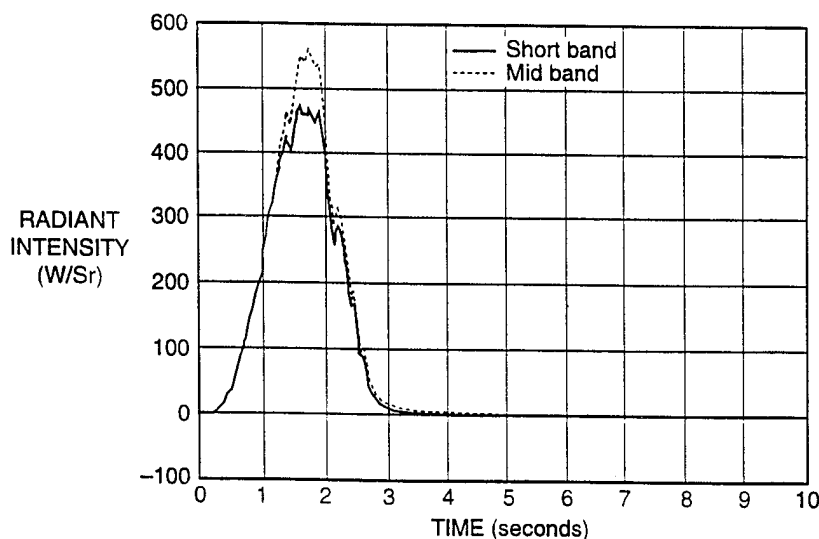




## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

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<p>(21) International Application Number: PCT/US97/19984 (22) International Filing Date: 14 November 1997 (14.11.97) (30) Priority Data: 60/030,922 15 November 1996 (15.11.96) US (71) Applicant (for all designated States except US): THIOKOL CORPORATION [US/US]; 2575 Washington Boulevard, Ogden, UT 84401 (US). (72) Inventors; and (75) Inventors/Applicants (for US only): NIELSON, Daniel, B. [US/US]; 86 North 200 West, Brigham City, UT 84302 (US). LESTER, Dean, M. [US/US]; 120 North 300 East, Brigham City, UT 84302 (US). (74) Agents: COLTON, Kendrew, H. et al.; Cushman Darby &amp; Cushman, Intellectual Property Group of Pillsbury Madison &amp; Sutro, 1100 New York Avenue, N.W., Washington, DC 20005 (US).</p>		<p>(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, ARIPO patent (GH, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG).</p> <p><b>Published</b> <i>With international search report.</i></p> <p>(88) Date of publication of the international search report: 13 August 1998 (13.08.98)</p>

(54) Title: BLACK BODY DECOY FLARE COMPOSITIONS AND USE



## (57) Abstract

This invention relates to the production of black body-generating decoy flares. Compositions are provided which, when combusted, provide black body radiation. The compositions generally include from about 40 % to about 70 % metal such as magnesium or aluminum, from about 10 % to about 40 % polytetrafluorethylene, and from about 8 % to about 30 % binder. Important to the operation of the present invention is the production of carbon upon combustion of the composition. Accordingly, polyaromatic thermoplastics, such as polystyrene and dimethyl phthalate, serve as the binder. Also disclosed are methods of producing black body decoy flares.

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INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US97/19984

**A. CLASSIFICATION OF SUBJECT MATTER**

IPC(6) : F42B 4/26  
US CL : 102/336

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 102/334, 336; F42B 4/26

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 3,680,484 A (STETTER) 01 August 1972.	1-19
A	US 3,474,732 A (THOMISON) 28 October 1969, See Example. 1.	1, 5, 7, 9, 11,13, 15
A	US 3,744,418 A (TYROLER) 10 July 1973.	1-19
A	US 4,130,061 A (BOGGS ET AL) 19 December 1978.	1-19
A	US 4,640,193 A (KOROSCIL) 03 February 1987, See claims 3 and 4.	2, 3, 10, 14
A	US 4,682,544 A (KOROSCIL ET AL) 28 July 1987, See claims 3-5	2, 3, 10, 14
A	US, 4,860,657 A (STEINICKE ET AL) 29 August 1989.	1-19

Further documents are listed in the continuation of Box C.  See patent family annex.

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Date of the actual completion of the international search 06 APRIL 1996	Date of mailing of the international search report <b>26 MAY 1998</b>
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## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US97/19984

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5,499,582 A (SCHIESSEL ET AL) 19 March 1996.	1-19
A	US 5,585,594 A (PELHAM ET AL) 17 December 1996, See claim 20.	1, 9, 13, 17
A	US 4,860,657 A (STEINICKE ET AL) 29 August 1989.	1-19