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KEYWORD : FLEXOGRAPHY PRINTING/ POLYPROPYLENE/RUB RESISTANCE/Lab

PHAIRAT SITTIRATTANAYEUNYONG : INFLUENCE OF PRINTING CONDITION
OF FLEXOGRAPHY MACHINE ON QUALITIES OF POLYPROPYLENE
PRINTING MATERIAL. THESIS ADVISOR : MR.VARUN TAEPASITPHONGSE,
Ph.D.,CO. ADVISOR : MR.MARACHAI KONGBOONMA, 94 pp. ISBN 974-03-
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This experimental work studied the effect of viscosity of water-based ink, drying power and machine speed of flexography machine on the rub resistance and color shade of printed polypropylene sheet. The polypropylene sheet was surface treated by corona method to have the surface energy at 38 dyne/centimeter.

The results showed that ink viscosity had strong effect on the qualities of the printed sheet. Higher the viscosity, higher the thickness of the film obtained. However, the rub resistance was lower. The suitable ink viscosity was found to be at 35 second (measured by DIN cup no.4). The drying power had little effect on the quality of printed sheet. But if the drying power was inadequate, the set off problem would occur. The suitable drying power used in the test machine was found to be 100 percent. Additionally, the machine speed also affected the rub resistance of printed sheet. At low speed, the film thickness was thin and had good rub resistance. However, the color shade of printed sheet differed more than at high machine speed. The suitable speed was found to be at 7,000 sheets per hour.