

# ファインパターン対応ビアフィリング用硫酸銅めっき添加剤

Additives for Acid Copper Plating to Via-filling (For Fine Pattern)

## トッフルチナFRV

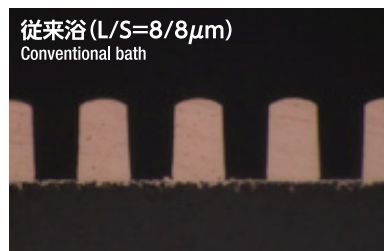
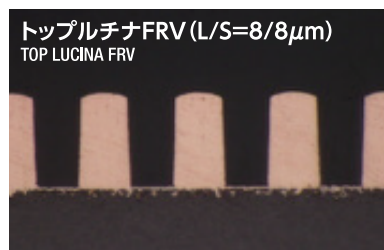
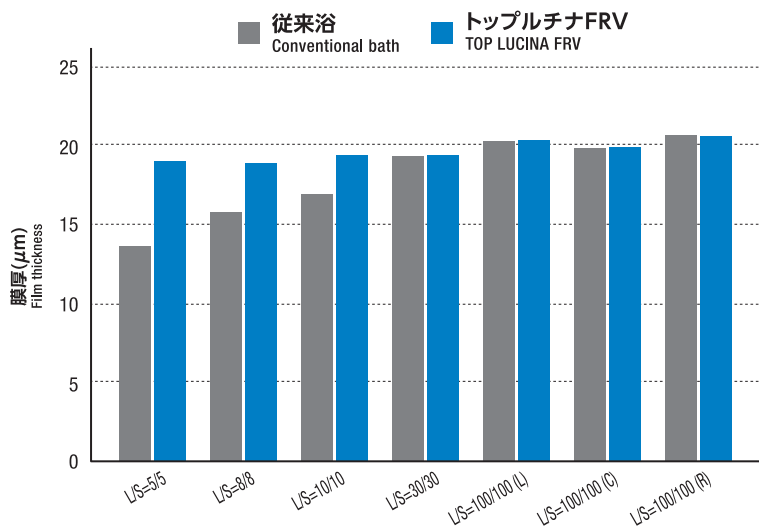
TOP LUCINA FRV

- 微細配線の膜厚低下が少なく膜厚均一性に優れる  
Reduce thickness variation of micro-patterns, excellent in thickness uniformity
- 配線の断面形状の矩形性が良好  
Can obtain fine square shapes
- ブラインドビアホールのフィリングが可能  
Blind via holes can be filled
- 緻密で平滑な光沢外観が得られ、高展延性の皮膜が得られる  
Fine and smooth films can be obtained, films with high ductility comes available

### 優れた膜厚均一性・・・微細配線の膜厚低下が少ない

Excellent in thickness uniformity

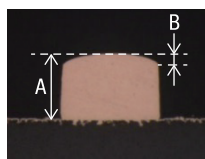
Reduce thickness variation of micro-patterns



### 良好な矩形性

Square-shape patterns can be obtained

	トッフルチナFRV TOP LUCINA FRV	従来浴 Conventional bath
L=30μm 断面形状 Cross-sectional image		
矩形性率 Square-shape ratio	9.8%	16.9%
L=8μm 断面形状 Cross-sectional image		
矩形性率 Square-shape ratio	4.9%	6.8%

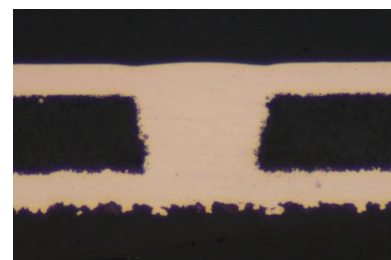


$$\text{矩形性率 (\%)} = B (\mu\text{m}) \div A (\mu\text{m})$$

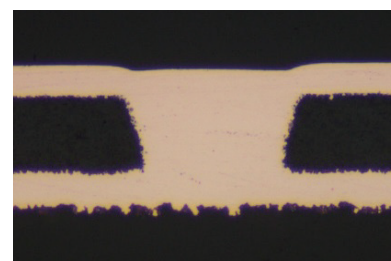
Square-shape ratio

### 良好なフィリング性

Great via-filling performance



ビア径 60μm    ビア深さ 30μm  
Via diameter    Via depth



ビア径 70μm    ビア深さ 30μm  
Via diameter    Via depth