

Space Transportation & Systems Group
Rockwell International Corporation
12214 Lakewood Boulevard
Downey, California 90241



Rockwell
International

December 11, 1983

Mr. Donald R. Lewis
Rotary Components, Inc.
816 East Edna Place
Covina, California 91723

Dear Mr. Lewis:

Regarding your query as to Dicronite applications on the Space Shuttle Orbiter, the Materials Analysis and Control (MATCO) system identifies thirty-eight (38) Orbiter drawings with Dicronited parts. Additionally, fourteen (14) drawings for Orbiter related hardware (also tracked by the MATCO system) show Dicronite applications.

Our specification covering Dicronite, MB0140-009, was released in December, 1973. The original (no change) version is still current. It was based on an earlier Autonetics Division specification, and our qualification of Dicronite is based on an Autonetics test report dated in January of 1969.

Dicronite is listed in the MATCO directory as being acceptable (A-rated) for flammability, toxicity, thermal vacuum stability, and static age life. These are the principal criteria for which any nonmetallic material is rated. Thus, it may be used in any area of the vehicle that a design engineer may wish, that is where he feels it will be of engineering value.

Dicronite has also been tested by the NASA/White Sands Test Facility in 1975 and 1976 under the following conditions:

- WSTF 75-5135
- a) liquid oxygen, ambient pressure, mechanical impact at 367-5 ft. lbs. No reaction in 20 specimens tested.
 - b) gaseous oxygen, 1500 psia, pneumatic impact, ambient temperature. No reaction in 20 specimens tested.

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WSTF 76-8348 a) gaseous oxygen, 600 psia, ambient temperature,
mechanical impact at 368 ft. lbs. No reaction
in 20 specimens tested.

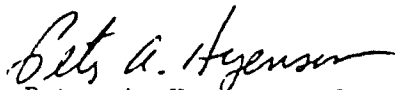
To the best of my knowledge, we have had no failures ascribable to
Dicronite.

I trust that this communication answers your questions; if any addi-
tional information is needed, contact the undersigned or L. J. Guertin.

Prepared by: J. S. Rockette

Sincerely,

ROCKWELL INTERNATIONAL



Peter A. Hogenson, Supervisor
Nonmetals and Advanced Materials
Laboratories and Test

PAH:ls

cc: R. E. Barton *REB*
W. D. Ende *WE*
J. H. Diaz *JHD*

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