

Registration No. _____

SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, DC 20549

FORM S-8

REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

AIR PRODUCTS AND CHEMICALS, INC.
(Exact Name of Registrant as Specified in Its Charter)

Delaware

(State or Other Jurisdiction of Incorporation or Organization)

23-1274455
(I.R.S. Employer Identification No.)

7201 Hamilton Boulevard, Allentown, Pennsylvania 18195-1501
(Address of Principal Executive Offices) (Zip Code)

Air Products and Chemicals, Inc. Long-Term Incentive Plan
(Full Title of the Plan)

W. Douglas Brown, Vice President, General Counsel and Secretary
Air Products and Chemicals, Inc., 7201 Hamilton Boulevard,
Allentown, PA 18195-1501
(Name and Address of Agent for Service)

610-481-4911
(Telephone Number, Including Area Code, of Agent for Service)

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(1)
Common Stock, par value \$1				
2001 Fair Market Value Options	4,393,502	\$38.02	\$167,040,946.04	\$15,367.77
	4,393,502		167,040,946.04	\$15,367.77

(1) The registration fee with respect to these shares has been computed in accordance with paragraph (h) of Rule 457 based upon the stated exercise price of the Options.

Air Products and Chemicals, Inc. (the "Company"), by the filing of this Registration Statement, hereby registers additional shares of common stock of the Company, for distribution pursuant to the Long-Term Incentive Plan (the "Plan"). These are securities of the same class as the securities registered on Forms S-8, Registration Statement Nos. 33-65117, 333-21145, 333-45239 333-71405, 333-95317, and 333-54224 for distribution pursuant to the Plan. Accordingly, the contents of Registration Statement Nos. 33-65117, 333-21145, 333-45239, 333-71405, 333-95317, and 333-54224 are incorporated herein by reference.

EXHIBITS

- 23. Consent of Arthur Andersen LLP.
- 24. Power of Attorney.

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 Allentown, Commonwealth of Pennsylvania, on this 25th day of January, 2002.

AIR PRODUCTS AND CHEMICALS, INC.
(Registrant)

By: /s/ W. Douglas Brown

W. Douglas Brown*
Vice President, General Counsel
and Secretary

* W. Douglas Brown, Vice President, General Counsel and Secretary, by signing his name hereto, signs this registration statement on behalf of the registrant and, for each of the persons indicated by asterisk on pages 3 and 4 hereof, pursuant to a power of attorney duly executed by such persons which is filed with the Securities and Exchange Commission herewith.

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 date indicated.

Signature -----	Title -----	Date ----
/s/ John P. Jones III John P. Jones III	Director, Chairman of the Board, President, and Chief Executive Officer (Principal Executive Officer)	January 25, 2002
/s/ Leo J. Daley Leo J. Daley	Vice President - Finance and Controller (Principal Financial and Accounting Officer)	January 25, 2002
* Mario L. Baeza	Director	January 25, 2002
* L. Paul Bremer III	Director	January 25, 2002
* Michael J. Donahue	Director	January 25, 2002
* Ursula F. Fairbairn	Director	January 25, 2002
* Edward E. Hagenlocker	Director	January 25, 2002
* James F. Hardyman	Director	January 25, 2002

Signature -----	Title -----	Date -----
* Terry R. Lautenbach	Director	January 25, 2002
* Charles H. Noski	Director	January 25, 2002
* Paula G. Rosput	Director	January 25, 2002
* Lawrason D. Thomas	Director	January 25, 2002

CONSENT OF INDEPENDENT PUBLIC ACCOUNTANTS

To: Air Products and Chemicals, Inc.

As independent public accountants, we hereby consent to the incorporation by reference in this Registration Statement of our reports dated 26 October 2001 included and incorporated by reference in Air Products and Chemicals, Inc.'s, Form 10-K for the year ended 30 September 2001 and to all references to our Firm included in this Registration Statement.

ARTHUR ANDERSEN LLP

Philadelphia, Pennsylvania
23 January 2002

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints JOHN P. JONES III or LEO J. DALEY or W. DOUG BROWN, acting severally, his/her true and lawful attorney-in-fact and agent, with full power of substitution and resubstitution, for him/her and in his/her name, place, and stead, in any and all capacities, to sign Form S-3 and S-8 Registration Statements and amendments thereto pertaining to interests in and/or Common Stock offered, issued, sold, or resold under

- the Air Products and Chemicals, Inc. Long-Term Incentive Plan (formerly the 1997 Long-Term Incentive Plan);
- the Air Products and Chemicals, Inc. Retirement Savings and Stock Ownership Plan;
- the Air Products and Chemicals, Inc. Supplementary Savings Plan;
- the Air Products and Chemicals, Inc. Annual Incentive Plan;
- the Air Products and Chemicals, Inc. Stock Incentive Program;
- the Air Products Employee Stock Option Award granted 2 October 1995, the Air Products Employee Stock Option Award granted 1 October 1997 and/or the Air Products Employee Stock Option Award granted 1 October 1999;
- the Air Products and Chemicals, Inc. Deferred Compensation Plan for Directors and/or the Air Products and Chemicals, Inc. Stock Option Plan for Directors;
- the Air Products PLC U.K. Savings-Related Share Option Scheme and/or the Air Products Group Limited U.K. Savings-Related Share Option Scheme;
- the Direct Investment Program for Shareholders of Air Products and Chemicals, Inc.;
- the Air Products and Chemicals, Inc. Flexible Employee Benefits Trust Agreement, dated December 29, 1993 as it may be amended from time to time;
- the Amended and Restated Trust Agreement for the Air Products and Chemicals, Inc. Supplementary Pension Plan and certain other defined benefit pension agreements including the directors pension plan, dated August 1, 1999, as it may be as amended from time to time;
- the Amended and Restated Trust Agreement for the Air Products and Chemicals, Inc. Supplementary Savings Plan and the Deferred Compensation Plan for Directors, dated August 1, 1999, as it may be amended from time to time;

- the Amended and Restated Trust Agreement for the Stearns Catalytic World Corporation Supplementary Retirement Plan, dated August 1, 1999, as it may be amended from time to time; and
- any other plan, program, or award (together with all of the foregoing, the "Plans") of Air Products and Chemicals, Inc. or its subsidiaries existing from time to time which involves Common Stock,

which Registration Statements may be required for (i) the registration of interests in and/or Common Stock for issuance under any of such Plans as may be necessary from time to time in accordance with the provisions of such Plans, (ii) amendments to said Plans heretofore or hereafter approved or established by the Board or the appropriate committee of the Board, by Air Products PLC, by Air Products Group Limited, or by the Plan Administrator, (iii) the sale or transfer from time to time by the Trustee or Trustees and/or the Company to the public and/or to Plan Participants, and/or to pay Plan obligations (as such terms are defined in the relevant Trust Agreement) payable in cash or Common Stock and/or to fund the Trust with cash as required by the Trust Agreements, or (iv) any fundamental change in the information contained in such Registration Statements, and to file the same, with all exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorney-in-fact and agent full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as he/she might or could do in person, hereby ratifying and confirming all that said attorney-in-fact and agent, or his substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

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

SIGNATURE -----	TITLE -----	DATE -----
/s/ John P. Jones III John P. Jones III	Director, Chairman of the Board, Chief Executive Officer and Employee Benefit Plans Committee Member (Principal Executive Officer)	November 15, 2001
/s/ Mario L. Baeza Mario L. Baeza	Director	November 15, 2001

/s/ L. Paul Bremer III L. Paul Bremer III	Director	November 15, 2001
/s/ Robert Cizik Robert Cizik	Director	November 15, 2001
/s/ Michael J. Donahue Michael J. Donahue	Director	November 15, 2001
/s/ Ursula F. Fairbairn Ursula F. Fairbairn	Director	November 15, 2001
/s/ Edward E. Hagenlocker Edward E. Hagenlocker	Director	November 15, 2001
/s/ James F. Hardymon James F. Hardymon	Director	November 15, 2001
/s/ Terry R. Lautenbach Terry R. Lautenbach	Director	November 15, 2001
/s/ Charles H. Noski Charles H. Noski	Director	November 15, 2001
/s/ Paula G. Rosput Paula G. Rosput	Director	November 15, 2001
/s/ Lawrason D. Thomas Lawrason D. Thomas	Director	November 15, 2001