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

SCHEDULE 13G

UNDER THE SECURITIES EXCHANGE ACT OF 1934  
ANNUAL FILING

AIR PRODUCTS & CHEMICALS  
(NAME OF ISSUER)  
COMMON STOCK  
(TITLE OF CLASS OF SECURITIES)  
009158106  
(CUSIP NUMBER)  
12/31/2013  
(DATE OF EVENT WHICH REQUIRES FILING OF THIS STATEMENT)

CHECK THE APPROPRIATE BOX TO DESIGNATE THE RULE PURSUANT TO WHICH THIS  
SCHEDULE IS FILED:

- RULE 13D-1 (B)  
 RULE 13D-1 (C)  
 RULE 13D-1 (D)

\*THE REMAINDER OF THIS COVER PAGE SHALL BE FILLED OUT FOR A  
REPORTING PERSON'S INITIAL FILING ON THIS FORM WITH RESPECT TO THE  
SUBJECT CLASS OF SECURITIES, AND FOR ANY SUBSEQUENT AMENDMENT  
CONTAINING INFORMATION WHICH WOULD ALTER THE DISCLOSURES PROVIDED  
IN A PRIOR COVER PAGE.

THE INFORMATION REQUIRED IN THE REMAINDER OF THIS COVER PAGE SHALL  
NOT BE DEEMED TO BE "FILED" FOR THE PURPOSE OF SECTION 18 OF THE  
SECURITIES EXCHANGE ACT OF 1934 ("ACT") OR OTHERWISE SUBJECT TO THE  
LIABILITIES OF THAT SECTION OF THE ACT BUT SHALL BE SUBJECT TO ALL  
OTHER PROVISIONS OF THE ACT (HOWEVER, SEE THE NOTES).

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1. NAME OF REPORTING PERSON: STATE STREET CORPORATION  
I.R.S. IDENTIFICATION NO. OF THE ABOVE PERSON: 04-2456637
2. CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP  
NOT APPLICABLE
3. SEC USE ONLY
4. CITIZENSHIP OR PLACE OF ORGANIZATION

BOSTON, MASSACHUSETTS

5. SOLE VOTING POWER  
0 SHARES
6. SHARED VOTING POWER  
11,381,894
7. SOLE DISPOSITIVE POWER  
0
8. SHARED DISPOSITIVE POWER  
11,381,894
9. AGGREGATED AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON  
11,381,894
10. CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES  
NOT APPLICABLE
11. PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 9  
5.4%
12. TYPE OF REPORTING PERSON  
HC

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ITEM 1.

- (A) NAME OF ISSUER  
AIR PRODUCTS & CHEMICALS
- (B) ADDRESS OF ISSUER'S PRINCIPAL EXECUTIVE OFFICES  
7201 HAMILTON BOULEVARD  
ALLENTOWN, PA 18195-1501

ITEM 2.

- (A) NAME OF PERSON FILING  
STATE STREET CORPORATION AND ANY OTHER REPORTING PERSON  
IDENTIFIED ON THE SECOND PART OF THE COVER PAGES HERETO
- (B) ADDRESS OF PRINCIPAL BUSINESS OFFICE OR, IN NONE,  
RESIDENCE  
STATE STREET FINANCIAL CENTER  
ONE LINCOLN STREET  
BOSTON, MA 02111  
(FOR ALL REPORTING PERSONS)
- (C) CITIZENSHIP: SEE ITEM 4 (CITIZENSHIP OR PLACE OF  
ORGANIZATION) OF COVER PAGES

(D) TITLE OF CLASS OF SECURITIES

COMMON STOCK

(E) CUSIP NUMBER:

009158106

ITEM 3.

IF THIS STATEMENT IS FILED PURSUANT TO RULE 13D-1(B), OR 13D-2(B) OR (C), CHECK WHETHER THE PERSON FILING IS A:

SEE ITEM 12 (TYPE OF REPORTING PERSON) OF THE COVER PAGE FOR EACH REPORTING PERSON AND THE TABLE BELOW, WHICH EXPLAINS THE MEANING OF THE TWO LETTER SYMBOLS APPEARING IN ITEM 12 OF THE COVER PAGES.

| SYMBOL | CATEGORY  |
|--------|---|
| BK     | BANK AS DEFINED IN SECTION 3(A) (6) OF THE ACT.   |
| IC     | INSURANCE COMPANY AS DEFINED IN SECTION 3 (A) (19) OF THE ACT   |
| IC     | INVESTMENT COMPANY REGISTERED UNDER SECTION 8 OF THE INVESTMENT COMPANY ACT OF 1940.  |
| IA     | AN INVESTMENT ADVISOR IN ACCORDANCE WITH RULE 13D-1(B) (1) (II) (E).  |
| EP     | AN EMPLOYEE BENEFIT PLAN OR ENDOWMENT FUND IN ACCORDANCE WITH RULE 13D-1(B) (1) (II) (F) .  |
| HC     | A PARENT HOLDING COMPANY OR CONTROL PERSON IN ACCORDANCE WITH RULE 13D-1(B)(1)(II) (G).   |
| SA     | A SAVINGS ASSOCIATIONS AS DEFINED IN SECTION 3(B) OF THE FEDERAL DEPOSIT INSURANCE ACT (12 U.S.C. 1813).                                  |
| CP     | A CHURCH PLAN THAT IS EXCLUDED FROM THE DEFINITION OF AN INVESTMENT COMPANY UNDER SECTION 3(C)(14) OF THE INVESTMENT COMPANY ACT OF 1940. |

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ITEM 4. OWNERSHIP

THE INFORMATION SET FORTH IN ROWS 5 THROUGH 11 OF THE COVER PAGE HERETO FOR EACH OF THE REPORTING PERSONS IS INCORPORATED HEREIN BY REFERENCE.

ITEM 5. OWNERSHIP OF FIVE PERCENT OR LESS OF CLASS

NOT APPLICABLE

ITEM 6. OWNERSHIP OF MORE THAN FIVE PERCENT ON BEHALF OF ANOTHER PERSON

NOT APPLICABLE

ITEM 7. IDENTIFICATION AND CLASSIFICATION OF THE SUBSIDIARY WHICH ACQUIRED THE SECURITY BEING REPORTED ON BY THE PARENT HOLDING COMPANY OR CONTROL PERSON

SEE EXHIBIT 1 ATTACHED HERETO

ITEM 8. IDENTIFICATION AND CLASSIFICATION OF MEMBERS OF THE GROUP

NOT APPLICABLE

ITEM 9. NOTICE OF DISSOLUTION OF GROUP

NOT APPLICABLE

ITEM 10. CERTIFICATION

BY SIGNING BELOW I CERTIFY THAT, TO THE BEST OF MY KNOWLEDGE AND BELIEF, THE SECURITIES REFERRED TO ABOVE WERE ACQUIRED AND ARE HELD IN THE ORDINARY COURSE OF BUSINESS AND WERE NOT ACQUIRED AND ARE NOT HELD FOR THE PURPOSE OR WITH THE EFFECT OF CHANGING OR INFLUENCING THE CONTROL OF THE ISSUER OF THE SECURITIES AND WERE NOT ACQUIRED AND ARE NOT HELD IN CONNECTION WITH OR AS A PARTICIPANT IN ANY TRANSACTION HAVING THAT PURPOSE OR EFFECT.

SIGNATURES

AFTER REASONABLE INQUIRY AND TO THE BEST OF HIS KNOWLEDGE AND BELIEF, EACH OF THE UNDERSIGNED CERTIFIES THAT THE INFORMATION SET FORTH IN THIS STATEMENT IS TRUE, COMPLETE AND CORRECT.

3 FEBRUARY 2014  
STATE STREET CORPORATION

/s/ JAMES J. MALERBA  
EXECUTIVE VICE PRESIDENT,  
CORPORATION CONTROLLER

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EXHIBIT 1

THE FOLLOWING TABLE LISTS THE IDENTITY AND ITEM 3 CLASSIFICATION OF EACH SUBSIDIARY OF STATE STREET CORPORATION, THE PARENT HOLDING COMPANY, THAT BENEFICIALLY OWNS THE ISSUER`S COMMON STOCK. PLEASE REFER TO ITEM 3 OF THE ATTACHED SCHEDULE 13G FOR A DESCRIPTION OF EACH OF THE TWO-LETTER SYMBOLS REPRESENTING THE ITEM 3 CLASSIFICATION BELOW.

| SUBSIDIARY                                      | ITEM 3 CLASSIFICATION |
|---|-----------------------|
| STATE STREET GLOBAL ADVISORS FRANCE S.A.        | IA                    |
| STATE STREET BANK AND TRUST COMPANY             | BK                    |
| SSGA FUNDS MANAGEMENT, INC                      | IA                    |
| STATE STREET GLOBAL ADVISORS LIMITED            | IA                    |
| STATE STREET GLOBAL ADVISORS LTD                | IA                    |
| STATE STREET GLOBAL ADVISORS, AUSTRALIA LIMITED | IA                    |
| STATE STREET GLOBAL ADVISORS JAPAN CO., LTD.    | IA                    |
| STATE STREET GLOBAL ADVISORS, ASIA LIMITED      | IA                    |

NOTE: ALL OF THE LEGAL ENTITIES ABOVE ARE DIRECT OR INDIRECT SUBSIDIARIES OF STATE STREET CORPORATION.