

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 20549**

FORM 11-K

FOR ANNUAL REPORTS OF EMPLOYEE STOCK PURCHASE, SAVINGS AND SIMILAR PLANS PURSUANT TO
SECTION 15(d) OF THE SECURITIES AND EXCHANGE ACT OF 1934

(Mark One)

ANNUAL REPORT PURSUANT TO SECTION 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended 31 December 2024

OR

TRANSITION REPORT PURSUANT TO SECTION 15(d) OF THE SECURITIES EXCHANGE ACT OF
1934

For the transition period from _____ to _____

Commission file number 001-04534

A. Full title of the Plan and the address of the Plan, if different from that of the issuer named below:

**AIR PRODUCTS AND CHEMICALS, INC.
RETIREMENT SAVINGS PLAN**

B. Name of issuer of the securities held pursuant to the Plan and the address of its principal executive offices:

**AIR PRODUCTS AND CHEMICALS, INC.
1940 AIR PRODUCTS BOULEVARD
ALLENTOWN, PA 18106-5500**

**AIR PRODUCTS AND CHEMICALS, INC.
RETIREMENT SAVINGS PLAN**

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All other schedules required by the Department of Labor's Rules and Regulations for Reporting and Disclosure under the Employee Retirement Income Security Act of 1974 ("ERISA") have been omitted because there is no information to report.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Plan Participants and Plan Administrator of Air Products and Chemicals, Inc. Retirement Savings Plan

Opinion on the Financial Statements

We have audited the accompanying statements of net assets available for benefits of Air Products and Chemicals, Inc. Retirement Savings Plan (the "Plan") as of 31 December 2024 and 2023, the related statement of changes in net assets available for benefits for the year ended 31 December 2024, and the related notes (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the net assets available for benefits of the Plan as of 31 December 2024 and 2023, and the changes in net assets available for benefits for the year ended 31 December 2024, in conformity with accounting principles generally accepted in the United States of America.

Basis for Opinion

These financial statements are the responsibility of the Plan's management. Our responsibility is to express an opinion on the Plan's financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Plan in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

Report on Supplemental Schedules

The supplemental schedules of assets (held at end of year) as of 31 December 2024 and of delinquent participant contributions for the year ended 31 December 2024, have been subjected to audit procedures performed in conjunction with the audit of the Plan's financial statements. The supplemental schedules are the responsibility of the Plan's management. Our audit procedures included determining whether the supplemental schedules reconcile to the financial statements or the underlying accounting and other records, as applicable, and performing procedures to test the completeness and accuracy of the information presented in the supplemental schedules. In forming our opinion on the supplemental schedules, we evaluated whether the supplemental schedules, including their form and content, are presented in compliance with the Department of Labor's Rules and Regulations for Reporting and Disclosure under the Employee Retirement Income Security Act of 1974. In our opinion, such schedules are fairly stated, in all material respects, in relation to the financial statements as a whole.

/s/ DELOITTE & TOUCHE LLP

Philadelphia, Pennsylvania
20 June 2025

We have served as the auditor of the Plan since 2019.

AIR PRODUCTS AND CHEMICALS, INC.
RETIREMENT SAVINGS PLAN

Statements of Net Assets Available for Benefits

As of 31 December 2024 and 2023

(In thousands)

	2024	2023
Assets:		
Participant-directed investments at fair value:		
Interest-bearing cash	\$18,983	\$21,275
Mutual funds	303,645	648,339
Commingled funds	1,543,041	981,203
Company stock	458,761	502,296
Separately managed account	141,575	150,087
Self-directed brokerage account	79,217	70,325
Total participant-directed investments at fair value	2,545,222	2,373,525
Fully benefit-responsive investment contracts at contract value:		
Fixed income securities fund	175,762	200,661
Receivables:		
Notes receivable from participants	19,564	16,873
Employer contributions receivable	852	798
Accrued interest and dividends	669	1,746
Other receivables	1,722	188
Total receivables	22,807	19,605
Total assets	2,743,791	2,593,791
Liabilities:		
Payables and accrued liabilities	333	318
Total liabilities	333	318
Net assets available for benefits	\$2,743,458	\$2,593,473

See notes to financial statements.

AIR PRODUCTS AND CHEMICALS, INC.
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Statement of Changes in Net Assets Available for Benefits

For the Year Ended 31 December 2024

(In thousands)

	2024
Additions:	
Contributions:	
Participant contributions	\$92,069
Company matching contributions	19,576
Company core contributions	34,356
Total contributions	146,001
Investment income:	
Interest income	2,470
Dividend income	43,857
Net appreciation in the fair value of investments	295,983
Total investment income	342,310
Total additions	488,311
Deductions:	
Distributions to participants	337,869
Administrative expenses	457
Total deductions	338,326
Net increase	149,985
Net assets available for benefits:	
Beginning of year	2,593,473
End of year	\$2,743,458

See notes to financial statements.

AIR PRODUCTS AND CHEMICALS, INC.
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Notes to Financial Statements

As of 31 December 2024 and 2023, and for the Year Ended 31 December 2024

(In thousands, except for share data)

(1) Description of the Plan

The following description of the Air Products and Chemicals, Inc. Retirement Savings Plan (the "Plan") provides only general information. Participants should refer to the Summary Plan Description and the Plan Document for a more complete description of the Plan's provisions. Capitalized terms used herein but not defined herein have the meanings set forth in the Plan.

(a) General

The Plan is a defined-contribution plan sponsored by Air Products and Chemicals, Inc. (the "Company") covering certain full-time and part-time salaried and hourly employees of the Company and designated subsidiaries. The Plan permits participation by employees whose terms and conditions of employment are covered by the terms of a collective bargaining agreement provided such collective bargaining agreement provides for Plan participation. Participants of the Plan are entitled to make before-tax contributions and Roth 401(k) contributions as allowed by Sections 401(k) and 401(m) of the Internal Revenue Code ("IRC") after having completed at least 30 days of service. Company matching contributions are made under IRC Section 401(m). The Plan is subject to the provisions of the Employee Retirement Income Security Act ("ERISA").

(b) Administration

The Board of Directors of the Company (the "Board") has delegated oversight for the design and administration of the Plan to its Management Development and Compensation Committee and oversight for the funding and management of assets of the Plan to its Audit and Finance Committee. The Board has delegated authority to the Chief Executive Officer to take such actions as necessary to provide employee pension, retirement savings, or welfare benefits, in accordance with its delegation with respect to the Company's pension, retirement savings, and welfare benefit plans. The Chief Executive Officer has delegated some of this authority to the Executive Vice President and Chief Human Resources Officer, who has established a Benefits Committee to have fiduciary responsibility for appeals of the denial of benefits in an ERISA plan. The "Plan Administrator" means the Executive Vice President and Chief Human Resources Officer. The Audit and Finance Committee appointed the Pension Investment Committee to supervise, monitor and review the investment performance of the Plan's assets. Fidelity Management Trust ("Fidelity") is the trustee of the Plan. The Pension Investment Committee has appointed Willis Towers Watson to serve as the Plan's investment consultant under the ERISA definition of a 3(21) investment advisor. The Pension Investment Committee also appoints various external investment managers for the management of the Plan's assets.

(c) Participant Accounts

Individual accounts are maintained for each participant of the Plan. Each participant's account is credited with the participant's contributions, Company contributions, and allocations of the Plan's earnings. Participant accounts are also charged with withdrawals and an allocation of Plan losses and administrative expenses. Allocations are based on investment elections made by the participant. The benefit to which a participant is entitled is the benefit that can be provided from the participant's vested account balance.

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(In thousands, except for share data)

(d) Contributions

Subject to certain IRC restrictions, participants may elect to contribute to the Plan on a before-tax 401(k) basis or after-tax Roth 401(k) basis from 3% to 50%, in whole percentages, of each participant's compensation, as defined in the Plan Document, through payroll deductions. The before-tax basis allows a participant to defer recognition of income for federal income tax purposes.

Participants who are at least age 50 before the close of the calendar year may make catch-up contributions in accordance with, and subject to the limitations of, IRC Section 414(v).

The Plan is required to return contributions received during the Plan year in excess of the IRC limits.

The Company will match certain contributions to the Plan made by participants. The matching contributions are made in accordance with IRC Section 401(a). Effective 1 January 2022, all eligible non-union participants receive the same matching contribution percentage. Subject to the terms of their Collective Bargaining Agreement, union employees may receive matching contributions.

Company core contributions are cash contributions made by the Company to eligible participants' accounts in accordance with the participants' investment direction election. To be eligible for Company core contributions, a participant must be (1) a salaried employee hired or rehired after 31 October 2004, (2) an hourly employee who transferred to a salaried status after 31 October 2004, (3) a nonunion hourly employee hired or rehired after 31 January 2011, (4) an employee who became a nonunion hourly employee after 31 January 2011 due to a change in employment status and is not earning credited service under the Pension Plan for Hourly Rated Employees of Air Products and Chemicals, Inc., (5) a salaried employee who made an irrevocable election to receive Company core contributions under the Plan instead of continuing to earn credited service under the Air Products and Chemicals, Inc. Pension Plan for Salaried Employees, or (6) an employee covered by the terms of a collective bargaining agreement whose terms provide for a Company core contribution after 31 October 2017.

As of 1 January 2022, the amount of Company core contribution is based on participants' service and base pay as follows:

- 5% of base pay if credited service is less than 10 years;
- 6% of base pay if credited service is between 10 and 19 years; or
- 7% of base pay if credited service is 20 years or more.

Eligible participants are not required to contribute to the Plan in order to receive the Company core contribution.

As of 1 January 2022, for participants who are eligible to receive a Company matching contribution, the Company will match 50% of the first 6% of a Participant's annual salary that is deferred to the Plan as before-tax contributions or Roth 401(k) contributions. Catch-up contributions are not eligible for Company matching contributions.

Company matching contributions are invested in the Company's common stock ("Company stock"). Company matching contributions may be transferred by the Plan's participants to any of the Plan's other investment options at any time. As such, investment in Company stock is deemed participant directed.

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(In thousands, except for share data)

Employee contributions and employer matching contributions are recorded when earned.

On an annual basis, the Company shall ensure that, for participants who are employed by the Company on the last day of the Plan year, the participant's Company matching contribution is equal to the maximum contribution the participant would receive under the Company matching formula for the calendar year based upon the participant's before-tax and Roth 401(k) contributions for the entire calendar year. The Company will make the appropriate additional Company matching contribution to the Plan as needed. The additional Company matching contributions to provide participants with their maximum amount were \$852 and \$798 for the Plan years 2024 and 2023, respectively, and are reflected on the statements of net assets available for benefits within "Employer contributions receivable."

(e) Contribution Percentage Changes

Contribution percentage changes are effective as soon as administratively possible after receipt of a request from a participant.

(f) Rollovers

A participant or any other employee who is entitled to make a rollover contribution to the Plan under the IRC may make a cash contribution to the Plan of all or a portion of any such rollover contribution amount.

(g) Vesting

Participants are immediately vested in 100% of their elected salary deferrals, rollover contributions, the Company's matching contributions, Company core contributions, and earnings thereon.

(h) Forfeitures

The Company can use forfeitures to reduce the costs of administering the Plan. There were no forfeitures used to reduce the costs of administering the Plan in 2024. There were \$213 and \$207 of unallocated forfeitures at 31 December 2024 and 2023, respectively.

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Notes to Financial Statements

As of 31 December 2024 and 2023, and for the Year Ended 31 December 2024

(In thousands, except for share data)

(i) Withdrawal Provisions

Upon application, but no sooner than 12 months after any earlier withdrawal:

- (a) a participant may withdraw all or a portion of after-tax contributions, which have been in the Plan for at least two years;
- (b) after withdrawing all amounts described in subparagraph (a), a participant may withdraw any Company matching contributions, which have been in the Plan for at least two years;
- (c) after withdrawing all amounts described in subparagraphs (a) and (b), a participant may withdraw before-tax contributions, Roth 401(k) contributions, and then vested Company core contributions upon:
 - (i) attaining age 59½;
 - (ii) providing satisfactory evidence that the withdrawal is required on account of a “hardship.” Hardship withdrawals will be limited to situations in which a participant has an immediate and heavy financial need and a distribution from the Plan is necessary to meet that need. A participant is not required to take a plan loan from any plan maintained by the Company or an Affiliated Company, as defined by IRC section 414, in order to obtain a hardship distribution. A hardship withdrawal may be made without regard to whether any other withdrawal has occurred within the last 12 months. Hardship distribution provisions treat expenses and losses (including loss of income) incurred by a participant on account of a disaster as an immediate and heavy financial need. To qualify, the Federal Emergency Management Agency (“FEMA”) must declare a disaster under the Robert T. Stafford Disaster Relief and Emergency Assistance Act, Public Law 100-707, and the participant’s principal residence or principal place of employment at the time of the disaster must be located in an area designated by FEMA for individual assistance with respect to the disaster;
 - (iii) a Qualified Reservist Distribution; or
 - (iv) a distribution pursuant to the Heroes Earnings Assistance and Relief Tax Act of 2008.

A participant, upon separation of employment, is entitled to receive all amounts credited to his or her account, including before-tax, Roth 401(k), after-tax, catch-up, Company matching contributions, and Company core contributions. This distribution will automatically occur on or about 60 days after the end of the month in which employment ends if the participant’s account balance is less than \$1. Participants may continue to repay any outstanding loan balances; any outstanding loan balance which is not repaid within 90 days will be treated as a taxable distribution. At the discretion of the Plan Administrator, loan balances may be transferred to a successor employer for participants whose employment ends due to a divestiture of a business or segment of the Company. Participants may elect to rollover distributions directly into another qualified plan or an Individual Retirement Account.

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The distribution of a participant's account balance may be deferred until the earlier of age 73 or death. The entire balance of the participant's account is required to be distributed within 10 years following a participant's death, regardless of whether the participant dies before, on, or after the age for required minimum distribution.

(j) Notes Receivable from Participants

The Plan may make a loan or loans to any participant upon electronic request through Fidelity. Loans may be made in an amount that, when added to the outstanding balance of any other loan, will not exceed the lesser of \$50 or one half of the present value of the participant's vested account balance. Participant loans are valued at the sum of the unpaid principal balance, plus accrued and unpaid interest. The loan must be adequately secured, bear a reasonable interest rate, and be repaid within a maximum of five years, unless such loan is for a principal residence, in which case the loan is to be repaid within a maximum of 25 years. The interest rate charged on outstanding participant loans during the Plan year ended 31 December 2024, ranged from 4.25% to 10.50%, with maturities through 2049.

Loan principal and interest repayments are credited directly to the borrowing participant's plan account and invested in accordance with the participant's then-current investment directions.

Plan participant loans may be directly rolled over to a qualified plan of a subsequent employer of the participant pursuant to an agreement between the Company and the subsequent employer at the discretion of the Plan Administrator. In addition, loan participants may repay an amount toward the outstanding loan balance at any time in accordance with the procedures established by the Plan Administrator.

(k) Investment Directions

Participant investment fund elections can be made in increments of 1% provided the percentages total 100%. Designated default funds for the Plan are the State Street Global Advisor Target Retirement Date Funds. Company matching contributions are invested in Company stock, which may be transferred by the Plan's participants to any other investment option at any time, provided they are not in violation of frequent trading rules as defined in the Summary Plan Description. Participants can elect to have their contributions to the Plan and Company core contributions invested in mutual funds, Company stock, commingled funds, a separately managed account, and a fixed income securities fund offered by the Plan. Participants may also direct their investments through a record keeper sponsored brokerage account ("Fidelity BrokerageLink"), which offers the option to invest in a range of Fidelity and non-Fidelity mutual funds. Interest-bearing cash held in the Fidelity BrokerageLink account is presented separately on the statements of net assets available for benefits.

Participant changes to investment elections can apply to future contributions, accumulated savings, or both. Participant investment election changes completed by 4:00 p.m. (Eastern Time) are effective the same New York Stock Exchange ("NYSE") business day and are reflected in the participant's account the next NYSE business day.

Participants may not redirect accumulated savings directly from the fixed income securities fund to Fidelity BrokerageLink.

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(In thousands, except for share data)

(1) *Secure 2.0 Act of 2022*

On 29 December 2022, the SECURE 2.0 Act of 2022 ("SECURE 2.0") was signed into law. SECURE 2.0 includes provisions intended to expand coverage, increase retirement savings, and simplify and clarify retirement plan rules. The Plan is continuing to evaluate the impact of SECURE 2.0 on its operations and financial statements but does not expect a significant impact at this time.

(2) *Summary of Significant Accounting Policies*

(a) *Basis of Accounting*

The financial statements and accompanying footnotes were prepared on the accrual basis of accounting in conformity with accounting principles generally accepted in the United States of America ("GAAP"). The Company has elected to file these financial statements with the Securities and Exchange Commission prepared in conformity with guidelines issued under ERISA, as amended.

(b) *Use of Estimates*

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of net assets, liabilities and changes therein, and disclosure of contingent assets and liabilities. Actual results could differ from those estimates.

(c) *Investment Valuation and Income Recognition*

The Plan's investments are stated at fair value, except for fully benefit-responsive contracts which are carried at contract value (see Note 4, *Fixed Income Securities Fund*, for additional information). Quoted market prices are used to value investments.

Purchases and sales are recorded on a trade-date basis. Interest is recorded on an accrual basis. Dividends are recorded on the ex-dividend date. Net appreciation on the statement of changes in net assets available for benefits includes the Plan's gains and losses on investments bought and sold as well as held during the year.

(d) *Risks and Uncertainties*

Investment securities are exposed to various risks, such as interest rate, credit, and overall market volatility risks. Market volatility risks include global events which could impact the value of investment securities, such as a pandemic or international conflict. Due to the level of risk associated with certain investment securities, it is reasonably possible that changes in the values of investment securities will occur in the near term and could materially impact participants' account balances and the amounts reported in the accompanying statements of net assets available for benefits.

The Plan's exposure to a concentration of credit risk is dependent upon the investment allocations selected by the Plan's participants. At 31 December 2024 and 2023, 17% and 19%, respectively, of the Plan's net assets available for benefits were invested in the Company's stock. The underlying value of the Company's stock is impacted by the performance of the Company, the market's evaluation of such performance, and other factors.

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(In thousands, except for share data)

(e) Payment of Benefits

Benefits are recorded when paid. Amounts allocated to accounts of participants who have elected to withdraw from the Plan, but have not yet been paid, were \$1,827 at 31 December 2024. There was \$688 allocated to accounts of participants who elected to withdraw from the Plan, but that had not yet been paid at 31 December 2023.

(3) Fair Value Measurements

Fair value is defined as an exit price, or the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.

The fair value hierarchy prioritizes the inputs to valuation techniques used to measure fair value into three broad levels as follows:

- *Level 1* – Quoted prices (unadjusted) in active markets for identical assets or liabilities.
- *Level 2* – Inputs that are observable for the asset or liability, either directly or indirectly through market corroboration, for substantially the full term of the asset or liability.
- *Level 3* – Inputs that are unobservable for the asset or liability based on the Company's own assumptions about the assumptions market participants would use in pricing the asset or liability.

If the inputs used to measure the financial assets and liabilities fall within more than one level described above, the categorization is based on the lowest level input that is significant to the fair value measurement of the instrument. Within the Plan, investments are recorded at fair value as follows:

Interest-bearing Cash

The carrying amounts of cash and cash equivalents approximate fair value due to short-term maturity.

Mutual Funds

Shares of mutual funds are valued at the daily closing price as reported by the fund. The mutual funds are required to publish their daily net asset value ("NAV") and to transact at that price. The mutual funds are deemed to be actively traded and are classified as Level 1 assets.

Commingled Funds

Commingled funds are valued at NAV, determined by each fund's trustee based on the fair value of the underlying securities within the funds, which are traded on active markets. The commingled funds are not subject to redemption restrictions and are presented as a Level 1 asset.

Company Stock

Company stock is valued based on the number of shares held by the Plan at period-end multiplied by the closing price of the Company's stock on the NYSE and, therefore, presented as a Level 1 asset.

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(In thousands, except for share data)

Separately Managed Account

The separately managed account consists of a portfolio of individual securities (equity securities) managed on the participant's behalf. The Plan directly owns the individual equity securities. The individual assets of the fund are held in the name of the Plan and are considered separately as individual investments for accounting, auditing and financial statement reporting purposes. The portfolio of individual equity securities are valued based on the closing price reported on the active market on which the individual securities are traded and are presented as Level 1 assets.

Fixed Income Securities Fund

The fixed income securities fund invests in fully-benefit responsive investment contracts that are held at contract value. See Note 4, *Fixed Income Securities Fund*, for additional information on the fund.

Investments Measured at Fair Value

Investments measured at fair value at 31 December 2024 and 2023 are summarized below:

	31 December 2024			
	Total	Level 1	Level 2	Level 3
Assets				
Interest-bearing cash	\$18,983	\$18,983	\$—	\$—
Mutual funds	382,862	382,862	—	—
Commingled funds	1,543,041	1,543,041	—	—
Company stock	458,761	458,761	—	—
Separately managed account	141,575	141,575	—	—
Total investments at fair value	<u>\$2,545,222</u>	<u>\$2,545,222</u>	<u>\$—</u>	<u>\$—</u>
Investments measured at contract value:				
Fixed income securities fund	175,762			
Total Investments	<u>\$2,720,984</u>			
31 December 2023				
	Total	Level 1	Level 2	Level 3
Assets				
Interest-bearing cash	\$21,275	\$21,275	\$—	\$—
Mutual funds	718,664	718,664	—	—
Commingled funds	981,203	981,203	—	—
Company stock	502,296	502,296	—	—
Separately managed account	150,087	150,087	—	—
Total investments at fair value	<u>\$2,373,525</u>	<u>\$2,373,525</u>	<u>\$—</u>	<u>\$—</u>
Investments measured at contract value:				
Fixed income securities fund	200,661			
Total Investments	<u>\$ 2,574,186</u>			

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(In thousands, except for share data)

(4) Fixed Income Securities Fund

Contributions made to the fixed income securities fund (the "Fund") can be invested in varying allocations of traditional investment contracts with insurance companies and other financial institutions, and short to intermediate-term fixed income securities or portfolios that are "wrapped" by third-party financial institutions that guarantee principal and a predetermined interest rate yield. The contract issuers of the traditional investment contracts and the wrap providers are highly rated financial institutions. The contracts held in the Fund are currently synthetic and deemed fully benefit-responsive as they provide that the Plan's participants may make withdrawals at contract value. As described in Note 2, *Summary of Significant Accounting Policies*, contract value is the relevant measurement attributable for the contracts held in the Fund because the contracts are deemed fully benefit-responsive. Contract value represents contributions made under the contract, plus earnings, less participant withdrawals and administrative expenses.

No valuation reserves were recorded against the contract value for credit risk of the contract issuers or otherwise for the Fund at 31 December 2024 and 2023.

Key factors that could influence future average interest crediting rates include, but are not limited to the following: the Fund's cash flows, changes in interest rates, total return performance of the bond strategies underlying each of the Fund's contracts, and default or credit failures of any of the securities, investment contracts, or other investments held in the Fund.

Participants may ordinarily direct the withdrawal or transfer of all or a portion of their investment at contract value. Certain events, although considered unlikely and not probable, such as a change in administration or operation of the Plan or the Fund, group terminations, layoffs, or exclusion of group eligibility in the Plan, may limit the ability of participants to access their investments at contract value. The contract issuers may terminate the contracts in the unlikely event of a default by the Plan.

(5) Income Tax Status

The Internal Revenue Service has determined and informed the Company, by letter dated 16 February 2017, that the Plan is designed in accordance with applicable sections of the IRC. The determination letter covered Plan amendments adopted through 14 December 2015. Although the Plan has been amended since receiving the determination letter, the Plan Administrator and the Plan's tax counsel believe that the Plan is designed and is currently being operated in compliance with the applicable requirements of the IRC and, therefore, believe that the Plan is qualified as tax-exempt.

(6) Expenses of the Plan

The Plan has paid all reasonable third-party fees and expenses for administration of the Plan, including (but not limited to) trustee fees, record-keeping fees, investment consulting fees, proxy voting fees, and communication expenses. Such expenses may be assessed to participant accounts as a quarterly administrative charge. Expenses incident to the management of the Plan's investments are deducted from the earnings of the respective investments.

(7) Plan Termination

Although it has not expressed any intent to do so, the Company has the right under the Plan to discontinue its contributions at any time and to terminate the Plan subject to the provisions of ERISA.

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(In thousands, except for share data)

(8) Party-In-Interest Transactions

Related-Party and Exempt Party-In-Interest Transactions

The Plan holds Company stock, representing qualifying equity securities as defined by ERISA. The Plan held Company stock valued at \$458,761 and \$502,296 at 31 December 2024 and 2023, representing 17% and 19% of net assets available for benefits, respectively. At 31 December 2024 and 2023, the Plan held 1,581,614 and 1,834,399 shares of Company stock with a cost basis of \$230,007 and \$251,180, respectively. The Plan recorded dividend income of \$12,280 and \$12,507 received from dividends on Company stock during the Plan year ended 31 December 2024 and 2023, respectively.

Plan investments include shares of funds managed by Fidelity. Fidelity is the trustee and record keeper, as defined by the Plan. Therefore, these transactions qualify as exempt party-in-interest transactions. Fees paid for investment management services were included as a reduction of the return earned on each fund. The Plan's investments in funds managed by Fidelity are valued at \$594,680 and \$513,038 at 31 December 2024 and 2023, representing 22% and 20% of net assets available for benefits, respectively.

The Plan also issues loans to participants, which are secured by the vested balances in the participants' accounts.

Nonexempt Party-In-Interest Transactions

The Company remitted certain 2024 participant contributions of \$102 to the trustee later than required by Department of Labor (DOL) Regulation 2510.3-102. The Company made the appropriate corrections in 2024 and intends to file Form 5330 with the IRS and pay the required excise tax on the transaction. In addition, participant accounts were credited with the amount of investment income that would have been earned had the participant contribution been remitted on a timely basis.

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As of 31 December 2024 and 2023, and for the Year Ended 31 December 2024

(In thousands, except for share data)

(9) Reconciliations of Financial Statements to Form 5500

The following is a reconciliation of net assets available for benefits per the financial statements at 31 December 2024 and 2023 to Form 5500:

	2024	2023
Net assets available for benefits per the financial statements	\$2,743,458	\$2,593,473
Adjustment from contract value to fair value for fully benefit-responsive investment contracts	(10,883)	(11,640)
Amounts allocated to withdrawing participants	(1,827)	(688)
Net assets available for benefits per Form 5500	\$2,730,748	\$2,581,145

The following is a reconciliation of benefits paid to participants per the financial statements for the year ended 31 December 2024 to the Form 5500:

	2024
Distributions to participants per the financial statements	\$337,869
Amounts allocated to withdrawing participants at 31 December 2024	1,827
Amounts allocated to withdrawing participants at 31 December 2023	(688)
Distributions to participants per Form 5500	\$339,008

The following is a reconciliation of the net increase in net assets per the financial statements for the year ended 31 December 2024 to the Form 5500:

	2024
Increase in net assets per the financial statements	\$149,985
Change in the adjustment from contract value to fair value for fully benefit-responsive investment contracts	757
Change in amounts allocated to withdrawing participants	(1,139)
Net increase per Form 5500	\$149,603

Air Products and Chemicals, Inc. Retirement Savings Plan
Employer ID No: 23-1274455, Plan No: 001
Schedule H, Part IV, Line 4(a) – Schedule of Delinquent Participant Contributions
For the Year Ended 31 December 2024
(In thousands)

Participant Contributions Transferred Late to the Plan	Total that Constitute Nonexempt Prohibited Transactions			
Check Here if Late Participant Loan Repayments are Included: ✓	Contributions Not Corrected	Contributions Corrected Outside VFCP	Contributions Pending Correction in VFCP	Totally Fully Corrected Under VFCP and PTE 2002- 51
\$102	\$—	\$102	\$—	\$—

Air Products and Chemicals, Inc. Retirement Savings Plan
Employer ID No: 23-1274455, Plan No: 001
Schedule H, Part IV, Line 4(i) – Schedule of Assets (Held at End of Year)
As of 31 December 2024
(In thousands, except for share data)

Identity of issue	Description	Current value
Interest-bearing cash:		
* Fidelity Trust Management Company	Cash	\$12,043
Snyder Small Mid Cap	Cash	3,236
* Invesco Stable Value Fund	Cash	3,704
Bond Index Fund:		
Vanguard Total Bond Market Index Fund	Mutual fund shares: 4,763,143	45,155
Large Cap Value Fund:		
Vanguard Windsor II Fund Admiral	Mutual fund shares: 2,877,520	226,029
International Stock Funds:		
* Fidelity International Discovery Commingled Pool	Commingled investment pool	66,610
Vanguard Total International Stock Index Fund	Mutual fund shares: 256,162	32,461
Life Cycle Funds (Lending Series Fund Class V):		
SS Target Retirement Income Securities	Commingled investment pool	33,773
SS Target Retirement 2020 Securities	Commingled investment pool	38,227
SS Target Retirement 2025 Securities	Commingled investment pool	91,183
SS Target Retirement 2030 Securities	Commingled investment pool	152,640
SS Target Retirement 2035 Securities	Commingled investment pool	100,892
SS Target Retirement 2040 Securities	Commingled investment pool	101,321
SS Target Retirement 2045 Securities	Commingled investment pool	69,332
SS Target Retirement 2050 Securities	Commingled investment pool	60,534
SS Target Retirement 2055 Securities	Commingled investment pool	49,580
SS Target Retirement 2060 Securities	Commingled investment pool	22,199
SS Target Retirement 2065 Securities	Commingled investment pool	8,189
Corporate Bond Fund:		
Western Asset Core Plus Bond CIF R1	Commingled investment pool	45,027
S&P 500 Index Fund:		
* Spartan 500 Index Pool	Commingled investment pool	383,586
Extended Market Index Fund:		
* Spartan Extended Market Index Pool	Commingled investment pool	49,520
Large Cap Growth Fund:		
JPMCB Large Cap Growth Fund	Commingled investment pool	270,428
Common Stock:		
* Air Products and Chemicals, Inc. Common Stock	Common stock shares: 1,581,614; Historical Cost: \$230,007	458,761
Small Mid-Cap Corporate Common Stock		
** Snyder Small Mid Cap	Equity Securities	141,575
Self-Directed Brokerage Account:		
* Fidelity BrokerageLink	Brokerage account for many publicly available mutual funds	79,217
Fixed Income Securities Fund:		
** Invesco Stable Value Fund	Guaranteed investment contracts	164,879
Total investments		\$2,710,101
* Participant loans	Interest rates ranging from 4.25% to 10.50% with various maturity dates	\$19,564

* Represents investments with a party-in-interest.

** Refer to Attachment A for listing of underlying holdings.

Note: Cost information not presented because investments are participant directed.

Air Products and Chemicals, Inc. Retirement Savings Plan
Employer ID No: 23-1274455, Plan No: 001
Attachment A
As of 31 December 2024
(In thousands)

Identity of issue	Description	Current value
Ametek Inc	Common Stock	\$6,384
Amphenol Corp Cl A	Common Stock	7,694
Bio Techne Corp	Common Stock	3,775
Brown & Brown Inc	Common Stock	5,450
BWX Technologies Inc	Common Stock	5,884
Cabot Corp	Common Stock	3,397
Charles River Laboratories International Inc	Common Stock	3,118
Clean Harbors Inc	Common Stock	8,491
Coherent Corp	Common Stock	3,882
Copart Inc	Common Stock	2,893
Dolby Laboratories Inc Cl A	Common Stock	3,449
Entegris Inc	Common Stock	6,408
First American Financial Corp	Common Stock	2,096
FMC Corp	Common Stock	2,711
Graco Inc	Common Stock	2,434
Halozyme Therapeutics Inc	Common Stock	5,724
HEICO Corp Cl A	Common Stock	3,117
Henry Schein Inc	Common Stock	3,947
Hexcel Corp	Common Stock	1,480
Huntington Bancshares Inc	Common Stock	4,786
IDEX Corp	Common Stock	3,420
Ingredion Inc	Common Stock	5,126
Keysight Technologies Inc	Common Stock	2,080
LKQ Corp	Common Stock	3,920
Markel Group Inc	Common Stock	1,781
Mid-America Apartment Communities Inc	Common Stock	2,860
NNN REIT Inc	Common Stock	2,925
Prosperity Bancshares Inc	Common Stock	3,154
Rentokil Initial PLC Sponsored ADR	Common Stock	2,308
SS&C Technologies Holdings Inc	Common Stock	6,662
STERIS PLC	Common Stock	2,896
UGI Corp	Common Stock	4,005
Waste Connections Inc	Common Stock	7,563
WEX Inc.	Common Stock	2,525
Woodward Inc	Common Stock	3,230
	Snyder Small Mid Cap	\$141,575
Dodge & Cox Core Fixed Income Fund	Synthetic	\$8,502
Invesco Core Fixed Income Fund	Synthetic	8,525
Invesco Intermediate Fund	Synthetic	17,357
Invesco Short Term Bond Fund	Synthetic	78,673
Jennison Intermediate Fund	Synthetic	17,372
Loomis Sayles Core Fixed Income Fund	Synthetic	8,530
Loomis Sayles Intermediate Fund	Synthetic	8,706
PIMCO Core Fixed Income Fund	Synthetic	8,521
PIMCO Intermediate Fund	Synthetic	8,693
	Invesco Stable Value Fund	\$164,879

INDEX TO EXHIBIT

Exhibit No.	Description
23.1	Consent of Independent Registered Public Accounting Firm

SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, the trustees (or other persons who administer the employee benefit plan) have duly caused this Annual Report to be signed on its behalf by the undersigned hereunto duly authorized.

Air Products and Chemicals, Inc. Retirement Savings
Plan

(Name of Plan)

Date: 20 June 2025

By: /s/ Sean D. Major

Sean D. Major
Executive Vice President, General Counsel and
Secretary

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in Registration Statement No. 333-204388 of Air Products and Chemicals, Inc. on Form S-8 of our report dated 20 June 2025, relating to the financial statements and supplemental schedules of Air Products and Chemicals, Inc. Retirement Savings Plan, appearing in this Annual Report on Form 11-K of Air Products and Chemicals, Inc. Retirement Savings Plan for the year ended 31 December 2024.

/s/ DELOITTE & TOUCHE LLP

Philadelphia, Pennsylvania
20 June 2025