UNITED STATES SECURITIES AND EXCHANGE COMMISSION Washington, D.C. 20549

FORM 8-A

FOR REGISTRATION OF CERTAIN CLASSES OF SECURITIES Pursuant to Section 12(b) or (g) of the Securities Exchange Act of 1934

> AIR PRODUCTS AND CHEMICALS, INC. (Exact name of registrant as specified in its charter)

1-4534 23-1274455 Delaware (State or other Jurisdiction of Incorporation) (Commission File Number) (IRS. Employer Identification No.) 7201 Hamilton Boulevard 18195-1501 Allentown, Pennsylvania (Address of Principal Executive Offices) (Zip Code)

(610) 481-4911

Registrant's telephone number, including area code

Not Applicable

(Former name or former address if changed since last report.)

If this form relates to the registration of a class of securities pursuant to Section 12(b) of the Exchange Act and is effective pursuant to General Instruction A. (c), please check the following box: x

If this form relates to the registration of a class of securities pursuant to Section 12(g) of the Exchange Act and is effective pursuant to General Instruction A. (d), please check the following box: o

Securities Act registration statement file number to which this form relates: Not Applicable.

Securities to be registered pursuant to Section 12(b) of the Act:

Title of Each Class to be so Registered	Name of Each Exchange on Which Each Class is to be Registered
Preferred Stock Purchase Rights	New York Stock Exchange

Securities to be registered pursuant to Section 12(g) of the Act:

None (Title of Each Class)

Item 1. Description of Securities To Be Registered.

On July 24, 2013, the Board of Directors (the "<u>Board</u>") of Air Products and Chemicals, Inc., a Delaware corporation (the "<u>Company</u>"), declared a dividend of one preferred share purchase right (a "<u>Right</u>") for each outstanding share of common stock, par value \$1.00 per share (the "<u>Common Stock</u>"). The dividend is payable on August 5, 2013 to the stockholders of record on August 5, 2013. The description and terms of the Rights are set forth in a Rights Agreement, dated as of July 24, 2013 (the "<u>Rights Agreement</u>"), between the Company and American Stock Transfer & Trust Company, LLC, as Rights Agent.

In general terms, the Rights Agreement works by imposing a significant penalty upon any person or group which acquires 10% (or 20% in the case of certain institutional investors who report their holdings on Schedule 13G) or more of the outstanding Common Stock without the approval of the Board.

For those interested in the specific terms of the Rights Agreement as made between the Company and American Stock Transfer & Trust Company, LLC, as the Rights Agent, dated as of July 24, 2013, we provide the following summary description. This description is only a summary, and is not complete, and should be read together with the entire Rights Agreement, which has been filed as an exhibit to this Registration Statement on Form 8-A. A copy of the Rights Agreement is available free of charge from the Company.

The Rights. The Rights will initially trade with, and will be inseparable from, the Common Stock. The Rights are evidenced only by certificates that represent shares of Common Stock. New Rights will accompany any new shares of Common Stock the Company issues after August 5, 2013 until the Distribution Date described below.

Exercise Price. Each Right will allow its holder to purchase from the Company one one-thousandth of a share of Series A Junior Participating Preferred Stock (a "<u>Preferred Share</u>") for \$300.00 (the "<u>Exercise Price</u>"), once the Rights become exercisable. This portion of a Preferred Share will give the stockholder approximately the same dividend, voting, and liquidation rights as would one share of Common Stock. Prior to exercise, the Right does not give its holder any dividend, voting, or liquidation rights.

Exercisability. The Rights will not be exercisable until 10 days after the public announcement that a person or group has become an "<u>Acquiring Person</u>" by obtaining beneficial ownership of 10% (or 20% in the case of certain institutional investors who report their holdings on Schedule 13G) or more of the outstanding Common Stock.

Certain synthetic interests in securities created by derivative positions – whether or not such interests are considered to be ownership of the underlying Common Stock or are reportable for purposes of Regulation 13D of the Securities Exchange Act – are treated as beneficial ownership of the number of shares of the Common Stock equivalent to the economic exposure created by the derivative position, to the extent actual shares of the Common Stock are directly or indirectly held by counterparties to the derivatives contracts. Swaps dealers

unassociated with any control intent or intent to evade the purposes of the Rights Agreement are excepted from such imputed beneficial ownership.

The date when the Rights become exercisable is the "<u>Distribution Date</u>." Until that date, the Common Stock certificates will also evidence the Rights, and any transfer of shares of Common Stock will constitute a transfer of Rights. After that date, the Rights will separate from the Common Stock and be evidenced by book-entry credits or by Rights certificates that the Company will mail to all eligible holders of Common Stock. Any Rights held by an Acquiring Person are void and may not be exercised.

Consequences of a Person or Group Becoming an Acquiring Person.

- *Flip In.* If a person or group becomes an Acquiring Person, all holders of Rights except the Acquiring Person shall thereafter have the right to receive, upon exercise, that number of shares of Common Stock (or, in certain circumstances, cash, property or other securities of the Company) which equals the Exercise Price divided by 50% of the current market price per share of Common Stock at the date of the occurrence of such event.
- *Flip Over*. If the Company is later acquired in a merger or similar transaction after the Distribution Date, all holders of Rights except the Acquiring Person shall thereafter have the right to receive, upon exercise, that number of shares of common stock of the acquiring company which equals the Exercise Price divided by 50% of the current market price of such common stock at the date of the occurrence of the event.
- *Notional Shares*. Shares held by affiliates and associates of an Acquiring Person, and notional shares held by counterparties to a Derivatives Contract with an Acquiring Person, will be deemed to be beneficially owned by the Acquiring Person.

Preferred Share Provisions. Each one one-thousandth of a Preferred Share, if issued:

- will not be redeemable;
- will entitle its holder to quarterly dividend payments of \$0.001 per share, or an amount equal to the dividend paid on one share of Common Stock, whichever is greater;
- will entitle its holder upon liquidation either to receive \$1.00 or an amount equal to the payment made on one share of Common Stock, whichever is greater;
- will have the same voting power as one share of Common Stock; and

-2-

• if shares of the Common Stock are exchanged via merger, consolidation, or a similar transaction, will entitle holders to a per share payment equal to the payment made on one share of Common Stock.

The value of one one-thousandth interest in a Preferred Share should approximate the value of one share of Common Stock.

Expiration. The Rights will expire on July 24, 2014.

Redemption. The Board may redeem the Rights for \$0.001 per Right at any time before any person or group becomes an Acquiring Person. If the Board redeems any Rights, it must redeem all of the Rights. Once the Rights are redeemed, the only right of the holders of Rights will be to receive the redemption price of \$0.001 per Right. The redemption price will be adjusted if the Company has a stock split or stock dividends of its Common Stock.

Exchange. After a person or group becomes an Acquiring Person, but before an Acquiring Person owns 50% or more of the outstanding Common Stock, the Board may extinguish the Rights by exchanging one share of Common Stock or an equivalent security for each Right, other than Rights held by the Acquiring Person.

Anti-Dilution Provisions. The Board may adjust the purchase price of the Preferred Shares, the number of Preferred Shares issuable and the number of outstanding Rights to prevent dilution that may occur from a stock dividend, a stock split, a reclassification of the Preferred Shares or Common Stock. No adjustments to the Exercise Price of less than 1% will be made.

Amendments. The terms of the Rights Agreement may be amended by the Board without the consent of the holders of the Rights. After a person or group becomes an Acquiring Person, the Board may not amend the agreement in a way that adversely affects holders of the Rights.

Miscellaneous. Until a Right is exercised, the holder thereof, as such, will have no separate rights as a stockholder of the Company, including, without limitation, the right to vote or to receive dividends in respect of the Rights. Although the distribution of the Rights will not be taxable to stockholders or to the Company, stockholders may, depending upon the circumstances, recognize taxable income in the event that the Rights become exercisable for Common Stock (or other consideration) or for common stock of the acquiring company or in the event of the redemption of the Rights as set forth above.

Anti-Takeover Effects. The Rights may have certain anti-takeover effects. The Rights may cause substantial dilution to any person or group that attempts to acquire the Company without the approval of the Board. As a result, the overall effect of the Rights may be to render more difficult or discourage a merger, tender offer or other business combination involving the Company that is not supported by the Board.

The Certificate of Designations of Series A Junior Participating Stock and the Rights Agreement, dated as of July 25, 2013, between the Company and American Stock Transfer & Trust Company, LLC, as Rights Agent, specifying the terms of the Rights are

-3-

attached hereto as exhibits and are incorporated herein by reference. The foregoing description of the Rights is qualified in its entirety by reference to such exhibits.

Item 2. Exhibits.

- 3.1 Certificate of Designations for Air Products and Chemicals, Inc. Series A Junior Participating Preferred Stock (Incorporated by reference to Exhibit 3.2 to Air Products and Chemicals, Inc.'s Form 8-K filed on July 25, 2013).
- 4.1 Rights Agreement, dated as of July 24, 2013, between Air Products and Chemicals, Inc. and American Stock Transfer & Trust Company, LLC, which includes the form of Certificate of Designations of Series A Junior Participating Preferred Stock as Exhibit A, the form of Right Certificate as Exhibit B and the Summary of Rights to Purchase Preferred Shares as Exhibit C (Incorporated by reference to Exhibit 4.1 to Air Products and Chemicals, Inc.'s Form 8-K filed on July 25, 2013).

SIGNATURES

Pursuant to the requirements of Section 12 of the Securities Exchange Act of 1934, the registrant has duly caused this registration statement to be signed on its behalf by the undersigned, thereto duly authorized.

Date: July 25, 2013

<u>Air Products and Chemicals, Inc.</u> (Registrant)

By: /s/ John D. Stanley

Name: John D. Stanley Title: Senior Vice President, General Counsel, and Chief Administrative Officer

Exhibit Index

<u>Exhibit No.</u>	Description
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	by reference to Exhibit 3.2 to Air Products and Chemicals, Inc.'s Form 8-K filed on July 25, 2013).
4.1	Rights Agreement, dated as of July 24, 2013, between Air Products and Chemicals, Inc. and American Stock Transfer & Trust
	Company, LLC, which includes the form of Certificate of Designations of Series A Junior Participating Preferred Stock as
	Exhibit A, the form of Right Certificate as Exhibit B and the Summary of Rights to Purchase Preferred Shares as Exhibit C
	(Incorporated by reference to Exhibit 4.1 to Air Products and Chemicals, Inc.'s Form 8-K filed on July 25, 2013).