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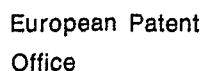
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54 **Slurry cast double base propellants.**

57 A slurry casting process is described capable of producing crosslinked double base propellant having improved burning rates and high specific impulse. The crosslinked matrix is obtained by curing a admixture of nitrocellulose, a polyol and a polyfunctional isocyanate crosslinking agent. Such propellants can be formulated to be smokeless. Improved burning rates are achieved by incorporating into a slurry of double base composition, casting powder granules containing 20% to 75% by weight of small particle ammonium perchlorate. The casting powder granules substantially retain their identity in the cured propellant matrix. The casting powder granules have a high burning rate and are uniformly distributed throughout the propellant. The granules are responsible for increasing the burning rate of the entire cross-linked double base propellant composition of the invention.



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