



**Avflex**

GLOBAL TECHNOLOGY – LOCAL SERVICE



## Hydro-Solve®

Magnesium Photo-Engraving Plates

Luxfer Graphic Arts has led the industry since 1935 and are the leading manufacturer and supplier of coated magnesium plate especially designed for the Graphic Arts and engraving industries globally.

Luxfer Hydro-Solve® PE plates (Photo-Engraving) are the premium plate to produce intricate magnesium dies for hot foil stamping, embellishing and fine engraving.

Luxfer Hydro-Solve® plates, are processed with Luxfer Aqueous Based chemistry for safer and environmentally friendly etching and Luxfer chemistry provides trouble free processing every time.

All Luxfer Hydro-Solve® Graphic Arts magnesium plates are hot rolled, milled to ensure surface integrity, cold rolled to tight tolerances then thermally flattened at 371°C and stress relieved with final machining to gauge before having the unique Hydro-Solve® photo sensitive coating applied evenly for optimised imaging.

**Cost Savings:** Faster production means a completed etched die can be produced in under 30 minutes which is vastly superior to CNC production.

**Technical Benefits:** A chemically etched magnesium die can hold a 2% dot, sharper corners and edges and high shoulders for super fine high resolution images. Magnesium maintains and disperses the heat evenly across the entire face of the die for perfect results and magnesium has a significantly longer service life than similar metals like Aluminium.

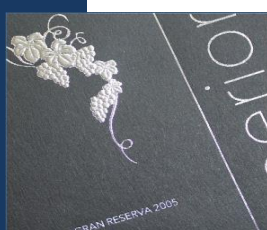
**Limitless Opportunities:** Chemically etched magnesium dies can also be used for hot foiling, deep embossing, multi-level embossing, micro etching in label printing and post press embellishing or can be incorporated into carton cutting die forms for a carton cut-crease-emboss single process. Additionally chemically etched magnesium dies are the perfect solution for wood burnishing for high end wine presentation boxes.

### Standard Plate Thicknesses Available:

1.00 mm / .040"  
1.63 mm / .064"  
2.50 mm / .098"  
4.00 mm / .157"  
6.35 mm / .250"

### Standard Plate Sizes Available:

610 x 762 mm / 24 x 30"  
610 x 914 mm / 24 x 36"



Exclusively Supplied By **AVFLEX Australia Pty Ltd**

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## Hydro-Solve®

Magnesium Etching Chemistry

The magnesium chemical etching process, whilst simple and easy, requires specialised and tailored chemistry all fine tuned for consistent results every time. Luxfer Graphic Arts offers a suite of proven Aqueous based chemistry to help produce quality results with all Hydro-Solve® plates. Plate protectors help promote true-image lines and a smooth etch, while specially formulated developers and coating top removers quickly strip off photoresist coating after etching. Luxfer chemistry solutions are specially formulated for Luxfer Hydro-Solve® photoengraving plates

**Developing Solution:** Aqueous based for fast developing after exposure.

- Hydro-Solve® Developer Concentrate  
(mixed 3 parts water to 1 part developer and heated to @ 30°C)

**Pre-Etch Plate Protector:** Pre-etch Gum to prevent oxidation after developing.

- Luxfer Express Guard  
(used neat)

**Etching Additive:** Etching oil to maintain crisp shoulders on image areas.

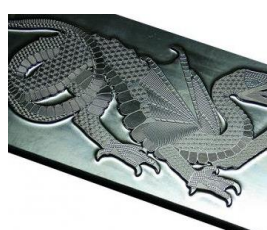
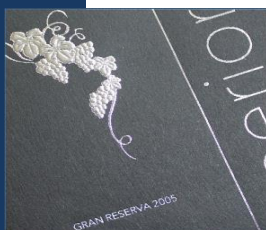
- Hydro-Solve® Rev-Flex
- Luxfer X5K Additive  
(add at 5% to bath):

**Coating Remover:** For simple and easy final coating removal post etching.

- Hydro-Solve® Coating Remover.  
(use neat and heated to 35°C)

**Etching Sundries:**

- Luxfer Stop-Out Lacquer. For raid spot or pinhole patching
- Luxfer Hydro-Solve® Spray Resist: For micro & double etching.  
(brush on or aerosol application options)



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