

### ***S2.1.1 Polypropylene Fine Fiber Strength Improvement with HALS***

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It is well accepted that the presence of high levels of the beta crystals can sharply improve the impact strength, toughness, micro-pores and heat deflection temperature of polypropylene fine fibers.

There are several substances such as diamides of adipic and/or suberic acids, and N,N-dicyclohexyl-tetraphthalamide that can act as specific beta-nucleators. Commercially available beta-nucleator, N, N'-dicyclohexyl-2,6-naphthalene dicarboxamide, which is known under the trade name NJStar NU-100 (NJS), is one of the most powerful beta nucleating agents. Amide groups seem to be highly efficient beta nucleating agents. Since Hindered Amine Light Stabilizers (HALS) are widely used in polymer processing in order to protect the polypropylene fibers from UV lights, this study was initiated to investigate possibility of increasing beta crystal contents by adding HALS.