

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. Retirement Savings and Stock Ownership Plan
(Full Title of the Plan)

James H. Agger, Senior 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	2,000,000	\$87.6875	\$175,375,000	\$53,143.94

In addition, pursuant to Rule 416(c) under the Securities Act of 1933, this registration statement also covers an indeterminate amount of interests to be offered or sold pursuant to the employee benefit plan described herein.

(1) The registration fee with respect to these shares has been computed in accordance with paragraphs (c) and (h) of Rule 457, based upon the average of the reported high and low sale prices of shares of Common Stock on September 18, 1997 (i.e., \$87.6875 per share).

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 offer and sale pursuant to the Retirement Savings and Stock Ownership Plan (the "Plan"), together with additional interests to be offered and sold pursuant to the Plan. These are securities of the same class as the securities registered on Form S-8, Registration Statement No. 33-57017, for offer and sale pursuant to the Plan. Accordingly, the contents of Registration Statement No. 33-057017 are incorporated herein by reference.

ITEM 8. 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 24th day of September, 1997.

AIR PRODUCTS AND CHEMICALS, INC.
(Registrant)

By: /s/ James H. Agger

James H. Agger*
Senior Vice President, General Counsel
and Secretary

* James H. Agger, Senior 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, 4, and 5 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 -----
* ----- Harold A. Wagner	Director, Chairman of the Board and Chief Executive Officer (Principal Executive Officer)	September 24, 1997
/s/ Arnold H. Kaplan ----- Arnold H. Kaplan	Senior Vice President - Finance (Principal Financial Officer)	September 24, 1997
/s/ Paul E. Huck ----- Paul E. Huck	Vice President and Corporate Controller (Principal Accounting Officer)	September 24, 1997
* ----- Dexter F. Baker	Director	September 24, 1997
* ----- Tom H. Barrett	Director	September 24, 1997
* ----- L. Paul Bremer III	Director	September 24, 1997
* ----- Robert Cizik	Director	September 24, 1997
* ----- Ruth M. Davis	Director	September 24, 1997
----- Edward E. Hagenlocker	Director	September 24, 1997
----- James F. Hardymon	Director	September 24, 1997

Signature

Title

Date

*

Director

September 24, 1997

Joseph J. Kaminski

*

Director

September 24, 1997

Terry R. Lautenbach

*

Director

September 24, 1997

Ruud F. M. Lubbers

*

Director

September 24, 1997

Takeo Shiina

*

Director

September 24, 1997

Lawrason D. Thomas

The Plan. Pursuant to the requirements of the Securities Act of 1933, the Air Products and Chemicals, Inc. Retirement Savings and Stock Ownership Plan 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 September 24, 1997.

AIR PRODUCTS AND CHEMICALS, INC.
RETIREMENT SAVINGS AND STOCK
OWNERSHIP PLAN
(The Plan)

By /s/ J. H. Agger

James H. Agger
Employee Benefit Plans Committee Chairman
and Member

By /s/ Leo J. Daley

Leo J. Daley
Employee Benefit Plans Committee Member

By /s/ Arnold H. Kaplan

Arnold H. Kaplan
Employee Benefit Plans Committee Member

By /s/ J. P. McAndrew

J. P. McAndrew
Employee Benefit Plans Committee Member

By *

Harold A. Wagner
Employee Benefit Plans Committee Member

EXHIBIT INDEX

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No opinion of counsel is being filed because the Common Stock to be distributed in connection with the Plan will consist exclusively of previously issued shares that are presently held by the Company in treasury or under the Air Products and Chemicals, Inc. Flexible Employee Benefits Trust (which was created to provide for the satisfaction of certain obligations of the Company and its affiliates under various employee plans, including the Plan) and will not constitute original issuance shares; further, no opinion is being furnished with respect to ERISA compliance because the Company has undertaken in Registration Statement No. 33-49981, filed with the Securities and Exchange Commission on Form S-8 on August 13, 1993, that it has submitted and will submit the Plan and any amendment thereto to the Internal Revenue Service (the "IRS") in a timely manner and has made and will make all changes required by the IRS in order to qualify the Plan, said Registration Statement No. 33-49981 having been incorporated by reference into Registration Statement No. 33-57017, which is incorporated by reference herein.

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 report dated March 19, 1997 on the financial statements of the Air Products and Chemicals, Inc. Retirement Savings and Stock Ownership Plan for the year ended 30 September 1996 and our reports dated 1 November 1996, included or incorporated by reference in Air Products and Chemicals, Inc.'s Form 10-K for the year ended 30 September 1996.

ARTHUR ANDERSEN LLP

Philadelphia, Pennsylvania
24 September 1997

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints HAROLD A. WAGNER or ARNOLD H. KAPLAN or JAMES H. AGGER, 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 (A) Form S-8 Registration Statements and amendments thereto pertaining to interests in and/or Common Stock issued under the Air Products and Chemicals, Inc. Long-Term Incentive Plan, the Air Products and Chemicals, Inc. 1997 Long-Term Incentive Plan (formerly the 1990 Long-Term Incentive Plan), the Air Products and Chemicals, Inc. Retirement Savings and Stock Ownership Plan, the Air Products PLC (formerly Air Products Limited) UK Savings-Related Share Option Scheme, and the 1996 Employee Stock Option Award, which may be required in connection with (i) the registration of interests in and/or Common Stock for issuance under 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 by the Board or the Management Development and Compensation Committee of the Board or by Air Products PLC or (iii) any fundamental change in the information contained in such Registration Statements, and (B) any amendments to Registration Statement No. 333-02461 for the registration of \$500,000,000 aggregate principal amount of Medium-Term Notes, Series F, of Air Products and Chemicals, Inc., and any and all amendments thereto, 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/ Harold A. Wagner ----- Harold A. Wagner	Director, Chairman of the Board, Chief Executive Officer and Employee Benefit Plans Committee Member (Principal Executive Officer)	November 21, 1996
/s/ Dexter F. Baker ----- Dexter F. Baker	Director	November 21, 1996

/s/ Tom H. Barrett ----- Tom H. Barrett	Director	November 21, 1996
/s/ L. Paul Bremer, III ----- L. Paul Bremer, III	Director	November 21, 1996
/s/ Robert Cizik ----- Robert Cizik	Director	November 21, 1996
/s/ Ruth M. Davis ----- Ruth M. Davis	Director	November 21, 1996
/s/ Joseph J. Kaminski ----- Joseph J. Kaminski	Director	November 21, 1996
/s/ Terry R. Lautenbach ----- Terry R. Lautenbach	Director	November 21, 1996
/s/ Ruud F. M. Lubbers ----- Ruud F. M. Lubbers	Director	November 21, 1996
/s/ Judith Rodin ----- Judith Rodin	Director	November 21, 1996
/s/ Takeo Shiina ----- Takeo Shiina	Director	November 21, 1996
/s/ Lawrason D. Thomas ----- Lawrason D. Thomas	Director	November 21, 1996