

A Study on Coating Characteristics of UV Curable Resin by Ultrasonic Nozzle Spraying

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Ultrasonic nozzle is more sustainable than normal pressurized nozzle because of easy control of spraying volume and less usage per unit spraying area. Therefore, the study is prepared to review the coating characteristics of UV curable resin, which is used for protective film by using ultrasonic nozzle. In the study, Urethane acrylate resin was used as UV curable resin while 1-Methoxy-2propanol was used to dilute the resin. Ultrasonic nozzle is easy to regulate spraying volume than normal pressurized nozzle, and in the study, the thickness and quality of coating film was measured according to the flow rate of unit coating solution, dilution rate and the movement velocity of coating substrate. As a result, the thickness of coating film could be regulated between 5 ~ 65 μ m, depending on the changes in the velocity of coating solution and the movement speed of substrate. In case the dilution of coating solution is regulated between 10 ~ 30%, it had little influence on the thickness of coating film but effected the quality.