

SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

POST-EFFECTIVE AMENDMENT NO. 1
TO
FORM S-3
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 Number)

7201 HAMILTON BOULEVARD
ALLENTOWN, PENNSYLVANIA 18195-1501
(610) 481-4911
(Address, Including Zip Code, and Telephone Number, Including
Area Code, of Registrant's Principal Executive Offices)

W. DOUGLAS BROWN, ESQ.
Vice President, General Counsel and Secretary
AIR PRODUCTS AND CHEMICALS, INC.
7201 HAMILTON BOULEVARD
ALLENTOWN, PENNSYLVANIA 18195-1501
(610) 481-4911

COPY TO:
D. COLLIER KIRKHAM, ESQ.
CRAVATH, SWAINE & MOORE, LLP
Worldwide Plaza
825 Eighth Avenue
New York, New York 10019
(Name, Address, Including Zip Code, and Telephone Number,
Including Area Code, of Agent For Service)

APPROXIMATE DATE OF COMMENCEMENT OF PROPOSED SALE TO THE PUBLIC: NOT APPLICABLE

If the only securities being registered on this Form are being offered pursuant to dividend or interest reinvestment plans, please check the following box. []

If any of the securities being registered on this form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box. []

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. []

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. []

If delivery of the prospectus is expected to be made pursuant to Rule 434, please check the following box. []

This Post-Effective Amendment No. 1 to Form S-3 shall become effective in accordance with Section 8(c) of the Securities Act of 1933, as amended, on such date as the Commission, acting pursuant to Section 8(c), may determine.

DEREGISTRATION OF DEBT SECURITIES

This Post-Effective Amendment No. 1 (the "Amendment") to the Registration Statement on Form S-3 (SEC File No. 333-02461) is being filed by Air Products and Chemicals, Inc. (the "Company") in order to deregister all of the \$25,000,000 principal amount of Debt Securities which remain unsold under SEC File No. 333-02461.

EXHIBITS

Exhibit 24. Power of Attorney

SIGNATURES

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 this Post-Effective Amendment No. 1 to Form S-3 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Allentown and Commonwealth of Pennsylvania on the 5th day of April, 2004.

Air Products and Chemicals, Inc.
(Issuer)

By: /s/ Paul E. Huck

Paul E. Huck, Vice President and
Chief Financial Officer

Pursuant to the requirements of the Securities Act of 1933, this Post-Effective Amendment No. 1 to the Registration Statement (SEC File No. 333-02461) has been signed below by the following persons in the capacities indicated on April 5, 2004.

SIGNATURE	TITLE
/s/ John P. Jones III ----- (John P. Jones III)	Director and Chairman, President and Chief Executive Officer (Principal Executive Officer)
* ----- (Mario L. Baeza)	Director
* ----- (Michael J. Donahue)	Director
* ----- (Ursula F. Fairbairn)	Director

*

(W. Douglas Ford)

Director

*

(Edward E. Hagenlocker)

Director

*

(James F. Hardymon)

Director

*

(Terrence Murray)

Director

*

(Paula G. Rosput)

Director

*

(Lawrason D. Thomas)

* W. Douglas Brown, Vice President, General Counsel and Secretary, by signing his name hereto, does sign this document on behalf of the above noted individuals, pursuant to a power of attorney duly executed by such individuals which is filed with the Securities and Exchange Commission herewith.

/s/ W. Douglas Brown

W. Douglas Brown
Attorney-in-Fact

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints JOHN P. JONES III or PAUL E. HUCK or W. DOUGLAS 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 one or more Registration Statements, and any amendments thereto, which may be required in connection with (i) the registration of Common Stock, Preferred Stock, Depository Shares, Debt Securities, and Warrants, including the registration of Common Stock for issuance under any employee benefit or compensation plan, (ii) the registration of interests under any employee benefit or compensation plan maintained by the Company or (iii) 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 and Exchange 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
Director
and
Chairman
of the
Board 18
March 2004

(Principal
Executive
Officer)
John P.
Jones III
/s/ Mario
L. Baeza
Director
18 March
2004 -----

Mario L.
Baeza /s/
Michael J.
Donahue
Director
18 March
2004 -----

Michael J.
Donahue
/s/ Ursula
F.
Fairbairn
Director
18 March
2004 -----

Ursula F.
Fairbairn

Signature
Title Date
/s/ W.
Douglas
Ford
Director
18 March
2004 -----

W. Douglas
Ford /s/
Edward E.
Hagenlocker
Director
18 March
2004 -----

Edward E.
Hagenlocker
/s/ James
F.
Hardymon
Director
18 March
2004 -----

James F.
Hardymon
/s/
Terrence
Murray
Director
18 March
2004 -----

Terrence
Murray /s/
Paula G.
Rosput
Director
18 March
2004 -----

Paula G.
Rosput /s/
Lawrason
D. Thomas
Director
18 March
2004 -----

Lawrason
D. Thomas