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(54) **LOWER BURNING RATE, REDUCED HAZARD, HIGH TEMPERATURE INCENDIARY**

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(58) **Field of Search** 149/19.3, 18, 19.91, 149/22, 108.2

(56) **References Cited**

U.S. PATENT DOCUMENTS

2,995,431 A		8/1961	Bice	52/5
3,638,573 A	*	2/1972	Campbell	102/364
3,986,909 A		10/1976	Macri	149/19.9
3,998,676 A		12/1976	Plauson et al.	149/7
4,131,498 A	*	12/1978	Lucy	149/19.3
4,331,080 A		5/1982	West et al.	102/301
4,376,083 A		3/1983	Ulsteen	264/3 D
4,402,705 A	*	9/1983	Daume et al.	149/108.2
4,428,786 A		1/1984	Arni	149/21
4,432,818 A	*	2/1984	Givens	149/108.2
4,470,855 A		9/1984	Bampfield	149/2
4,482,405 A		11/1984	Wright	149/19.3
H169 H	*	12/1986	Mackenzie et al.	149/19.3
4,840,687 A		6/1989	Forsberg et al.	149/2
4,944,815 A		7/1990	Consaga	149/19.1
4,978,400 A		12/1990	Juneau, Jr. et al.	149/21
5,187,320 A		2/1993	Yunan	102/275.8
5,468,313 A		11/1995	Wallace, II et al.	149/53
5,529,649 A		6/1996	Lund et al.	149/19.3
6,298,784 B1	*	10/2001	Knowlton et al.	102/205
6,354,222 B1	*	3/2002	Becker et al.	102/367
6,402,864 B1	*	6/2002	Gill et al.	149/108.2
6,409,854 B1	*	6/2002	Gill et al.	149/108.2

* cited by examiner

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(57) **ABSTRACT**

A low burning rate, high temperature incendiary composition having a reactive material of titanium, a second reactive material of boron, an oxidizer of polytetrafluoroethylene in an amount of from about 20 weight percent or greater of the composition and a binder of paraffin wax in an amount of from about 5 weight percent to about 20 weight percent. The composition is safe to handle, ignites readily, burns at a low and controlled rate and produces a very high flame temperature.

10 Claims, No Drawings

Scott, 82,155
Navy Case