ELECTRONIC MATERIAL



APPLICATION GUIDE BOOK

COATING SOLUTION, FILM MANUFACTURING



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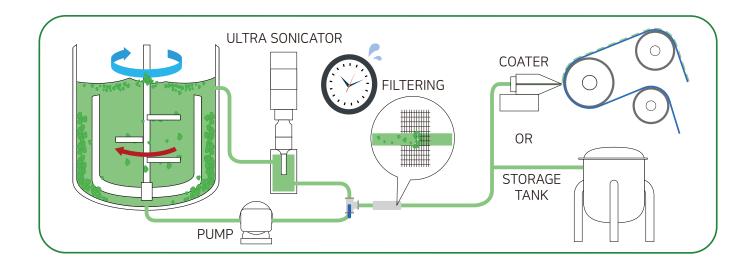
► Functional Coating solution, Film Production

- 1) Coating originally refers to work that increases durability, functionality, and protection against moisture or heat by applying a functional film or film treatment to the surface of the underlying material.
- 2) However, as industries and raw materials become innumerable and precise, the fields of 'functional coating' and functional film manufacturing are emerging as important processes.
- 3) In particular, the demand for functional coatings related to displays and secondary batteries, such as optical and semiconductor substrate coatings, conductive coating films, ultra-hard coatings or films, and ceramic coatings, is increasing.
- 4) However, if the material is not completely dispersed during the production of such a coating solution or film, quality problems may occur in the final product due to unstable strength, poor color or streaks, and uneven surface of the product.

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Problems with existing processes

- 1) Most of the coating or film processes are based on binders and solvents, and functional materials are added and dispersed therein.
- 2) However, with low-speed mixers such as ANCHOR MIXER or PADDLE MIXER that are commonly used, it takes a long time and it is difficult to obtain perfect dispersion results, so filtering is often done. Ultrasonic dispersers with relatively good dispersing power also take a lot of time to mass-produce due to the limitation of small-volume processing.
- 3) In some cases, coating is carried out by transferring it directly to the next process, COATER, after the dispersion process. Even in this case, it must be transferred by a separate pump or manually.



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