

Registration No. 333-_____

SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM S-8
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

APPLIED MATERIALS, INC.
(Exact name of issuer as specified in its charter)

Delaware
(State or other jurisdiction of incorporation or organization)

94-1655526
(I.R.S. employer identification number)

3050 Bowers Avenue, Santa Clara, California 95054
(Address of principal executive offices) (Zip Code)

APPLIED MATERIALS, INC.
2000 GLOBAL EQUITY INCENTIVE PLAN

Joseph J. Sweeney
Applied Materials, Inc.
3050 Bowers Avenue, Santa Clara, California 95054
(Name and address of agent for service)

Telephone number, including area code, of agent for service: (408) 727-5555

Copy to:

John E. Aguirre, Esq.
Wilson Sonsini Goodrich & Rosati, PC
650 Page Mill Road
Palo Alto, California 94304

CALCULATION OF REGISTRATION FEE

Title of Securities to be Registered	Amount to be Registered*	Proposed Maximum Offering Price Per Share**	Proposed Maximum Aggregate Offering Price**	Amount of Registration Fee**
Common Stock*** and Options to Purchase Common Stock	20,000,000 shares	\$40.35	\$807,000,000.00	\$192,873.00

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* This Registration Statement shall also cover any additional shares of the Registrant's Common Stock that become issuable under the Applied Materials, Inc. 2000 Global Equity Incentive Plan described herein by reason of any stock dividend, stock split, recapitalization or other similar transaction effected without the Registrant's receipt of consideration that results in an increase in the number of the Registrant's outstanding shares of Common Stock.

** Estimated solely for the purpose of calculating the registration fee pursuant to Rule 457(c) under the Securities Act of 1933, on the basis of \$40.35 per share, the average of the high and low prices per share of the Common Stock on December 20, 2001, as reported by Nasdaq.

*** Includes associated rights (the "Rights") to purchase preferred or common stock. Until the occurrence of certain prescribed events, none of which has occurred, the Rights are not exercisable.

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INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

ITEM 3. INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE

The following documents are incorporated by reference in this registration statement: (i) the latest annual report of Applied Materials, Inc. (the "Registrant") filed pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"); (ii) all other reports filed pursuant to Section 13(a) or 15(d) of the Exchange Act since the end of the fiscal year covered by the annual report referred to in clause (i) above; and (iii) the description of the Registrant's common stock set forth in the Registrant's Registration Statement on Form 8-A relating thereto, including any amendment or report filed for the purpose of updating such description. All documents filed by the Registrant after the date of this registration statement pursuant to Sections 13(a), 13(c), 14, and 15(d) of the Exchange Act, prior to the filing of a post-effective amendment (that indicates all securities offered have been sold or deregisters all securities then remaining unsold), shall be deemed to be incorporated by reference in this registration statement and to be a part hereof from the date of filing of such documents.

ITEM 4. DESCRIPTION OF SECURITIES

Inapplicable.

ITEM 5. INTERESTS OF NAMED EXPERTS AND COUNSEL

Inapplicable.

ITEM 6. INDEMNIFICATION OF DIRECTORS AND OFFICERS

Section 145 of the Delaware General Corporation Law (the "Delaware Law") authorizes a court to award, or a corporation's board of directors to grant, indemnity to directors and officers in terms sufficiently broad to permit such indemnification under certain circumstances for liabilities (including reimbursement for expenses incurred) arising under the Securities Act of 1933, as amended. The Registrant's Certificate of Incorporation provides for indemnification of the Registrant's directors, officers, employees and other agents to the maximum extent permitted by Delaware Law. In addition, the Registrant has entered into indemnification agreements with its directors and certain of its officers.

ITEM 7. EXEMPTION FROM REGISTRATION CLAIMED

Inapplicable.

ITEM 8. EXHIBITS

4.1 Applied Materials, Inc. 2000 Global Equity Incentive Plan, as amended (and incorporated by reference to Exhibit 4.1 to the Registrant's Registration Statement on Form S-8 filed on December 22, 2000, Commission File No. 333-52518).

5.1 Opinion of Wilson Sonsini Goodrich & Rosati, Professional Corporation.

- 23.1 Consent of Independent Accountants.
- 23.2 Consent of Wilson Sonsini Goodrich & Rosati, Professional Corporation is included in Exhibit 5.1 to this Registration Statement.
- 24.1 Power of Attorney of Directors.
- 99.1 Language re: Israel Exemption.

ITEM 9. UNDERTAKINGS

(a) The undersigned Registrant hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

(i) To include any prospectus required by section 10(a)(3) of the Securities Act of 1933;

(ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement;

(iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;

Provided, however, that paragraphs (a)(1)(i) and (a)(1)(ii) do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in periodic reports filed by the Registrant pursuant to section 13 or section 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in the registration statement.

(2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(b) The undersigned Registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, each filing of the Registrant's annual report pursuant to section 13(a) or section 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered

therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(c) Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the Registrant pursuant to the foregoing provisions, or otherwise, the Registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Registrant of expenses incurred or paid by a director, officer or controlling person of the Registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the Registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act of 1933 and will be governed by the final adjudication of such issue.

Signatures

THE REGISTRANT

Pursuant to the requirements of the Securities Act of 1933, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Santa Clara, State of California on the 21st day of December, 2001.

APPLIED MATERIALS, INC.
(Registrant)

/s/ James C. Morgan

James C. Morgan
Chairman of the Board and
Chief Executive Officer

Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed by the following persons in the capacities and on the dates indicated.

Signature

Title

Date

Principal Executive Officer:

/s/ James C. Morgan

Chairman of the Board and
Chief Executive Officer

December 21, 2001

James C. Morgan

Principal Financial Officer:

/s/ Joseph R. Bronson

Executive Vice President,
Office of the President and
Chief Financial Officer

December 21, 2001

Joseph R. Bronson

Principal Accounting Officer:

/s/ Nancy H. Handel

Group Vice President,
Deputy Chief Financial
Officer and Corporate
Controller

December 21, 2001

Nancy H. Handel

Directors:

* ----- James C. Morgan	Chairman of the Board and Director	December 21, 2001
* ----- Michael H. Armacost	Director	December 21, 2001
* ----- Deborah A. Coleman	Director	December 21, 2001
* ----- Herbert M. Dwight, Jr.	Director	December 21, 2001
* ----- Philip V. Gerdine	Director	December 21, 2001
* ----- Minoru Morio	Director	December 21, 2001
* ----- Paul R. Low	Director	December 21, 2001
* ----- Dan Maydan	Director	December 21, 2001
* ----- Steven L. Miller	Director	December ____, 2001
* ----- Stan Shih	Director	December 21, 2001

A majority of the members of the Board of Directors.

* By /s/ James C. Morgan

James C. Morgan
Attorney-in-Fact

EXHIBIT INDEX

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- 23.1 Consent of Independent Accountants.
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- 24.1 Power of Attorney of Directors.
- 99.1 Language re: Israel Exemption.

AMENDMENT NO. 1 TO THE
APPLIED MATERIALS, INC.
2000 GLOBAL EQUITY INCENTIVE PLAN

APPLIED MATERIALS, INC. (the "Company"), having adopted the Applied Materials, Inc. 2000 Global Equity Incentive Plan (the "Plan"), hereby amends the Plan as follows:

1. Section 4.1 is amended by deleting the numeral 53,500,000 from the first sentence thereof and substituting the numeral 73,500,000 therefor.
2. This Amendment No. 1 is effective as of October 11, 2001.

IN WITNESS WHEREOF, the Company, by its duly authorized officer, has executed this Amendment No. 1 to the Plan on the date indicated below.

APPLIED MATERIALS, INC.

Dated: _____, 2001

By _____
Title:

December 21, 2001

Applied Materials, Inc.
3050 Bowers Avenue
Santa Clara, California 95054

Re: Registration Statement on Form S-8/Applied Materials, Inc. 2000
Global Equity Incentive Plan, as amended

Ladies and Gentlemen:

At your request, we are rendering this opinion in connection with the proposed issuance of an aggregate of 20,000,000 additional shares of common stock (the "Common Stock") of Applied Materials, Inc., a Delaware corporation (the "Company"), and related options under the Applied Materials, Inc. 2000 Global Equity Incentive Plan, as amended (the "Plan").

We have examined instruments, documents, and records which we deemed relevant and necessary for the basis of our opinion hereinafter expressed. In such examination, we have assumed the following: (a) the authenticity of original documents and the genuineness of all signatures; (b) the conformity to the originals of all documents submitted to us as copies; and (c) the truth, accuracy and completeness of the information, representations and warranties contained in the records, documents, instruments and certificates we have reviewed.

Based on such examination, we are of the opinion that the 20,000,000 additional shares of Common Stock to be issued by the Company pursuant to the Plan are validly authorized shares of Common Stock and, when issued in accordance with the provisions of the Plan, will be legally issued, fully paid and nonassessable.

We hereby consent to the filing of this opinion as an exhibit to this Registration Statement on Form S-8 and to the use of our name wherever it appears in said Registration Statement. In giving such consent, we do not consider that we are "experts" within the meaning of such term as used in the Securities Act of 1933, as amended, or the rules and regulations of the Securities and Exchange Commission issued thereunder, with respect to any part of the Registration Statement, including this opinion as an exhibit or otherwise.

Very truly yours,

/s/ Wilson Sonsini Goodrich & Rosati, PC

WILSON SONSINI GOODRICH & ROSATI,
Professional Corporation

CONSENT OF INDEPENDENT ACCOUNTANTS

We hereby consent to the incorporation by reference in this Registration Statement on Form S-8 of our report dated November 15, 2000 relating to the financial statements and financial statement schedule, which appears in Applied Materials, Inc.'s Annual Report on Form 10-K for the year ended October 29, 2000.

/s/ PricewaterhouseCoopers LLP

San Jose, California
December 21, 2001

POWER OF ATTORNEY OF DIRECTORS

Each of the undersigned directors of Applied Materials, Inc., a Delaware corporation (the "Company"), hereby constitutes and appoints James C. Morgan, Joseph R. Bronson and Joseph J. Sweeney and each of them with power to act alone, his or her true and lawful attorney-in-fact, with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to execute a Registration Statement or Registration Statements on Form S-8 or other appropriate form, under the Securities Act of 1933, as amended, relating to up to 20,000,000 additional shares of Common Stock of the Company issuable under the Applied Materials, Inc. 2000 Global Equity Incentive Plan, as amended, and any and all amendments (including post-effective amendments) to such Registration Statement, and to file such Registration Statement and any and all amendments thereto, with exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorney-in-fact full power and authority to do and perform each and every act and thing necessary or desirable to be done in and about the premises, as fully to all intents and purposes, as he or she might or could do in person, thereby ratifying and confirming all that said attorney-in-fact or his substitute or substitutes may lawfully do or cause to be done by virtue hereof.

IN WITNESS WHEREOF, we have hereunto set our hands this 27th day of November, 2001.

/s/ Michael H. Armacost

/s/ Paul R. Low

Michael H. Armacost

Paul R. Low

/s/ Deborah A. Coleman

/s/ Dan Maydan

Deborah A. Coleman

Dan Maydan

/s/ Herbert M. Dwight, Jr.

Herbert M. Dwight, Jr.

Steven L. Miller

/s/ Philip V. Gerdine

/s/ James C. Morgan

Philip V. Gerdine

James C. Morgan

/s/ Minoru Morio

/s/ Stan Shih

Minoru Morio

Stan Shih

LANGUAGE RE: ISRAEL EXEMPTION

Applied Materials, Inc. has obtained from the Securities Authority of the State of Israel an exemption from the obligation to publish this prospectus in the manner required pursuant to the prevailing laws of the State of Israel. Nothing in such exemption of the Securities Authority of the State of Israel shall be construed as authenticating the matters contained in this prospectus or as an approval of their reliability or adequacy or an expression of opinion as to the quality of the securities hereby offered.