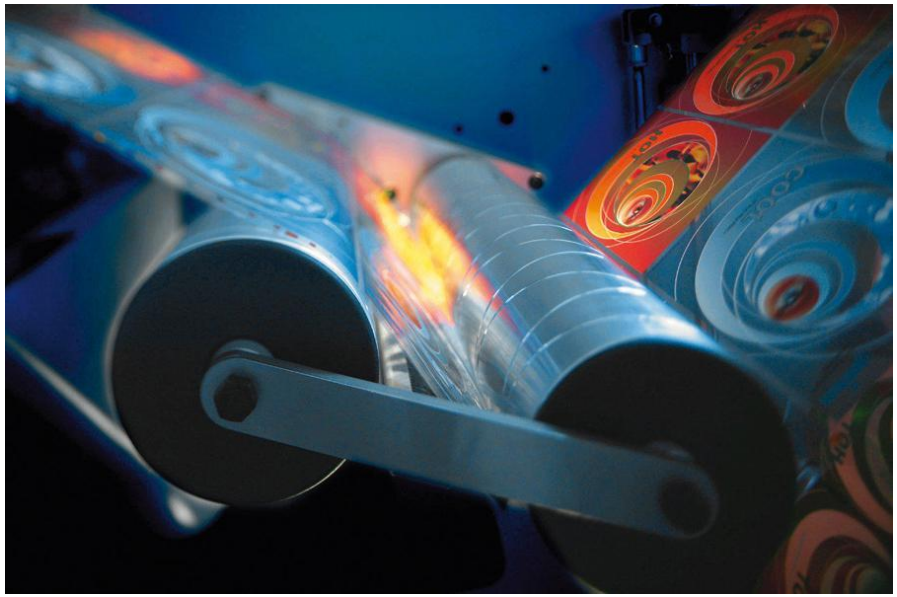
FEATURES OF POLYMER PLATES AFFECTING THE QUALITY OF FLEXO PRINTING



Purpose of research and experimentation

High quality requirements for printing label products are required in connection with need for accurate reproduction of small elements and stable color rendition. A method of selecting flexo polymers is necessary, because flexo forms are one of the most important quality factors.

Experimental procedure

Flexographic plates of three popular brands for high-quality printing with similar characteristics (rigidity, thickness, resolution, color rendition) were chosen as objects for experiments:

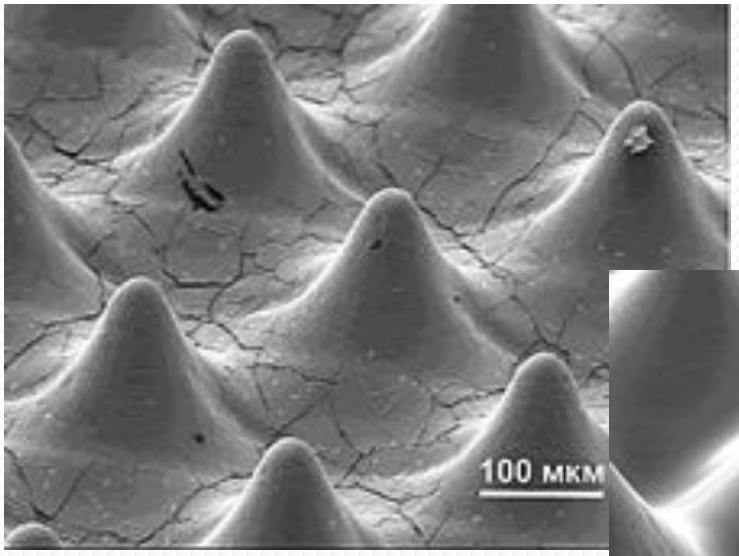
- DuPont Cyrel DPU
- Kodak Flexcel NX
- Toyobo Cosmolight QS

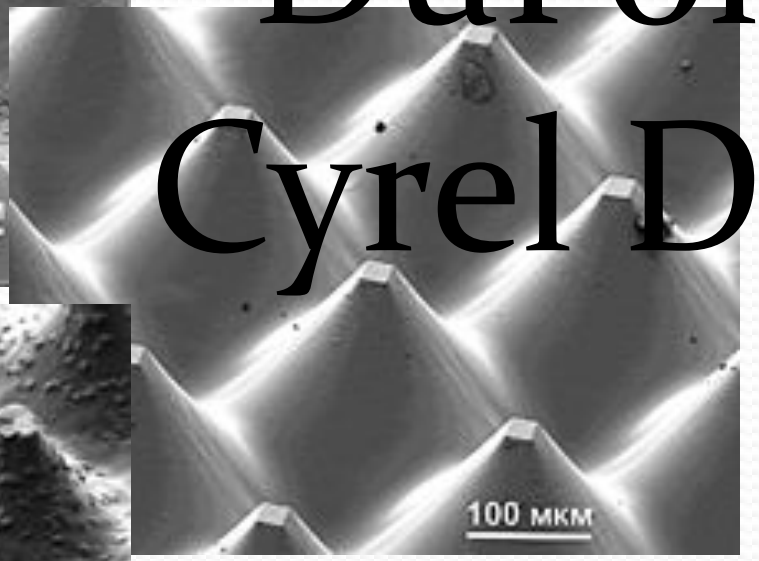
Specifications	DuPont Cyrel DPU	Kodak Flexcel NX	Toyobo Cosmolight QS
Thickness, mm	1,14	1,14	1,14
Hardness, Shore A	76	73	77
Resolution, %	1-95	0,4-99	1-95

Detailed surface comparison

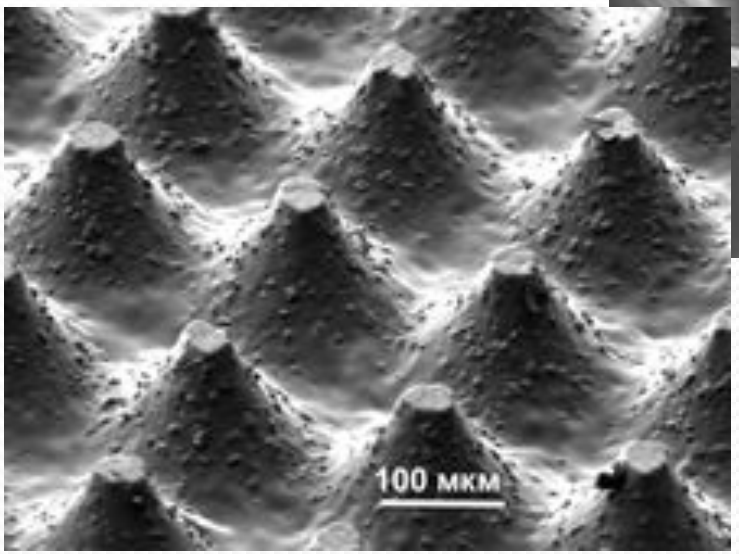
Jeol JSM 7500F Scanning Electron Microscope

Detailed surface comparison

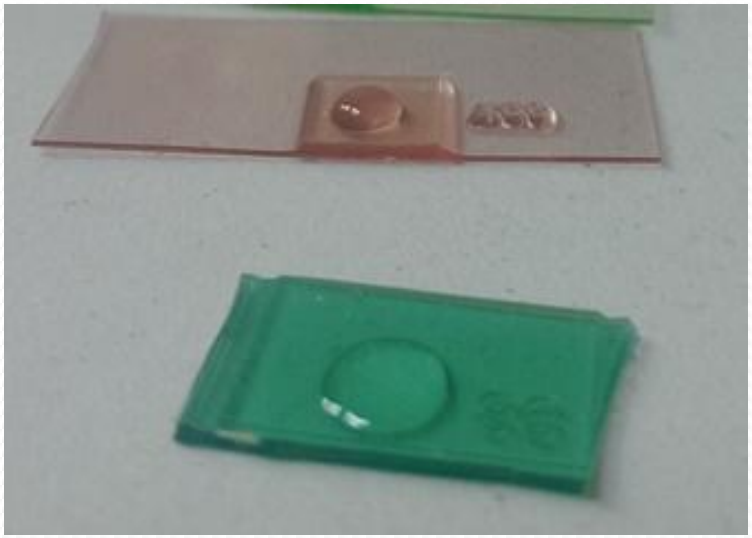




DuPont
Cyrel DPU



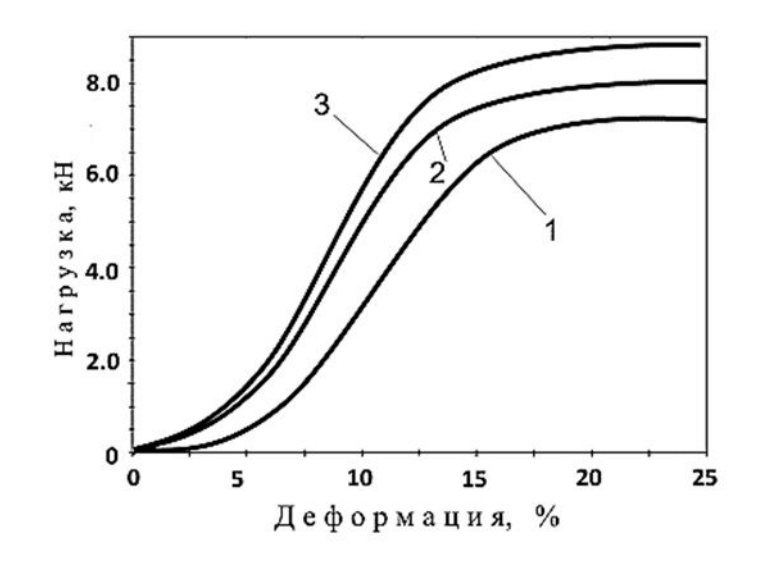
Ink trapping

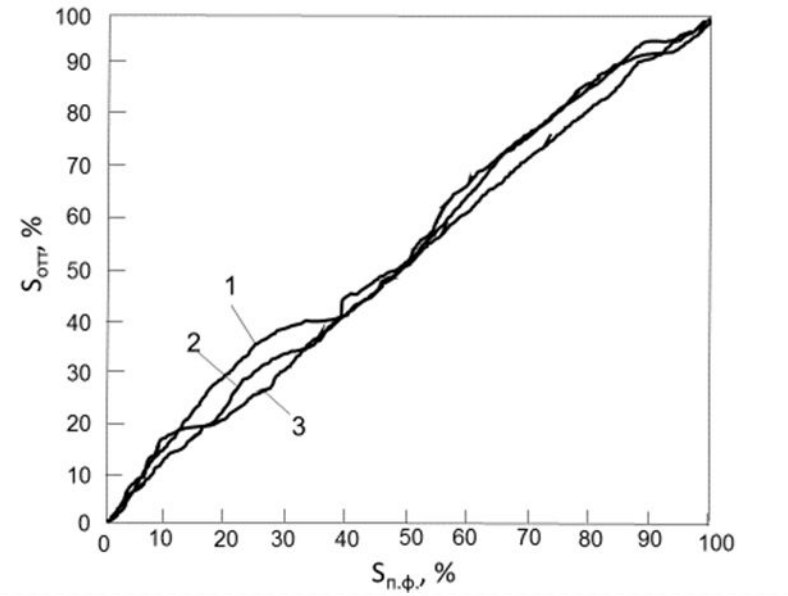


$$A = \gamma(\cos\Theta + 1)$$

	DuPont	Kodak	Toyobo
Contact angle/Work of adhesion (J)	78/86.9	57/111.2	45/122.2

Ink trapping




100
90
80
70
60
50
40
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20
10
0
$S_{отт}$, %
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