

username

LOGIN

[New Account »](#)
[Forgot Password?](#)

Titanium Dioxide

GO

[Advanced Search »](#)
[Propulsion, Engines and Missiles](#) » [Combustion and Ignition](#)

Investigation of Titanium Combustion Characteristics and Suppression Techniques

 Authors: [Duane G. Fox](#); [AIR FORCE AERO PROPULSION LAB WRIGHT-PATTERSON AFB OH](#)

Abstract: This test program studies the burning characteristics of **titanium** under air flow conditions. The flat plate **titanium** samples are ignited by molten **titanium** from an electrically heated ignitor. Air flow conditions that support sustained combustion of a single sample are determined. The burn rate is measured on all tests with steady state burning. Argon gas is shown to be a feasible extinguishing agent for a **titanium** fire. Quick injection of a sufficient amount of argon gas to maintain a 60% concentration by volume of argon results in quick suppression by oxygen depletion. Carbon **dioxide** (CO₂), a common fire extinguishing agent, is shown to sustain **titanium** burning at an accelerated rate. The ultraviolet (UV) radiation emitted by burning **titanium** is shown to be of a sufficient intensity for existing UV fire detectors to detect at reasonable distances.

 Adobe PDF - \$21.95

 Printed Format - \$24.95

 ADD TO CART

Please check the box for the format you wish to order.

[Shipping Terms](#)
[About Electronic Delivery](#)
 [Email This Abstract](#)

Limitations:  APPROVED FOR PUBLIC RELEASE

Description: Final rept. 1 Jan 1974-1 Mar 1975

Pages: 68

Report Date: FEB 1976

Report Number: B705010

 **Keywords relating to this report:**

- ✦ [AIR FLOW](#)
- ✦ [ARGON](#)
- ✦ [BURNING RATE](#)
- ✦ [COMBUSTION](#)
- ✦ [COMBUSTION CHAMBERS](#)
- ✦ [COMPRESSOR BLADES](#)
- ✦ [EMISSION SPECTRA](#)
- ✦ [FIRE DETECTORS](#)
- ✦ [FIRE EXTINGUISHING AGENTS](#)
- ✦ [FLAMES](#)
- ✦ [FLAT PLATE MODELS](#)
- ✦ [GAS TURBINES](#)
- ✦ [INSTRUMENTATION](#)
- ✦ [SUPPRESSION](#)
- ✦ [TEST FACILITIES](#)
- ✦ [TITANIUM](#)
- ✦ [ULTRAVIOLET DETECTORS](#)
- ✦ [ULTRAVIOLET RADIATION](#)

[« Back to search](#)