

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
(Address of Principal Executive Offices)

18195-1501
(Zip Code)

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

Sean D. Major
Executive Vice President, General Counsel and Secretary
Air Products and Chemicals, Inc.
7201 Hamilton Boulevard
Allentown, Pennsylvania 18195-1501
(Name and Address of Agent for Service)

(610) 481-4911

(Telephone Number, Including Area Code, of Agent for Service)

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer Accelerated filer
Non-accelerated filer (Do not check if a smaller reporting company) Smaller reporting company
Emerging growth company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of the Securities Act.

CALCULATION OF REGISTRATION FEE

Titles of securities to be registered	Amount to be registered(1)	Proposed maximum offering price per share(2)	Proposed maximum aggregate offering price(2)	Amount of registration fee
Common Stock, par value \$1 per share	733,445	\$166.80	\$122,338,626.00	\$15,231.16

- (1) Pursuant to Rule 416(a) under the Securities Act of 1933, as amended (the "Securities Act"), this Registration Statement shall also cover any additional shares of the registrant's Common Stock that become issuable in respect of the securities identified in the above table by reason of any stock dividend, stock split, recapitalization or other similar transaction.
- (2) 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 sales prices of shares of Common Stock on 14 May 2018 (i.e., \$166.80 per share).

EXPLANATORY NOTE

Air Products and Chemicals, Inc. (the “Registrant”), has prepared this Registration Statement on Form S-8 (this “Registration Statement”) for the purpose of registering the offer and sale of 733,445 additional shares of common stock of the Registrant under the Securities Act. The additional shares registered hereby will be issued pursuant to the Air Products and Chemicals, Inc. Long-Term Incentive Plan, as amended and restated (the “Plan”).

These are securities of the same class as the securities issuable under the Plan that were registered on the Registrant’s prior Registration Statements on Form S-8 that were filed with the United States Securities and Exchange Commission (the “SEC”) on 14 March 2003 (File No. 333-103809), 24 March 2004 (File No. 333-113882), 22 March 2005 (File No. 333-123477), 21 March 2006 (File No. 333-132599), 16 March 2007 (File No. 333-141336), 20 March 2008 (File No. 333-149813), 19 March 2009 (File No. 333-158102), 19 March 2010 (File No. 333-165563), 17 March 2011 (File No. 333-172889), 15 March 2012 (File No. 333-180123), 16 May 2013 (File No. 333-188643), 16 May 2014 (File No. 333-196000), 22 May 2015 (File No. 333-204387) and 20 May 2016 (File No. 333-211476) (collectively, the “Prior Registration Statements”). Pursuant to General Instruction E to Form S-8, the contents of the Prior Registration Statements are incorporated herein by reference.

PART I INFORMATION REQUIRED IN THE SECTION 10(a) PROSPECTUS

The information required by Item 1 and Item 2 of Part I of Form S-8 is omitted from this filing in accordance with Rule 428 under the Securities Act and the introductory note to Part I of Form S-8. The documents containing the information specified in Part I will be delivered to the participants in the Plan as required by Rule 428(b)(1) under the Securities Act.

PART II INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 3. Incorporation of Documents by Reference.

The following documents the Registrant previously filed with the SEC under the Securities Exchange Act of 1934, as amended (the “Exchange Act”), are incorporated herein by reference:

- (a) the Registrant’s Annual Report on Form 10-K for the fiscal year ended 30 September 2017, filed on 16 November 2017;
- (b) the Registrant’s Quarterly Reports on Form 10-Q for the quarter ended 31 December 2017, filed on 26 January 2018 and for the quarter ended 31 March 2018, filed on 26 April 2018.
- (c) the Registrant’s Current Reports on Form 8-K filed on 14 November 2017, 25 January 2018 and 17 May 2018; and
- (d) the description of the Registrant’s common stock in Exhibit 99.1 to its Annual Report on Form 10-K for the fiscal year ended September 30, 2014, filed with the SEC on November 24, 2014, and any amendment or report filed for the purpose of updating such description.

All documents subsequently filed by the Registrant pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Exchange Act (other than Current Reports on Form 8-K furnished pursuant to Item 2.02 of Item 7.01 of Form 8-K, unless otherwise indicated therein), prior to the filing of a post-effective amendment to this Registration Statement which indicates that all securities offered hereby have been sold or which deregisters all securities then remaining unsold, shall be deemed to be incorporated by reference in this registration statement and to be part hereof from the date of filing of such documents.

Any statement contained in a document incorporated or deemed to be incorporated by reference herein shall be deemed to be modified or superseded for purposes of this Registration Statement to the extent that a statement contained in any subsequently filed document which also is deemed to be incorporated by reference herein modifies or supersedes such statement. Any such statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this Registration Statement.

Item 8. Exhibits

- 4.1 Restated Certificate of Incorporation of the Registrant (filed as Exhibit 3.2 to the Registrant's Annual Report on Form 10-K for the fiscal year ended 30 September 1987).*P
- 4.2 [Amendment to the Restated Certificate of Incorporation of the Registrant dated 25 January 1996 \(filed as Exhibit 3.3 to the Registrant's Annual Report on Form 10-K for the fiscal year ended 30 September 1996\).](#)*
- 4.3 [Amendment to the Restated Certificate of Incorporation of the Registrant dated 28 January 2014 \(filed as Exhibit 10.2 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended 30 June 2014\).](#)*
- 4.4 [Amended and Restated Bylaws of the Registrant \(filed as Exhibit 3.1 to the Registrant's Current Report on Form 8-K filed 21 November 2014\).](#)*
- 4.5 [Air Products and Chemicals, Inc. Long-term Incentive Plan, as amended and restated effective 1 October 2014 \(filed as Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed 23 September 2014\).](#)*
- 23.1 [Consent of Independent Registered Public Accounting Firm.](#)
- 24.1 [Power of Attorney.](#)

* Incorporated herein by reference to the specified filing under the Exchange Act (File No. 001-04534).

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 registrant as treasury shares and will not constitute original issuance shares; further, no opinion is being furnished with respect to ERISA compliance because the Plan covered by the registration statement is not subject to the requirements of ERISA.

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Chadwick C. Deaton

Director

18 May 2018

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David H. Y. Ho

Director

18 May 2018

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Margaret G. McGlynn

Director

18 May 2018

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Edward L. Monser

Director

18 May 2018

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Matthew H. Paull

Director

18 May 2018

Consent of Independent Registered Public Accounting Firm

The Board of Directors
Air Products and Chemicals, Inc.:

We consent to the incorporation by reference of our report dated 16 November 2017, with respect to the consolidated balance sheets of Air Products and Chemicals, Inc. and Subsidiaries as of 30 September 2017 and 2016, and the related consolidated income statements, consolidated comprehensive income statements, consolidated statements of cash flows, and equity for each of the years in the three-year period ended 30 September 2017, and the related financial statement schedule, and the effectiveness of internal control over financial reporting as of 30 September 2017, which report appears in the 30 September 2017 Annual Report on Form 10-K of Air Products and Chemicals, Inc.

/s/ KPMG LLP

Philadelphia, Pennsylvania
18 May 2018

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints SEIFI GHASEMI, SEAN D. MAJOR, and M. SCOTT CROCCO, and each of them 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 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.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Seifi Ghasemi</u> Seifi Ghasemi	Director and Chairman of the Board President and Chief Executive Officer (Principal Executive Officer)	16 May 2018
<u>/s/ Susan K. Carter</u> Susan K. Carter	Director	16 May 2018
<u>/s/ Charles I. Cogut</u> Charles I. Cogut	Director	16 May 2018
<u>/s/ Chadwick C. Deaton</u> Chadwick C. Deaton	Director	16 May 2018

Signature**Title****Date**

/s/ David H. Y. Ho

David H. Y. Ho

Director

16 May 2018

/s/ Margaret G. McGlynn

Margaret G. McGlynn

Director

16 May 2018

/s/ Edward L. Monser

Edward L. Monser

Director

16 May 2018

/s/ Matthew H. Paull

Matthew H. Paull

Director

16 May 2018