

NEWS RELEASE

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New grade of waterborne polyurethane on sale

We at Dai-ichi Kogyo Seiyaku have recently been added to our waterborne urethane resin series **SUPERFLEX 210** and begun its manufacturing and sales. This product is widely applicable to plastic coatings and paints.

SUPERFLEX 210 is a polyester-type water-dispersed polyurethane developed as a coating agent for plastics, and it forms a very hard, very strong and transparent film. It shows excellent adhesiveness to various plastics such as polypropylene (PP), polyethylene terephthalate (PET) and polyethylene (PE), to which conventional products did not have enough adhesiveness. Generally, the plastic materials used for floors and/or walls are coated for the purposes of scratch-proofing, enhancing adhesiveness to other materials and/or coloring; PP, PET and PE are more and more employed for these purposes from the recyclability/reusability point of view. In this circumstance, we have been receiving a lot of requests from our customers for development of such a resin that has adequate adhesiveness to these plastics.

The market volume of the whole urethane resins is more or less around 620,000MT, and among this, the market size of *waterborne* urethane resins is expected to be around 20,000MT – this is expected to grow as, in future, more and more of conventional solvent-borne urethanes should be replaced with waterborne counterparts and also waterborne urethanes should be employed in a variety of new application fields.

SUPERFLEX have been being sold to manufacturers of a wide range of industries, such as paint, film, adhesive, paper, fiber and artificial leather etc. Waterborne urethane resin are used as: paint for cars, constructs, woods and plastics; coating agent for films, sheets, metals, papers and leathers; adhesive for fibers, films and woods; binder for papers, fibers and non-woven fabrics and so on. The application fields of environmental-friendly waterborne urethane resins are rapidly being promoted also due to the VOC regulations.

Note:

Waterborne urethane resin – Water-dispersed polyurethane obtained by polyaddition reaction between primary starting materials polyisocyanate and polyol, followed by introduction of hydrophilic component in the polyurethane skeleton for stably dispersing it in water or using an additional emulsifier to make it disperse.

The basic structure of waterborne urethane resin consists of a flexible soft segment and hard segment formed by binding units of urethane and urea bonds that have strong cohesive energy. By the balance of these two segments, waterborne urethane resins can have all of flexibility, strength, elasticity and even high adhesiveness. In comparison with other waterborne resins such as vinyl acetate, ethylene vinyl acetate (EVA), acrylic resin, epoxy resin and synthetic rubber latex, waterborne urethane resins have extreme strength and flexibility even when hard.

For more information, please contact:

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