For etching shallow relief plates (0,9 mm) or deep relief plates (4 mm) starting etch rates0,19 mm per minute for a metal thickness of 6 mm and 0,22 mm per minute for a metal thickness of 1,6 mm.

MACHINE ADJUSTMENTS

Paddle dip should be: 9 mm.

Turn table speed should be set to a minimum of 1,5 rpm(see machine manufacturer's recommendation.

INSTRUCTIONSFORUSE

Machine preparation

Clean the machine thoroughly prior to installing the X-Flex bath. Fill the machine with hot water, adding 3-4 liters of nitric acid. Then the paddles should be run for 5 minutes. Drain the machine and flush it thoroughly with warm water.

Bath preparation

A. Nitric Acid, 42° Baumé	-20% by volume
B. X-Flex	-5% by volume

Processing conditions

A. Temperature:
- heavy metal - 38°C
- normal metal (1,6 mm) - 35°C

B. Paddle Speed
Multiple paddle machines - 500 to 600 rpm

This composition serves as a basis for bath preparation and it may have to be adjusted according to the operating conditions.

Descumming

No special technique is required. A generally accepted formula is to mix 210 ml of 42° Baumé nitric acid with 60 ml of 14° Baumé gum arabic in water to make approximately 4 liters of solution ~~or to use Fuji Hunt Express Guard 2 - see instructions on technical brochure~~.

Bath Replenishment

Add nitric acid at a rate of 200 ml per 30 g of metal etched. Check the level of the bath.

42° Baumé	7 to 1
40° Baumé	8 to 1
36° Baumé	10 to 1

Holdover

No special precautions are necessary. If the level of the bath decreases, simply add water.

Bath Capacity

Normally a capacity of approximately 60 g per liter of machine capacity can be expected.

Packaging

Filming Agent X-Flex -1 drum 20 Liters - Catalogue N° 911719

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ETCHING CONTROL GUIDE

The following is offered as a guide to correcting certain etching conditions, with the most probable causes listed first:

CONDITION	PROBABLE CAUSE(S)	REMEDY
Tight Reverses (Shoulders)	1. Low temperature 2. High paddle speed 3. High acid 4. Low additive	1. Raise temperature 2. Lower speed 3. Hold back acid 4. Add X-Flex
Dirt	1. Pinholes in negative 2. Improper descum procedure 3. Low acid 4. Contaminated etching machine	1. Check negative carefully for pin-holes 2. Increase strength of descum to 360 ml of nitric acid and 210 ml of gum arabic per 4 liters. 3. Check acid additions. 4. Clean and rinse machine thoroughly.
Broad Shoulders	1. Low acid 2. High temperature 3. Slow paddle speed	1. Check acid additions 2. Lower temperature 3. Increase speed (check for low paddle dip).
Undercutting or Chipping	1. Low temperature 2. High paddle speed 3. High acid	1. Raise temperature. 2. Lower speed (check for high paddle dip). 3. Omit acid addition.
Low Etch Rate	1. Insufficient paddle dip 2. Low (or weak) acid 3. Slow paddle speed	1. Adjust bath level by adding water. Dip should be 19 mm. 2. Add acid. 3. Raise paddle speed (see Bulletin text for recommendations).