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(54) **LOW SLAG, REDUCED HAZARD, HIGH TEMPERATURE INCENDIARY**

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(56) **References Cited**

U.S. PATENT DOCUMENTS

2,995,431 A		8/1961	Bice	52/5
3,865,035 A	*	2/1975	Munson et al.	102/364
3,986,909 A		10/1976	Macri	149/19.9
4,012,244 A	*	3/1977	Kaufman et al.	149/19.3
4,098,625 A		7/1978	French et al.	149/19.3
4,131,498 A	*	12/1978	Lucy	149/114
4,262,541 A		4/1981	Jacobs	73/826
4,331,080 A		5/1982	West et al.	102/301
4,397,700 A		8/1983	Johnson et al.	149/7
4,428,786 A		1/1984	Arni	149/21
4,482,405 A		11/1984	Wright	149/19.3
H169 H	*	12/1986	Mackenzie et al.	149/108.6
4,944,815 A		7/1990	Consaga	149/19.1
4,978,400 A	*	12/1990	Juneau et al.	149/109.6
5,187,320 A		2/1993	Yunan	102/275.8
5,253,584 A	*	10/1993	Allford	149/19.3
5,468,313 A		11/1995	Wallace, II et al.	149/53
5,529,649 A		6/1996	Lund et al.	149/19.3
5,880,398 A	*	3/1999	Crilly et al.	102/364
6,354,222 B1	*	3/2002	Becker et al.	102/323

* cited by examiner

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(57) **ABSTRACT**

A 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 CTBN in an amount of from about 10 weight percent or less. The composition is safe to handle, ignites readily, produces low slag, burns at a low and controlled rate and produces a very high flame temperature.

12 Claims, No Drawings