



**INNOVATION AND TECHNOLOGY FOR PRINTING INDUSTRY**

**100% ECOLOGICAL GENERATION OF CONSUMABLES**



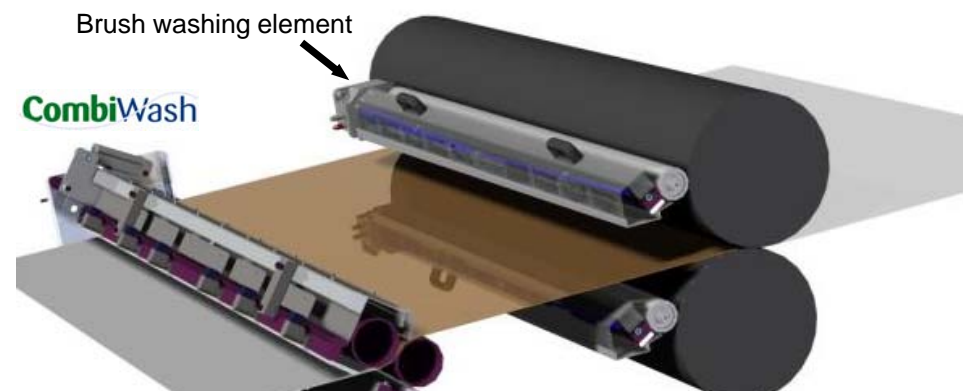
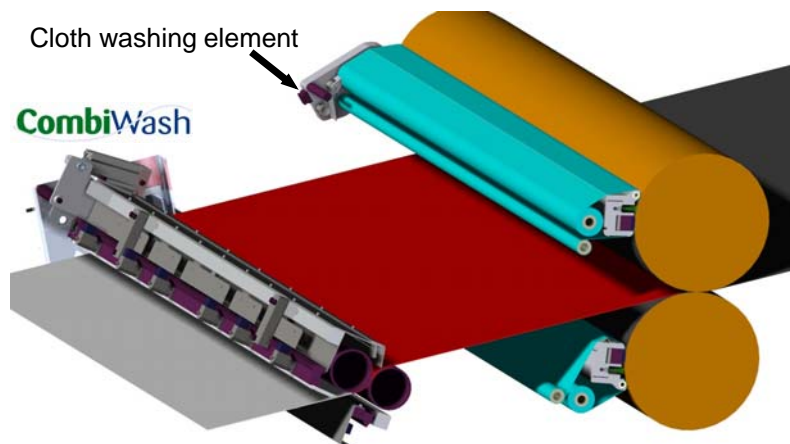


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ELETTRA's FOCUS is on the product and the process to generate a Real Added Value for the printer.

With the experience on automatic blanket washer systems and highly developed 'in the field' knowledge, Elettra is able to create the best washing solutions of the highest quality that satisfy both customers requirements and the most vigorous regulations.

ELETTRA has developed a 100% vegetable based solvent, **ECO101 series**, to add performance to automatic cleaning process.





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## **ELETTRA ECO series**

ECO101 3.0 the standard solution, uncoated paper

ECO101 4.0 the standard solution, for both coated / uncoated paper

ECO101 5.0 the highest performance solution, for both coated / uncoated paper

ECO101 6.2-F3 the highest performance solution, coated paper

ECO101 2.0 the highest performance solution, uncoated paper

ECO101 8.0 the best solution, uncoated paper (Micro emulsion)





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**All Elettra 's ECO101 solvents are tested in our laboratory respecting the FOGRA specifications:**



**Evaporation Factor**

Measure the weight of 3ml ECO101 and put in the dryer for 1h at 150°C. After 1h re-measure the weight differences.

**Metal back blanket Swelling**

Measure the weight of 3 different metal back blankets disc (Blue, Green and Black) and put in the dryer at 40°C into 50ml of the ECO101. After 1h, 3h, 1d, 3d, 7d, 14d take out from the dryer and re-measure the weight.

**Metal back blanket Airing**

After Metal back blanket Swelling test put in the dryer at 30°C these disc in cups without any ECO 101. After 1d, 2d, 7d take out from the dryer and re-measure the weight.

**Roller Swelling**

Measure the weight of 5 different rollers disc types and put each one in a cup with 50ml of ECO101. After 1d take out and re-measure the weight.

**Rollers Airing**

After Roller Swelling test put these disc in cups without any ECO 101. After 1d take out and re-measure the weight.



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### **Stability at room temperatures**

40 ml of ECO101 is centrifuged twice for 20 min at 4000 rev/min. It is then examined to determine if it is in an altered state: Any residue collection in the base of the test tube; precipitation or whether other changes in the product have occurred.



### **Stability at lower temperatures**

40 ml of ECO101 is inserted for 4 h at a temperature of  $-5^{\circ}\text{C}$  (Cryostat). After 4 h it is examined visually whether changes, especially flocculation, or phase separations through cooling, have occurred.



### **Viscosity**

250ml of ECO101 is emulsified with 250ml of water using a mechanical agitator for 1h at 150 strokes/min. Then using a flow cup, with a 3 mm nozzle, the time it takes to empty the flow cup is noted.

The behaviour of the product mixing with water has a particular importance in the washing process on printing presses. Too high a viscosity or solidifying aggregates can cause problems in automatic washing systems.



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### Conductivity

After 4h measure the emulsion conductivity.

The emulsion fluid characteristics can differ from the undiluted product.



### Copper , Steel and Nickel corrosion

Sample of **Copper** is put into 80ml of emulsion (organic phase) . After 7d check visually whether any changes occur, especially in colour , flocculation or deposit .

Measure the area and weight factor ( $\text{mg}/\text{cm}^2$ ) of **Steel** sample and put it into 80ml of emulsion (aqueous phase) . After 7d re-measure the area and weight factor ( $\text{mg}/\text{cm}^2$ ) .

Measure the area and weight factor ( $\text{mg}/\text{cm}^2$ ) of **Nickel** sample and put it into 80ml of emulsion (aqueous phase) . After 7d re-measure the area and weight factor ( $\text{mg}/\text{cm}^2$ ) .

### Iodine Number

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Iodine number is the mass of iodine (in grams) that reacts with 100 grams of fat. The Iodine number gives the information about the stability of the product and about the tendency towards auto-ignition This is measured considering technical specifications of each product contained in the ECO101.



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## ECO CLOTH MESH

Is a cloth made specifically for commercial web heat-set cleaning applications:

It's honeycombed structure allows easy penetration of both solvent and water, enabling all the wash solution, sprayed from the nozzles, to be where it needs to be, at the blanket. Little absorption, less solvent waste and a very efficient 'transport' system.





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Thank you very much  
for your attention...



ELETTRA S.R.L.  
Via De Gasperi, 2  
23887 Olgiate Molgora - Italy