



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

DIVISION OF  
CORPORATION FINANCE

Mail Stop 4631

August 11, 2016

Via E-mail

Mary T. Afflerbach  
Corporate Secretary and Chief Governance Officer  
Air Products & Chemicals, Inc.  
7201 Hamilton Boulevard  
Allentown, Pennsylvania 18195

**Re: Versum Materials, Inc.  
Amendment No. 2 to Registration Statement on Form 10-12B  
Filed July 22, 2016  
File No. 1-37664**

Dear Ms. Afflerbach:

We have reviewed the above-captioned filing and have the following comments.

General

1. Please include interim financial statements for the period ended June 30, 2016. Please similarly update the financial information throughout your filing. See Rule 3-12(a) of Regulation S-X.

Information Statement Summary, page 1

Competitive Strengths, Strong Financial Performance and Cash Flow Generation, page 3

2. Please expand your disclosures to address the impact of the debt you intend to incur to fund a dividend to Air Products upon the separation on your future cash flow generation here and throughout your filing where you discuss strong historical cash flow generation.

The Separation and Distribution, page 6

3. Please more fully disclose and discuss:
  - The reason(s) why Air Products decided to sell the Performance Materials business rather than include it in the entity to be spun-off;
  - The reason(s) why Air Products decided to proceed with the spin-off of the Electronic Materials business without the Performance Materials business; and,

- The potential impact on the business and operating prospects of the entity to be spun-off based on Air Products' decision to sell approximately half the operations it previously intended to spin-off.

Capitalization, page 46

4. Please update and present your capitalization table to be as of the most recent balance sheet date included in your filing.

Unaudited Pro Forma Financial Statements, page 47

5. Refer to notes (C) and (G) on pages 51 and 52, respectively. Please explain how and why you determined the effective income tax rate reflected in the pro forma combined income statement for the year ended September 30, 2015 is reasonable and appropriate.

Selected Historical Condensed Combined Financial Data, page 53

6. Please expand your disclosures regarding the fact that the historical financial information included in your filing may not be indicative of your future performance to specifically address the impact of the debt you intend to incur to fund a dividend to Air Products upon the separation.
7. Your disclosure appears to indicate you had no assets as of March 31, 2015. Please revise as necessary.

Index to Financial Statements and Supplementary Data, page F-1

1. Basis of Presentation, page F-8

8. You disclose here and on pages 57 and 76 that you have included, in your combined financial statements, the results of certain businesses that have historically been managed by you but will be retained by Air Products after the separation. Since these businesses will be retained by Air Products after the separation, please more fully explain why you have included their results of operations in your financial statements. Please also specifically address how and why you managed these businesses and how and why they will be retained by Air Products.

2. Major Accounting Policies, page F-9

Revenue Recognition, page F-9

9. We note your disclosure that revenue from equipment sale contracts is recorded using **either** the completed contract or percentage-of-completion method. Please fully explain when and why you use each method, including how you determined using both methods is appropriate.

12. Commitments and Contingencies, page F-21

8. Commitments and Contingencies, page F-38

10. We note your disclosure that you are involved in various legal proceedings and although you do not expect any sums you may have to pay would have a material adverse effect on your annual combined financial condition or net cash flows, a future charge could have a significant impact on your net income in the period in which it is recorded. Please be advised, if you believe it is reasonably possible that a proceeding may have a material impact on your financial statements, including your results of operations, you should disclose and discuss the specific nature of each such matter and the range of reasonably possible loss or, if applicable, explain why a range of loss cannot be quantified. Otherwise, please clarify your current disclosures.

15. Segment and Geographic Information, page F-25

11. We note that your top three customers each represented 10% or more of combined sales, accounting for 45% of your sales between both the Materials and Delivery Systems and Services segments. With reference to ASC 280-10-50-42, please disclose the total amount or percentage of revenue from **each** significant customer during **each** period presented. In addition, due to your reliance on significant customers, please provide similar disclosures for the interim periods included in your filing in the interim financial statements or MD&A.

Interim Combined Balance Sheets, page F-31

12. As previously requested, please reflect the intended dividend to Air Products on a pro forma basis alongside your most recent historical balance sheet as required by SAB Topic 1:B:3.

You may contact Jeff Gordon, Staff Accountant, at (202) 551-3866 or Anne McConnell, Staff Accountant, at (202) 551-3709 if you have questions regarding comments on the financial statements and related matters. Please contact Chris Ronne, Staff Attorney, at (202) 551-6156 or Jay Ingram, Legal Branch Chief, at (202) 551-3397 with any other questions.

Sincerely,

*/s/ John Cash, for*

Jay Ingram  
Legal Branch Chief  
Office of Manufacturing and  
Construction

cc: C. Michael Chitwood, Esq.