

New HDI-polyisocyanates “DURANATE™” contributing to sustainability: VOC reduction, expanding renewable energy, curing energy saving

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This presentation will show below three types of new HDI-polyisocyanates for various coating formulations toward sustainability.

1. “DURANATE™ Fine-series of low viscosity trimer grades”

Low viscosity trimer grades are suitable for high-solid, water-borne 2K-polyurethane or solvent-free formulations for VOC reduction within coatings. Moreover, we commercialized “Fine series” of low viscosity trimer grades with low monomer content (Residual HDI<0.1wt%) for European diisocyanate restriction. For these reasons, our low viscosity trimer grades can contribute to worker’s safety. Our low viscosity trimer grades, “Fine TLA-100, Fine TUL-100 and Fine TLL-100”, are all have various unique characteristics not only low viscosity, so you can select the most suitable grade for your application.

2. “DURANATE™ high-flexure grades”

High-flexure grades can give softness film and followability to substrate deformation. Therefore, they are recommended to application on curved surface. “E402-100” is the most flexible even when combined with aspartic ester resins. “X9124.01” has lower viscosity than “E402-100”, in addition, “X9124.01” shows not only high elongation but also higher hardness than “E402-100” in combination with aspartic ester resins. We believe our high-flexure grades contribute to expanding renewable energy by being used for wind blade coating.

3. “DURANATE™ low temp. curing solvent/water-dispersible type blocked grades”

Low temp. curing solvent type blocked grade “MF-K60X” can be crosslinked at 90°C for 30mins. And we also line-up low temp. curing water-dispersible type blocked grade “WM44-L70G”. “WM44-L70G” can be used in water-borne 1K-polyurethane formulation. Because of this characteristic, our low temp. curing blocked grades can contribute to saving energy in the coating process. Furthermore, simultaneous coating on metal / plastic parts can be achieved especially when used for OEM basecoats.