

SCHEDULE 13G

Amendment No. 0
Minerals Technologies Incorporated
Common Stock
Cusip #603158106

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Item 1: Reporting Person - FMR Corp.
Item 4: Delaware
Item 5: 0
Item 6: 0
Item 7: 1,460,500
Item 8: 0
Item 9: 1,460,500
Item 11: 7.272%
Item 12: HC

Cusip #603158106
Item 1: Reporting Person - Edward C. Johnson 3d
Item 4: United States of America
Item 5: 0
Item 6: 0
Item 7: 1,460,500
Item 8: 0
Item 9: 1,460,500
Item 11: 7.272%
Item 12: IN

SCHEDULE 13G - TO BE INCLUDED IN
STATEMENTS
FILED PURSUANT TO RULE 13d-1(b) or 13d-2(b)

Item 1(a). Name of Issuer:

Minerals Technologies Incorporated

Item 1(b). Name of Issuer's Principal Executive Offices:

405 Lexington Avenue
19th Floor
New York, NY 10174

Item 2(a). Name of Person Filing:

FMR Corp.

Item 2(b). Address or Principal Business Office or, if None,
Residence:

82 Devonshire Street, Boston,
Massachusetts 02109

Item 2(c). Citizenship:

Not applicable

Item 2(d). Title of Class of Securities:

Common Stock

Item 2(e). CUSIP Number:

603158106

Item 3. This statement is filed pursuant to Rule 13d-1(b) or 13d-2(b) and the person filing, FMR Corp., is a parent holding company in accordance with Section 240.13d-1(b)(ii)(G). (Note: See Item 7).

Item 4. Ownership

(a) Amount Beneficially Owned: 1,460,500

(b) Percent of Class: 7.272%

(c) Number of shares as to which such person has:

(i) sole power to vote or to direct the vote: 0

(ii) shared power to vote or to direct the vote: 0

(iii) sole power to dispose or to direct the disposition of: 1,460,500

(iv) shared power to dispose or to direct the disposition of: 0

Item 5. Ownership of Five Percent or Less of a Class.

Not applicable.

Item 6. Ownership of More than Five Percent on Behalf of Another Person.

Various persons have the right to receive or the power to direct the receipt of dividends from, or the proceeds from the sale of, the Common Stock of Minerals Technologies Incorporated. The interest of one person, Fidelity Growth Company Fund, an investment company registered under the Investment Company Act of 1940, in the Common Stock of Minerals Technologies Incorporated, amounted to 1,450,000 shares or 7.220% of the total outstanding Common Stock at December 31, 2005.

Item 7. Identification and Classification of the Subsidiary Which Acquired the Security Being Reported on By the Parent Holding Company.

See attached Exhibit A.

Item 8. Identification and Classification of Members of the Group.

Not applicable. See attached Exhibit A.

Item 9. Notice of Dissolution of Group.

Not applicable.

Item 10. Certification.

By signing below I certify that, to the best of my knowledge and belief, the securities referred to above were acquired in the ordinary course of business and were not acquired for the purpose of and do not have the effect of changing or influencing the control of the issuer of such securities and were not acquired in connection with or as a participant in any transaction having such purpose or effect.

Signature

After reasonable inquiry and to the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct.

February 14, 2006
Date

/s/Eric D. Roiter
Signature

Eric D, Roiter
Duly authorized under Power of Attorney
dated December 30, 1997 by and on behalf of FMR Corp. and
its direct and indirect subsidiaries

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Pursuant to the instructions in Item 7 of Schedule 13G,
Fidelity Management & Research Company ("Fidelity"), 82
Devonshire Street, Boston, Massachusetts 02109, a wholly-
owned subsidiary of FMR Corp. and an investment adviser
registered under Section 203 of the Investment Advisers Act
of 1940, is the beneficial owner of 1,460,500 shares or 7.272%
of the Common Stock outstanding of Minerals Technologies
Incorporated ("the Company") as a result of acting as
investment adviser to various investment companies registered
under Section 8 of the Investment Company Act of 1940.

The ownership of one investment company, Fidelity
Growth Company Fund, amounted to 1,450,000 shares or
7.220% of the Common Stock outstanding. Fidelity Growth
Company Fund has its principal business office at 82
Devonshire Street, Boston, Massachusetts 02109.

Edward C. Johnson 3d and FMR Corp., through its
control of Fidelity, and the funds each has sole power to
dispose of the 1,460,500 shares owned by the Funds.

Members of the family of Edward C. Johnson 3d,
Chairman of FMR Corp., are the predominant owners, directly
or through trusts, of Series B shares of common stock of FMR
Corp., representing 49% of the voting power of FMR Corp.
The Johnson family group and all other Series B shareholders
have entered into a shareholders' voting agreement under
which all Series B shares will be voted in accordance with the
majority vote of Series B shares. Accordingly, through their
ownership of voting common stock and the execution of the
shareholders' voting agreement, members of the Johnson
family may be deemed, under the Investment Company Act of
1940, to form a controlling group with respect to FMR Corp.

Neither FMR Corp. nor Edward C. Johnson 3d,
Chairman of FMR Corp., has the sole power to vote or direct
the voting of the shares owned directly by the Fidelity Funds,
which power resides with the Funds' Boards of Trustees.
Fidelity carries out the voting of the shares under written
guidelines established by the Funds' Boards of Trustees.

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FILED PURSUANT TO RULE 13d-1(b) or 13d-2(b)
RULE 13d-1(f)(1) AGREEMENT

The undersigned persons, on February 14, 2006, agree
and consent to the joint filing on their behalf of this Schedule
13G in connection with their beneficial ownership of the
Common Stock of Minerals Technologies Incorporated at
December 31, 2005.

FMR Corp.

By /s/ Eric D. Roiter
Eric D. Roiter
Duly authorized under Power of Attorney dated
December 30, 1997, by and on behalf of FMR Corp. and its
direct and indirect subsidiaries

Edward C. Johnson 3d

By /s/ Eric D. Roiter
Eric D. Roiter
Duly authorized under Power of Attorney dated
December 30, 1997, by and on behalf of Edward C. Johnson
3d

Fidelity Management & Research Company

By /s/ Eric D. Roiter
Eric D. Roiter
Senior V.P. and General Counsel

Fidelity Growth Company Fund

By /s/ Eric D. Roiter
Eric D. Roiter
Secretary