

鉛フリー低リンタイプ無電解ニッケル/PTFE複合めっき液

トップニコジットLPFE

Lead-free, Low-phosphorus Electroless Nickel/PTFE Composite Plating Process

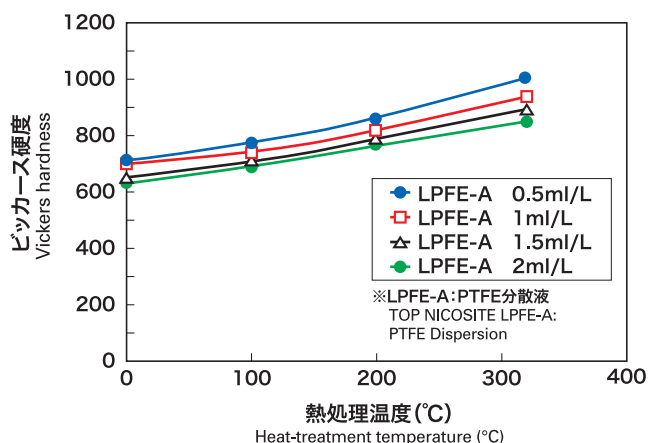
TOP NICOSITE LPFE

- 析出皮膜は硬度が高く、摺動性に優れる
 - リン含有率が1～3wt%と低く、PTFE共析量も5vol%以下で硬度が高い
 - 析出皮膜は、Hv650～700が得られ、320℃の熱処理により約Hv1000が得られる
- Excellent in film hardness, sliding performance
 - High hardness comes available • Ni-P (P ratio: 1 to 3% by weight), PTFE ratio: below 5vol%.
 - Film hardness: Hv 650 to 700 (as deposited) • Approx. Hv 1,000 (after heat-treatment at 320°C)

高い硬度 Great hardness

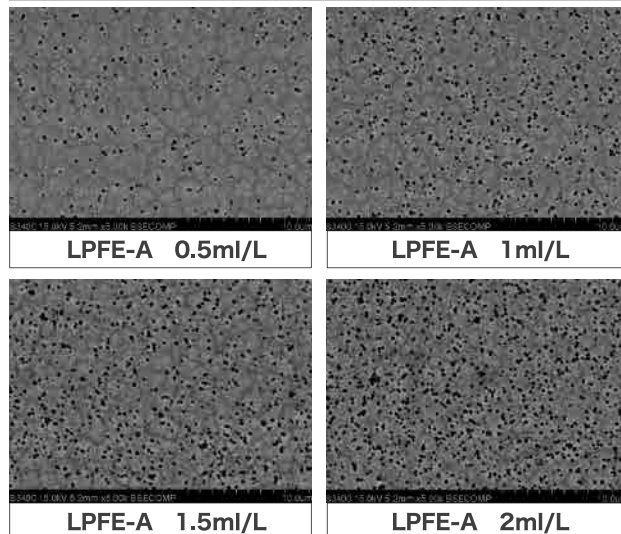
熱処理温度と皮膜硬度の関係

Relationship of heat-treatment temperature and film hardness



均一な共析性 Uniformly co-deposit

めっき皮膜の表面SEM写真 SEM image (Surface of the deposit)



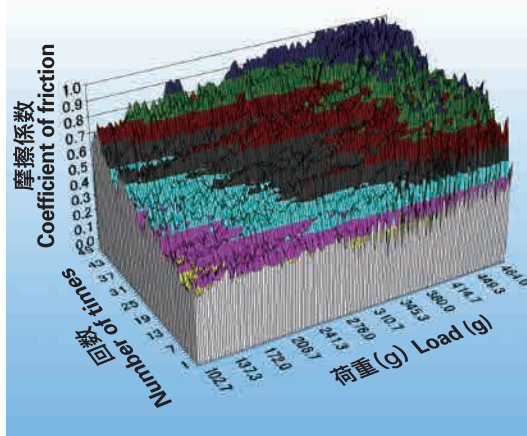
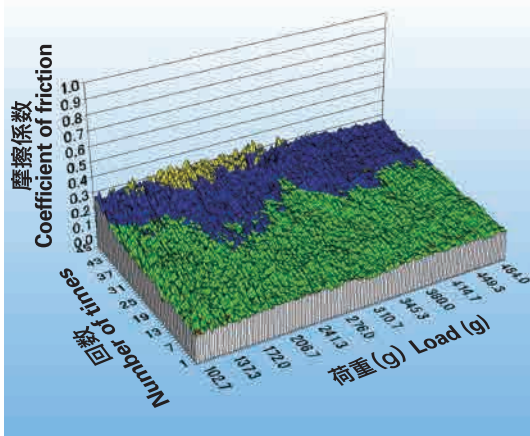
優れた摺動性 Excellent in sliding performance

トップニコジットLPFE皮膜および低リン無電解ニッケル皮膜の摩擦係数

Coefficient of friction of low phosphorus type electroless nickel plating film and plating film by TOP NICOSITE LPFE

トップニコジットLPFE-A 1ml/L
TOP NICOSITE LPFE-A 1ml/L

低リン無電解ニッケル
Low-phosphorus electroless nickel plating



測定機器 Evaluation method

荷重変動型摩擦摩耗試験機
トライボギアHHS-2000
新東科学株製
Friction and wear testing machine
Tribo Gear (HHS-2000),
Made by SHINTO Scientific Co., Ltd.

測定モード Evaluation mode

加減重往復測定
Addition and subtraction weight,
reciprocating-motion measurement

測定子 Measuring point

φ10mmSUSボール
Stainless steel ball, diameter 10mm

荷重 Weight

100gf(0.98N)~500gf(4.90N)

往復回数 Reciprocating-motion

50回 50 times