

(NASA-CR-112083) THE EFFECT OF SOLID PHASE  
REACTIONS ON THE BALLISTIC PROPERTIES OF  
PROPELLANTS W.G. Schmidt (Aerojet Solid  
Propulsion Co.) Aug. 1972 75 p GP-0 CSCI

Unclas  
21I F3/27 37218

NASA CR 112083

THE EFFECT OF SOLID PHASE REACTIONS ON  
THE BALLISTIC PROPERTIES OF PROPELLANTS

By Willfred G. Schmidt

August 1972

Distribution of this report is provided in the interest of information  
exchange. Responsibility for the contents resides in the author  
or organization that prepared it.

Prepared under Contract NAS1-9463 by  
Aerojet Solid Propulsion Company  
Sacramento, California



For

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

FOR U. S. GOVERNMENT AGENCIES AND THEIR  
CONTRACTORS ONLY



# aerojet solid propulsion company

P. O. BOX 13400 SACRAMENTO, CALIFORNIA 95813 • TELEPHONE (916) 355-4000

3050L3052

IGM:fem

1 November 1972

Subject: NASA Final Report CR 112083, "The Effect of Solid Phase Reactions on the Ballistic Properties of Propellants", by Willfred G. Schmidt, dated August 1972

To: Distribution List for the Subject Report

1. The subject report, which was distributed in late August 1972, contained the restriction "FOR U. S. GOVERNMENT AGENCIES AND THEIR CONTRACTORS ONLY", on the front cover.
2. The restriction was included by mistake and does not apply to the report.

AEROJET SOLID PROPULSION COMPANY

I. G. McLean  
Contract Administrator  
Programs

cc: NASA/Langley - Mr. C. Ray Davis  
Contracting Officer



# aerojet solid propulsion company

P. O. BOX 13400 SACRAMENTO, CALIFORNIA 95813 • TELEPHONE (916) 355-4000

3050L3052  
IGM:fem

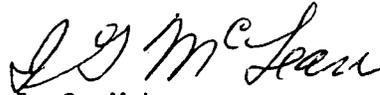
1 November 1972

Subject: NASA Final Report CR 112083, "The Effect of Solid Phase Reactions on the Ballistic Properties of Propellants", by Willfred G. Schmidt, dated August 1972

To: Distribution List for the Subject Report

1. The subject report, which was distributed in late August 1972, contained the restriction "FOR U. S. GOVERNMENT AGENCIES AND THEIR CONTRACTORS ONLY", on the front cover.
2. The restriction was included by mistake and does not apply to the report.

AEROJET SOLID PROPULSION COMPANY

  
I. G. McLean  
Contract Administrator  
Programs

cc: NASA/Langley - Mr. C. Ray Davis  
Contracting Officer



# aerojet solid propulsion company

P. O. BOX 13400 SACRAMENTO, CALIFORNIA 95813 • TELEPHONE (916) 355-4000

3050L3052

IGM:fem

1 November 1972

Subject: NASA Final Report CR 112083, "The Effect of Solid Phase Reactions on the Ballistic Properties of Propellants", by Willfred G. Schmidt, dated August 1972

To: Distribution List for the Subject Report

1. The subject report, which was distributed in late August 1972, contained the restriction "FOR U. S. GOVERNMENT AGENCIES AND THEIR CONTRACTORS ONLY", on the front cover.
2. The restriction was included by mistake and does not apply to the report.

AEROJET SOLID PROPULSION COMPANY

  
I. G. McLean  
Contract Administrator  
Programs

cc: NASA/Langley - Mr. C. Ray Davis  
Contracting Officer



# aerojet solid propulsion company

P. O. BOX 13400 SACRAMENTO, CALIFORNIA 95813 • TELEPHONE (916) 365-4000

3050L3052

IGM:fem

1 November 1972

Subject: NASA Final Report CR 112083, "The Effect of Solid Phase Reactions on the Ballistic Properties of Propellants", by Willfred G. Schmidt, dated August 1972

To: Distribution List for the Subject Report

1. The subject report, which was distributed in late August 1972, contained the restriction "FOR U. S. GOVERNMENT AGENCIES AND THEIR CONTRACTORS ONLY", on the front cover.
2. The restriction was included by mistake and does not apply to the report.

AEROJET SOLID PROPULSION COMPANY

  
I. G. McLean  
Contract Administrator  
Programs

cc: NASA/Langley - Mr. C. Ray Davis  
Contracting Officer



**aerojet solid propulsion company**

P. O. BOX 13400 SACRAMENTO, CALIFORNIA 95813 • TELEPHONE (916) 355-4000

3050L3052  
IGM:fem

1 November 1972

Subject: NASA Final Report CR 112083, "The Effect of Solid Phase Reactions on the Ballistic Properties of Propellants", by Willfred G. Schmidt, dated August 1972

To: Distribution List for the Subject Report

1. The subject report, which was distributed in late August 1972, contained the restriction "FOR U. S. GOVERNMENT AGENCIES AND THEIR CONTRACTORS ONLY", on the front cover.
2. The restriction was included by mistake and does not apply to the report.

AEROJET SOLID PROPULSION COMPANY

I. G. McLean  
Contract Administrator  
Programs

cc: NASA/Langley - Mr. C. Ray Davis  
Contracting Officer



**aerojet solid propulsion company**

P. O. BOX 13400 SACRAMENTO, CALIFORNIA 95813 • TELEPHONE (916) 355-4000

3050L3052  
IGM:fem

1 November 1972

Subject: NASA Final Report CR 112083, "The Effect of Solid Phase Reactions on the Ballistic Properties of Propellants", by Willfred G. Schmidt, dated August 1972

To: Distribution List for the Subject Report

1. The subject report, which was distributed in late August 1972, contained the restriction "FOR U. S. GOVERNMENT AGENCIES AND THEIR CONTRACTORS ONLY", on the front cover.
2. The restriction was included by mistake and does not apply to the report.

AEROJET SOLID PROPULSION COMPANY

I. G. McLean  
Contract Administrator  
Programs

cc: NASA/Langley - Mr. C. Ray Davis  
Contracting Officer



# aerojet solid propulsion company

P. O. BOX 13400 SACRAMENTO, CALIFORNIA 95813 • TELEPHONE (916) 355-4000

3050L3052  
IGM:fem

1 November 1972

Subject: NASA Final Report CR 112083, "The Effect of Solid Phase Reactions on the Ballistic Properties of Propellants", by Willfred G. Schmidt, dated August 1972

To: Distribution List for the Subject Report

1. The subject report, which was distributed in late August 1972, contained the restriction "FOR U. S. GOVERNMENT AGENCIES AND THEIR CONTRACTORS ONLY", on the front cover.
2. The restriction was included by mistake and does not apply to the report.

AEROJET SOLID PROPULSION COMPANY

I. G. McLean  
Contract Administrator  
Programs

cc: NASA/Langley - Mr. C. Ray Davis  
Contracting Officer



**aerojet solid propulsion company**

P. O. BOX 13400 SACRAMENTO, CALIFORNIA 95813 • TELEPHONE (916) 355-4000

3050L3052  
IGM:fem

1 November 1972

Subject: NASA Final Report CR 112083, "The Effect of Solid Phase Reactions on the Ballistic Properties of Propellants", by Willfred G. Schmidt, dated August 1972

To: Distribution List for the Subject Report

1. The subject report, which was distributed in late August 1972, contained the restriction "FOR U. S. GOVERNMENT AGENCIES AND THEIR CONTRACTORS ONLY", on the front cover.
2. The restriction was included by mistake and does not apply to the report.

AEROJET SOLID PROPULSION COMPANY

  
I. G. McLean  
Contract Administrator  
Programs

cc: NASA/Langley - Mr. C. Ray Davis  
Contracting Officer



# aerojet solid propulsion company

P. O. BOX 13400 SACRAMENTO, CALIFORNIA 95813 • TELEPHONE (916) 355-4000

3050L3052

IGM:fem

1 November 1972

Subject: NASA Final Report CR 112083, "The Effect of Solid Phase Reactions on the Ballistic Properties of Propellants", by Willfred G. Schmidt, dated August 1972

To: Distribution List for the Subject Report

1. The subject report, which was distributed in late August 1972, contained the restriction "FOR U. S. GOVERNMENT AGENCIES AND THEIR CONTRACTORS ONLY", on the front cover.
2. The restriction was included by mistake and does not apply to the report.

AEROJET SOLID PROPULSION COMPANY

  
I. G. McLean  
Contract Administrator  
Programs

cc: NASA/Langley - Mr. C. Ray Davis  
Contracting Officer