

Title (en)  
HEAVY DUTY PARTICULATE SYNTHETIC ORGANIC NONIONIC DETERGENT COMPOSITIONS OF IMPROVED CLEANING ACTION ON LAUNDRY CONTAINING HARD-TO-REMOVE SOILS

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Application  
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Abstract (en)  
[origin: EP0365103A2] A heavy duty particulate synthetic organic nonionic detergent composition, which is preferably what may be termed concentrated or superconcentrated because of its highly effective combination of cleaning agents, so that relatively small proportions thereof may be utilized to effectively wash laundry and remove from it hard-to-remove soils that often are entrapped in the laundry fibers, and which tend to give laundry articles a grayish appearance, includes certain percentages of synthetic organic nonionic detergent, builder for such detergent, cellulase and other cleaning enzyme(s), especially protease, and water. Such detergent compositions preferably include protease and amylase with the cellulase, and the cellulase may be of a type derived from fungus. To further improve cleaning and soil removal they also include narrow range ethoxylate nonionic detergent and polyethylene terephthalate-polyoxy-ethylene terephthalate copolymer soil release promoting agent. In European-type detergent compositions, intended for use in European-type washing machines, which usually operate at higher temperatures, perborate bleaching agent is desirably present but American-type detergent compositions, which are often employed in lower temperature washing of laundry, usually omit such bleaching agent. The described compositions include phosphate and non-phosphate builder systems. Also within the invention are processes for washing laundry, preferably with the described compositions.

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