

## Conversion Table for Electroplating

| Quantity             | A<br>Conventional Unit    | B<br>SI Unit                     | To Convert From |                       |
|----------------------|---------------------------|----------------------------------|-----------------|-----------------------|
|                      |                           |                                  | A to B          | B to A                |
|                      |                           |                                  | Multiply by     |                       |
| Coating Thickness    | mil (= .001 in.)          | $\mu\text{m}$                    | 25.4            | .0394                 |
|                      | inch (in.)                | mm                               | 25.4            | .0394                 |
| Coating Weight       | $\text{mg}/\text{in}^2$   | $\text{g}/\text{m}^2$            | 1.55            | 0.645                 |
|                      | $\text{mg}/\text{in}^2$   | $\text{mg}/\text{cm}^2$          | 0.155           | 6.45                  |
|                      | $\text{mg}/\text{in}^2$   | $\text{kg}/\text{m}^2$           | 43.9            | .0228                 |
|                      | $\text{oz}/\text{ft}^2$   | $\text{kg}/\text{m}^2$           | 0.305           | 3.28                  |
| Current Density      | $\text{A}/\text{ft}^2$    | $\text{A}/\text{m}^2$            | 10.76           | .0929                 |
|                      | $\text{A}/\text{in}^2$    | $\text{A}/\text{m}^2$            | 1550            | $6.45 \times 10^{-4}$ |
|                      | $\text{A}/\text{in}^2$    | $\text{A}/\text{cm}^2$           | 0.155           | 6.45                  |
| Plating rates        | A-hr/ft <sup>2</sup> -mil | A-s/m <sup>2</sup> $\mu\text{m}$ | 1530            | $6.55 \times 10^{-4}$ |
| Volume               | gallon                    | m <sup>3</sup>                   | .00379          | 264                   |
|                      |                           | liter                            | 3.79            | 0.264                 |
|                      | fl oz                     | ml                               | 29.6            | .0338                 |
| Mass Concentration   | oz/gal                    | g/litre                          | 7.49            | 0.134                 |
|                      |                           | $\text{kg}/\text{m}^3$           | 7.49            | 0.134                 |
| Volume Concentration | fl oz/gal                 | ml/liter                         | 7.81            | 0.128                 |
|                      |                           | $\text{cm}^3/\text{liter}$       | 7.81            | 0.128                 |
| Pressure             | 1000 psi                  | MPa (MN/m <sup>2</sup> )         | 6.89            | 0.145                 |

ASTM Committee 808, Subcommittee 1.

### COMMON ABBREVIATIONS AND CONVERSION FACTORS

A = ampere or amp  
 ASD = amps/dm<sup>2</sup> (amps per decimeter squared)  
 ASF = amps/ft<sup>2</sup> (amps per foot squared)  
 fl oz/gal = fluid ounces per gallon  
 g/l = grams/liter  
 HCD = high current density  
 LCD = low current density  
 MCD = mid current density  
 oz/gal = avoirdupois (dry) ounces per gallon  
 ppm = parts per million or milligrams per liter  
 tr. oz/gal = troy ounces per gallon

Some relationships between terms:

ASF = ASD (9.26)  
 ASD = ASF (0.108)  
 tr. oz/gal = g/l (0.12165)  
 g/l = 8.22 (tr. oz. gal)  
 oz/gal = 0.1333 (g/l)  
 gal = fl oz x 0.0078