

[\[Abstract\]](#) [\[Summary\]](#) [\[Drawing Description\]](#) [\[Detailed Description\]](#) [\[Claims\]](#)

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Energetic nitro prepolymer

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Abstract

Hydroxy-terminated poly(2,2-dinitropropyl)polynitroorthocarbonate prepolymers of the formula which are prepared by reacting bis(2,2-dinitropropyl)dichloroformal with a diol of the formula

wherein $n > 1$, and wherein W, X, Y, and Z vary independently and are F or NO₂, and wherein -A- is -CH₂-, -CH₂CH₂-, -CH₂CH₂CH₂-, -CF₂-, -CF₂CF₂-, -CF₂CF₂CF₂-, -CF₂CF₂CF₂CF₂-, -CH₂OCH₂-, -CH₂OCH₂OCH₂-, -CH₂OCF₂OCH₂-, or -CH₂N(NO₂)CH₂-. These prepolymers are reacted with curing agents (e.g., polyisocyanates) to form energetic polymeric binders.

US 03306939 19670200 Hill

References:

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et al.
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