



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

DIVISION OF
CORPORATION FINANCE

Mail Stop 4631

September 1, 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. 3 to Registration Statement on Form 10-12B
Filed August 26, 2016
File No. 001-37664**

Dear Ms. Afflerbach:

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

Unaudited Pro Forma Combined Financial Statements, page 49

1. We note your response to comment 5 of our letter dated August 11, 2016. Please revise note (C) to explain the reasons for the difference in the pro forma effective income tax rates reflected in the annual and interim pro forma combined income statements as noted in your response letter. Also, please explain to us, and revise your disclosures to clarify, if and how the pro forma adjustments in notes (F) and (G) will impact your effective income tax rates.

Selected Historical Condensed Combined Financial Data, page 56

2. You disclose here that you had total assets of \$890 million as of June 30, 2016; however, your June 30, 2016 balance sheet on page F-31 reflects total assets of \$908 million. Please clarify or revise.

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

Mary T. Afflerbach
Air Products & Chemicals, Inc.
September 1, 2016
Page 2

statements and related matters. Please contact Chris Ronne, Staff Attorney, at (202) 551-6156 or me at (202) 551-3397 with any other questions.

Sincerely,

/s/ Jay Ingram

Jay Ingram
Legal Branch Chief
Office of Manufacturing and
Construction

cc: C. Michael Chitwood, Esq.
Brian V. Breheny, Esq.