Particle board is an engineered wood product manufactured from wood particles, synthetic resin and other components. Catalyst is an important element in the particle board production process. The purpose of using catalyst in the production of particle boards is simple: allow resin to cure in the hot press. Nowadays particle board production uses three different catalyst solution types: ammonium chloride, ammonium sulfate and ammonium nitrate. Ammonium nitrate based catalyst has been specifically designed as a core and surface layer catalyst for particle board resins to increase production rates. These increases can only be taken as an advantage, if all the other parts of the line can sustain (flake preparation, drying, blending, forming, loading, pressing, unloading, trimming etc). If all other parts of the line can maintain, then production increase of up to 25% can be achieved. Ammonium nitrate is faster in reactivity than standard ammonium chloride or sulphate solutions and the high solids content allows lower core moisture contents and higher surface moisture contents for better heat transfer inside the board which permits higher press temperatures and faster press times to be achieved without a reduction in board properties. This generally leads to a reduction in overall board costs. Although it has a high reactivity at elevated temperatures, it still has good pot life at room temperature...
when mixed with the resin. It is suitable for use with urea-formaldehyde and melamineurea-formaldehyde resins and works well with E0 and E1 resins. Ammonium nitrate based catalyst has been tested and compared with current catalysts at two European particle board factories. The current article gives an overview of a new type of catalyst, trials, results that have been achieved and makes further recommendations.

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