

### Influence of the methylol reactive catalyst in methylenation for urea-formaldehyde precondensate synthesis

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The reaction of urea and formaldehyde in aqueous solution leads to the formation of monomethylolurea, dimethylolurea, trimethylolurea and tetramethylolurea. Those methylol group derivatives form larger molecules. Actually, the amount of unreacted formaldehyde present in methylenation of UF resin because of low reactivity between urea and formaldehyde. Addition of methylol reactive catalyst in condensation of UF synthesis was increased the reactivity of methylenation. We report on the methylenation reactivity of UF precondensate by the reduction of unreacted formaldehyde using methylol reactive catalyst. During synthesis, the amount of unreacted formaldehyde was determined by the titration of methyl-red and methylene-blue in UF precondensate, and then we observed effect of methylol reactive catalyst in UF precondensate.