

FOTECOAT 1711

Diazo Emulsion

1. DESCRIPTION

- Diazo screen emulsion with separate diazo powder for solvent based inks
- Light purple after exposure with excellent transparency
- Ideal for humid and warm climates

2. APPLICATION ADVANTAGES

- On polyester mesh 120/34 a stencil thickness below the mesh of approx. 10 microns can be reached by 3 coats from the printing side and 5 coats from the squeegee side, wet on wet. 8 microns are achieved by the 2/3 coating technique.
- The coating technique with intermediate drying cycles can be used. The stencil maker does not have to change his coating technique; in many cases however one coating stroke can be saved.
- Very high resistance against solvent based inks and UV-curing inks
- Nevertheless **FOTECOAT 1711** is easy to decoat. High pressure necessary for aggressive inks.
- Excellent adhesion and anchorage to the mesh; a strong water spray can be used for wash-out.
- Partial areas of the finished stencil can be covered with tape or water soluble screen filler for multi-color work with one stencil.
- The screen filler can afterwards be washed out with water without damaging the stencil.

3. PRINTING ADVANTAGES

- Very high resolution with excellent definition both for positive and negative printing.
- The flow-out of the emulsion after coating and during the drying cycle is extremely good so that relatively thin stencils below the mesh can be coated, creating at the same time a flat-bottomed stencil which is hardly influenced by the mesh structure.
- 8-10 microns are sufficient in combination with polyester mesh 120/34 for positive printing; 12-14 microns for negative printing.

4. STORING

The freshness of the diazo powder controls the pot life. Age, transportation and storing conditions influence the quality of the emulsion drastically.

Condition	Service Life
Unsensitized 18-25°C storage	24 months
Sensitized, stored at 20°C (pot life)	4-6 weeks
Pre-coated in total darkness at 20°C	2-3 weeks

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5. TECHNICAL INDICATIONS

Content of Solids	27% Unsensitized
Viscosity	Approx. 16'000 cps. This high viscosity is ideal for polyester and steel mesh. FOTECOAT 1711 can be coated on very fine fabrics and on coarse meshes by adapting the coating and drying technique to the mesh type. For meshes over 150/31 the screen emulsion can be diluted with water.
Exposure Time	Approx. 50% of a normal diazo screen emulsion
Stencil Color After Exposure	Light purple, with very good transparency
Resolution	50 µm positive / 70 µm negative
Edge Definition	Very good. The printing result depends on the mesh number, the mesh color, the coating and drying technique and the final dry stencil thickness below the mesh.
Solvent Resistance	Very good; also against aggressive cleaning solvents
Water Resistance	Reasonably good; screen filler can be washed out with water.
Sensitivity to Humidity	Minimum
Decoating	Easy; possible without high pressure unit. A degreasing cycle before decoating helps to prevent ghost images. Use FOTECHEM 2005 paste or 2044 powder or 2042 liquid concentrate.
Stencil/Ink Residue caused by inadequate cleaning/ decoating	Can be removed with FOTECLEAN 40306 (blend of emulsifying solvents) followed by FOTECHEM 2080 (high alkaline paste).
Compatibility with Machine Coating	Excellent and without problems; the screen emulsion can be diluted with water if the viscosity is too high.

6. EXPOSURE TIMES

5 kW metal halide lamp at 100 cm distance; photopolymer bulb at 100 hours operating time.

Mesh 120/34 W		
Coating	Thickness (µm)	Time (sec)
1/2	1 µm	35
2/3	8 µm	50
3/5	10 µm	60
2/3, 2 face coats	12 µm	70

Mesh 120/34 Y		
Coating	Thickness (µm)	Time (sec)
1/2	1 µm	50
2/3	8 µm	75
3/5	10 µm	90
2/3, +2 face coats	12 µm	110

Mesh 90/48 Y		
Coating	Thickness (µm)	Time (sec)
1/2	-	40
2/3	9 µm	85
3/5	11 µm	110
2/3, 2 face coats	13 µm	130

Mesh 77/55 Y		
Coating	Thickness (µm)	Time (sec)
1/2	-	80
2/3	12 µm	100
3/5	14 µm	130
2/3, 2 face coats	16 µm	160

Mesh 325 Steel		
Coating	Thickness (µm)	Time (sec)
1/2	1 µm	50
2/3	6 µm	80
3/5	8 µm	100
2/3, 2 face coats	12 µm	140