



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

Mail Stop 4631

October 28, 2009

Via U.S. mail and facsimile

Mr. Stephen W. Duffy, Esq.
General Counsel
Polymer Holdings LLC
15710 John F. Kennedy Blvd., Suite 300
Houston, TX 77032

**RE: Polymer Holdings LLC
Form S-1 filed October 1, 2009
File No. 333-162248**

Dear Mr. Duffy:

We have reviewed your filing and have the following comments. Where indicated, we think you should revise your document in response to these comments. If you disagree, we will consider your explanation as to why our comment is inapplicable or a revision is unnecessary. Please be as detailed as necessary in your explanation. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure. After reviewing this information, we may raise additional comments.

Please understand that the purpose of our review process is to assist you in your compliance with the applicable disclosure requirements and to enhance the overall disclosure in your filing. We look forward to working with you in these respects. We welcome any questions you may have about our comments or any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

General

1. We note that the registrant's common shares will be issued immediately prior to the completion of the offering and that some of the initial shareholders will be providing the shares for the fulfillment of the over-allotment option. Please advise us as to whether or not the equity holders of the LLC have made an enforceable, final and binding commitment to purchase the shares of common stock they will receive in the reorganization to corporate form. Confirm that the terms on which the equity interests will be exchanged are fixed in accordance with a formula that

varies only as the initial public offering price varies. Please cite us to the provisions of the applicable contractual agreement that binds the parties.

2. We will process this filing and your amendments without price ranges. Since the price range triggers a number of disclosure matters, we will need sufficient time to process the amendment when it is included. Please understand that its effect on disclosure throughout the document may cause us to raise issues on areas not previously commented upon.
3. Please provide us with copies of any graphical materials or artwork you intend to use in your prospectus. Upon review of such materials, we may have further comments. Please refer to Section VIII of our March 31, 2001 update to our Current Issues and Rulemaking Projects outline for additional guidance.
4. As soon as practicable, please furnish to us a statement as to whether or not the amount of compensation to be paid to the underwriters has been cleared by FINRA. Prior to the effectiveness of the registration statement, please provide us with a copy of the clearance letter or a call from FINRA informing us that FINRA has no additional concerns.
5. We are not able to fully assess the significance of the current unit capitalization structure because some of your disclosure is dependant upon the establishment of a specific price within a price range that is not yet disclosed. Because this and other information relating to the conversion of outstanding units is not provided, we cannot evaluate your overall capital structure and the potential impact on common stock holders with respect to the potential range of outcomes arising from the conversion of the outstanding units. We understand that you have not yet formally determined the price range for the offering but it would greatly aid our understanding of the effects of the reorganization if you provide us, as soon as possible, with a version of your document that gives effect to a possible offering price selected by management from a range of potential prices that management would consider acceptable and an estimate of the number of shares to be issued.

Prospectus Cover Page

6. Separately state the amount of common shares being offered by selling stockholders. See Item 501(b)(2) of Regulation S-K.
7. In the third full paragraph, clarify the meaning of the phrase “on the same terms and conditions as set forth above”
8. We note that the disclosure about your industry is based upon industry publications and other industry reports. We also note that you have not independently verified third party information or your own internal research.

Since potential investors should be able to rely upon data and statistics in your registration statement that are based upon reasonable and sound assumptions, your disclosure, as currently drafted, appears inappropriate. Please revise to remove any implication that you are not responsible for assessing the reasonableness and soundness of the market data and statistics presented, which you are reasserting and providing to investors as information upon which their investments will be based.

Summary, page 1

Our Principal Stockholders, page 8

9. Please rename this heading and revise your discussion thereunder to indicate that your principal stockholders are also your “selling stockholders.”

Adjusted EBITDA, page 13

10. We note the items which you have excluded in your Adjusted EBITDA do not appear to comply with Item 10(e)(ii)(B) of Regulation S-K as it appears that some of these charges are reasonably likely to recur within two years. Please either delete your presentation of these non-GAAP measures or provide to us a comprehensive explanation regarding why you believe these measures are appropriate and how you believe they comply with the requirements of Item 10(e) as a non-GAAP performance measure. Please also refer to Question #8 of the SEC “Frequently Asked Questions Regarding the Use of Non-GAAP Financial Measures.”

Risk Factors, page 15

11. We note the statement in the introductory paragraph that the risks described are not the only ones you face and that additional risks and uncertainties may exist. Please clarify that the ensuing discussion covers all material risks or disclose all known material risks and remove language suggesting that there may be other significant risks.
12. We note your statement on page 77 under the heading entitled “Information Systems” that you “are at risk in the event of a system failure at facilities in countries where [you] have not fully implemented the ERP system, which may result in [you] being unable to recover data from such facilities in a timely manner.” Please tell us what consideration you have given to providing relevant disclosure in your Risk Factors section.

The failure of our raw materials suppliers to perform their obligations under long-term..., page 16

13. Please update your disclose under this heading to indicate, as you do on page 75, that you received notice from Shell Chemicals on December 13, 2007, terminating your isoprene supply to your Pernis facility as of December 31, 2009.

Cautionary Note Regarding Forward-Looking Statements, page 31

14. You are not eligible to rely on the safe harbor set forth in the Private Securities Litigation Reform Act of 1995. Refer to section 27A(b) of the Securities Act. Please revise accordingly. Please also delete the word “will” from your list of forward-looking terminology.

Use of Proceeds, page 32

15. To the extent practicable, please provide more specific disclosure regarding the allocation of the offering proceeds. For example, discuss the specific “high priority, high return strategic projects,” referenced on page 66, that you expect to fund from the offering proceeds.

Results of Operations, page 43

16. You cite declines in sales volume in multiple end use markets to explain the total decrease period over period. Please revise your filing to quantify the impact of each end use markets reduction in volume.

Critical Accounting Policies

Income Taxes, page 49

17. Given the significant changes in your deferred tax asset valuation allowance, please enhance your disclosures to identify the positive and negative evidence you consider when determining what changes are required in your valuation allowance. Refer to paragraphs 23 and 24 of SFAS 109.

Impairment of Long-Lived Assets, page 49

18. Revise your filing to include the triggering events which would cause you to perform an impairment analysis of your long-lived assets. Also, please identify when your last impairment analysis was performed. If the fair value of your long-lived assets is not substantially in excess of the carrying value, please revise your filing to disclose the following:

- The percentage by which fair value exceeds carrying value as of the most-recent step-one test;
- A description of the methods and key assumptions used and how the key assumptions were determined;
- A discussion of the degree of uncertainties associated with the key assumptions, and;
- A discussion of any potential events, trends and/or changes in circumstances that could reasonably be expected to negatively affect the key assumptions.

If you have determined that estimated fair values substantially exceed carrying values, please disclose that determination. Refer to Item 303 of Regulation S-K and Section V of Interpretive Release 33-8350 for guidance.

Liquidity and Capital Resources

Operating Cash Flows, page 52

19. Revise your filing to provide a comprehensive discussion of the impacts of changes in working capital items to your operating cash flows for all periods presented. Please also discuss how these changes may have impacted your liquidity.

Business, page 63

Corporate Background, page 64

20. Please describe in further detail the general development of your business by describing the transactions by which your current shareholders acquired their equity interests and by which you had previously changed your ownership and reporting status from public to private. See Item 101(a) of Regulation S-K.

Our Competitive Strengths, page 64

21. We note your statement that “Since 2003, [you] have successfully completed plant expansions totally 60 kilotons of capacity at a total cost of less than \$50 million.” To provide perspective, please also state your total production capacity.

Products, page 67

22. Please state for each of the last three fiscal years the amount or percentage of total revenue contributed by any class of similar products or services. See Item 101(c)(1)(i) of Regulation S-K.

Our End-Use Markets, page 69

23. In the table, please provide your relative market share/position and growth rate figures for your “Emerging Businesses” and “Other Markets” end-use markets. Alternatively, explain in a footnote to the table your reasons for omitting this information.
24. It appears that you use the terms “market share” and “sales revenue share” interchangeably in this section. To avoid confusion to investors, please use terms consistently throughout your disclosure, and to the extent there are differences in terms, please clearly define them.

Research, Development and Technology, page 71

25. Please disclose the estimated amount spent during each of the last three fiscal years on research and development activities that were company-sponsored and that were customer-sponsored. See Item 101(c)(1)(xi) of Regulation S-K.

Sources and Availability of Raw Materials, page 73

26. We note the statement repeated throughout this section indicating that as contracts expire, you cannot give assurances that you will obtain long-term supply agreements or that the terms of such agreements will be on favorable terms. Please disclose the expiration dates for each of the supply agreements upon which you currently rely for your primary raw materials.

Competition, page 75

27. Under this heading, please discuss the principal methods of competition in your industry. See Item 101(c)(1)(x) of Regulation S-K.

Patents, Trademarks, Copyrights and Other Intellectual Property Rights, page 77

28. Please disclose the duration and effect of all your material intellectual property, and indicate whether the expiration of any single intellectual property right or group of such rights may have a material impact on your business.

Environmental Regulation, page 78

29. We note that Shell Chemicals has agreed to indemnify you for specific categories of environmental claims subject to certain time limitations and, in some cases, dollar amounts. Please disclose these limitations. In addition, state how much of the maximum dollar amount has already been used to cover environmental claims. Please also provide similar disclosure under the heading entitled “Legal Proceedings” on page 81 with respect to the asbestos exposure claims.

Management and Board of Directors, page 82

30. We note that your board will be divided up into three classes. Please indicate the board members of each class and when each class's term will expire. See Item 401(a) of Regulation S-K.

Executive Compensation, page 87

Compensation Discussion and Analysis, page 87

Components of Director Compensation, page 88

Base Salary, page 88

31. We note your disclosure that your "Compensation Committee reviews the base salaries of the Named Executive Officers on an annual basis and determines if an increase is warranted based on its review of individual performance, compensation comparisons, and recommendations of the CEO." Please expand your discussion of base salaries to address the following:
- Describe the elements of individual performance that you consider in evaluating your named executive officers' base salaries. To the extent individual performance factors differ among named executive officers, discuss such factors separately for each executive. See Item 402(b)(2)(vii) of Regulation S-K.
 - Explain the analysis you undertake when conducting "compensation comparisons."
32. We note that you increased the base salaries of Messrs. Fogarty and Bradley upon their appointments as President and CEO and as Chief Operating Officer, respectively. Please discuss how you determined the actual increased salary amounts for these individuals. See Items 402(b)(1)(v) and (2)(ix) of Regulation S-K.

Annual Bonus: Incentive Plan Compensation, page 88

33. Please expand and clarify your discussion of your annual incentive plan compensation. In doing so, please address the following:
- Disclose the EBITDA target for 2008, and explain how the actual results above or below this target were valued to produce an available bonus pool amount.

- Discuss the elements of individual performance considered, and their relative weight, when determining whether to adjust each named executive officer's eligible target bonus amount. To the extent individual considerations vary between named executive officers, discuss separately.
- State when your company and individual performance targets are determined.

Special Bonus, page 90

34. We note that "in consideration of the business environment [in January 2008], the board of directors of Kraton voted to grant special bonus awards to certain executives, including the Named Executive Officers." Please briefly describe the "business environment" to which you refer, disclose the special bonus amount you awarded to each of your named executive officers, and describe why the Compensation Committee determined that the amount of the special bonus was appropriate in light of the factors it considered. See Items 402(b)(1)(i) and (ii) of Regulation S-K.

Equity, page 90

Options, page 90

35. We note that the compensation committee "determined that a shorter vesting period was appropriate for [option] grants made during the 2008 fiscal year." Please discuss your compensation committee's reasons for shortening the option vesting periods. See Item 402(b)(1) of Regulation S-K.
36. Please describe "customer tag-along and drag-along rights," which you refer to in the second paragraph and last paragraph on pages 91 and 92, respectively.
37. We note that the compensation committee recommends to TJ Chemical that option grants be made to employees based on their contributions or their potential to contribute to the success of Kraton. Further, we note the significant stock and options grants made to your named executive officers on June 19, 2008. Please explain how the compensation committee and TJ Chemical determined the actual stock and option amounts awarded to each named executive officer and how such awards are appropriate in light of your overall compensation objectives. See Items 402(b)(1)(iv) and (vi) of Regulation S-K.
38. Please explain the purpose of awarding notional units representing membership units in TJ Chemical and restricted membership units in Management LLC, and explain how such awards fit into your overall compensation objectives. In addition, please explain how you determined the actual amounts awarded. See Items 402(b)(1)(i), (iv), (v) and (vi) of Regulation S-K.

Summary Compensation Table, page 95

39. We note your disclosure in footnote (7) to the summary compensation table indicating that amounts shown in the “Change in Pension Value...” column are not included in the “Total” column. Please clarify the meaning of the statement since it appears that you include the amounts reported in column (h) for purposes of determining total compensation as reported in column (j).

Grants of Plan-Based Awards in Fiscal Year 2008, page 97

40. We note from footnote (3) to your grants of plan-based awards table, as well as from page F-13, that “Kraton engaged an independent valuation and financial consultant, Corporate Valuation Advisors, Inc., to perform a valuation of the total equity of TJ Chemical Holdings LLC...” Please provide us with your analysis as to whether the consent of Corporate Valuation Advisors is required to be filed as an exhibit to the registration statement. See Securities Act Section 7(a), Rule 436 of Regulation C, and Interp. 233.02 of our Securities Act Rules Compliance and Disclosure Interpretations.

Outstanding Equity Awards at the End of Fiscal Year 2008, page 98

41. In a footnote to this table, disclose the vesting dates applicable to each equity award. See Instruction 2 to Item 402(f)(2) of Regulation S-K.

Pension Benefits in Fiscal Year 2008, page 100

42. Please provide a narrative description that addresses the material factors necessary to an understanding of each plan set forth in this table. See Item 402(h)(3) of Regulation S-K.

Nonqualified Deferred Compensation During Fiscal Year 2008, page 101

43. Please provide a narrative description detailing the material terms of your Deferred Compensation and Restoration Plan. See Item 402(i)(3) of Regulation S-K.

Named Executive Officers Whose Employment Terminated in Fiscal Year 2008, page 108

44. We note that Kraton agreed to repurchase certain of Mr. Gregory’s vested equity-based rights. Under this heading, please clarify which “equity-based rights” were purchased from Mr. Gregory, and disclose the number of units purchased and the amount of consideration Mr. Gregory received for them. We note your disclosure on page F-30.

Director Compensation During Fiscal Year 2008, page 109

45. Please discuss the reasons for wide variance in the annual retainer and stock option compensation paid to your directors. See Item 402(k) of Regulation S-K.

Principal and Selling Stockholders, page 111

46. Please clearly identify the natural persons who have voting or dispositive authority over the equity interests. See Interp. 140.02 of our Regulation S-K Compliance and Disclosure Interpretations

Certain Relationships and Related Party Transactions, page 114

47. We note your statement in the third paragraph that “[y]our board of directors consists of [y]our chief executive officer and three independent directors.” However, your disclosure on page 85 under the heading entitled “Our Board of Directors” indicates that you “expect to have one director...who satisfies the current independence requirements of the SEC.” Please revise.
48. Please indicate what consideration was given by TJ Chemical in exchange for its call option and whether you must pay TJ Chemical any consideration to terminate the call option as is planned on or prior to the closing of the offering.

Delaware Anti-Takeover Statute, page 118

49. Please briefly describe the effect of Section 203 of the DGCL and of your decision to forego application of this section. See Item 202(a)(5) of Regulation S-K.

Description of Certain Indebtedness, page 119

50. We note that TJ Chemical purchased and then contributed to you \$6.5 million face value of senior subordinated notes, which you then contributed to Kraton. Please clarify here and in your management’s discussion and analysis section what consideration, if any, was paid to TJ Chemical for its contribution of these notes.

Shares Eligible For Future Sale, page 122

51. Please disclose the number of common equity holders that you will have immediately prior to the date of this offering. See Item 201(b) of Regulation S-K.

Underwriting, page 127

52. We from the third paragraph on page 128 that you and the selling stockholders have agreed to indemnify the underwriters or contribute to payments made by the underwriters for liabilities under the Securities Act. Please briefly describe the situations in which you would only be required to contribute, rather than indemnify, the underwriters for such liability. See Item 508(g) of Regulation S-K.

Where You Can Find More Information, page 132

53. We note the disclosure that “[s]tatements contained in this prospectus as to the contents of any contract or other document filed as an exhibit are qualified in all respects by reference to the actual text of the exhibit.” Please explain why you believe it is appropriate to qualify reliance on the disclosure in your prospectus by reference to filed exhibits.

Notes to the Consolidated Financial Statements

1. Summary of Operations and Significant Accounting Policies

Revenue Recognition, page F-10

54. With regard to your product sales, clarify when title transfers to the customer (e.g. when the product is delivered or when the product is shipped to the customer). Refer to SAB Topic 13.3.a.

7. Employee Benefits, page F-23

55. We note at December 31, 2008 that approximately 62% of your pension plan assets were held in Equity Securities. Revise your filings to expand your discussion to include the impact market conditions have had on plan assumptions and the net periodic benefit cost, as well as the expected impact on future operations from a decrease in plan assets, change in expected return and amortization of actuarial loss.

13. Industry Segment and Foreign Operations, page F-37

56. We note that you operate under one reportable segment. It appears from your disclosures elsewhere in the filing, including the summary on page 1, your discussion of the differences in margins by end use product and your entry into the emerging businesses category (specifically with your IRL business) that you may have aggregated multiple operating segments into your reportable segment. Please provide us with a detailed explanation of how you determined both your operating segments and your reportable segment. Your response should

specifically identify each of your operating segments. If you have aggregated any operating segments, please tell us why you believe this aggregation is appropriate based on the guidance found in paragraph 17 of SFAS 131 and EITF 04-10.

7. Long-Term Debt, page F-60

57. Your balance sheet indicates that you have a balance on an insurance note payable. Please revise your filing to explain what this obligation relates to.

Item 16. Exhibits and Financial Statement Schedules, page II-1

58. All exhibits are subject to our review. Accordingly, please file or submit all of your exhibits with your next amendment or as soon as possible. Please note that we may have comments on the legal opinion, consents, and other exhibits once they are filed.
59. Please file or incorporate by reference the following agreements discussed on the pages indicated below or otherwise explain why you believe these agreements are not required to be filed under Item 601(b)(10) of Regulation S-K.
- Patent ownership agreement, page 19.
 - Lock-up agreements, page 28.
 - Joint venture agreement, page 73.
 - Waiver and agreement for one-time pay reduction, page 88
 - Incentive Compensation Plan, page 89.
 - Separation agreement with Mr. Gregory, page 108.
 - Director indemnification agreements, page 110.
 - TJ Chemicals LLC Agreement, page 114.
60. We note that exhibits 10.34-.38 incorporate by reference agreements that have portions omitted in reliance on expired confidential treatment orders. Please file unredacted copies of these agreements or promptly submit a request to the Office of the Secretary for extension of these confidential treatment orders.

Signatures, page II-3

61. Please indicate the dates on which each of your principal officers and directors signed the registration statement.

As appropriate, please amend your registration statement in response to these comments. You may wish to provide us with marked copies of the amendment to expedite our review. Please furnish a cover letter with your amendment that keys your responses to our comments and provides any requested information. Detailed cover letters greatly facilitate our review. Please understand that we may have additional comments after reviewing your amendment and responses to our comments.

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filing to be certain that the filing includes all information required under the Securities Act of 1933 and that they have provided all information investors require for an informed investment decision. Since the company and its management are in possession of all facts relating to a company's disclosure, they are responsible for the accuracy and adequacy of the disclosures they have made.

Notwithstanding our comments, in the event the company requests acceleration of the effective date of the pending registration statement, it should furnish a letter, at the time of such request, acknowledging that:

- should the Commission or the staff, acting pursuant to delegated authority, declare the filing effective, it does not foreclose the Commission from taking any action with respect to the filing;
- the action of the Commission or the staff, acting pursuant to delegated authority, in declaring the filing effective, does not relieve the company from its full responsibility for the adequacy and accuracy of the disclosure in the filing; and
- the company may not assert staff comments and the declaration of effectiveness as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

In addition, please be advised that the Division of Enforcement has access to all information you provide to the staff of the Division of Corporation Finance in connection with our review of your filing or in response to our comments on your filing.

We will consider a written request for acceleration of the effective date of the registration statement as confirmation of the fact that those requesting acceleration are aware of their respective responsibilities under the Securities Act of 1933 and the Securities Exchange Act of 1934 as they relate to the proposed public offering of the securities specified in the above registration statement. We will act on the request and, pursuant to delegated authority, grant acceleration of the effective date.

Mr. Stephen W. Duffy, Esq.
Polymer Holdings LLC
October 28, 2009
Page 14

We direct your attention to Rules 460 and 461 regarding requesting acceleration of a registration statement. Please allow adequate time after the filing of any amendment for further review before submitting a request for acceleration. Please provide this request at least two business days in advance of the requested effective date.

You may contact Mindy Hooker, Staff Accountant, at (202) 551-3732 or John Cash, Accounting Branch Chief, at (202) 551-3768 if you have questions regarding comments on the financial statements and related matters. Please contact Hagen Ganem, Staff Attorney, at (202) 551-3330 or me at (202) 551-3397 with any other questions.

Sincerely,

Jay Ingram
Legal Branch Chief

cc: William F. Gorin, Esq. (via facsimile)
Cleary Gottlieb Steen & Hamilton LLP