



DIVISION OF
CORPORATION FINANCE

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

June 26, 2019

Stavros G. Vizirgianakis
President and Chief Executive Officer
Misonix, Inc.
1938 New Highway
Farmingdale, New York 11735

Re: New Misonix, Inc.
Registration Statement on Form S-4
Filed May 29, 2019
File No. 333-231797

Dear Mr. Vizirgianakis:

We have reviewed your registration statement and have the following comments. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure.

Please respond to this letter by amending your registration statement and providing the requested information. If you do not believe our comments apply to your facts and circumstances or do not believe an amendment is appropriate, please tell us why in your response.

After reviewing any amendment to your registration statement and the information you provide in response to these comments, we may have additional comments.

Registration Statement on Form S-4 filed May 29, 2019

About this Joint Proxy and Consent Solicitation Statement/Prospectus, page i

1. Please tell us the intended purpose and effect of the last sentence in this section. Include in your response whether you believe the named entities are experts for purposes of Section 11 of the Securities Act.

What indemnification obligations will I have as Solsys unitholder under the merger agreement upon completion of the transactions?, page 8

2. Please clarify if the satisfaction of any of these obligations will be limited to the shares held in escrow.

Description of Support Agreements, page 20

3. We note your reference to the agreements to vote. We also note the irrevocable proxy like in section 4 of exhibit 10.2. Please provide us your analysis supporting your conclusions regarding whether offers and sales of the securities registered for sale have already been made and completed. For guidance, see the Division of Corporation Finance's Securities Act Sections Compliance and Disclosure Interpretation 239.13 available on the Commission's website.

Risk Factors, page 29

4. Please add a risk factor to address the obligation to pay the representative's expenses as mentioned on page 116; clarify when the obligation ends. Also add a risk factor to address the material difference in tax consequences of an investment in Solsys Medical LLC and New Misonix, Inc; provide us your analysis of whether Regulation S-K Item 601(b)(8) requires an opinion regarding the disclosure.

New Misonix's operating results may fluctuate..., page 34

5. Please reconcile your fourth bullet point which seems to indicate that New Misonix may manufacture TheraSkin with your disclosure on page 135 that TheraSkin is manufactured by LifeNet.

New Misonix may not be able to effectively protect its intellectual property rights, page 41

6. Please tell us when material patents related to the business of New Misonix and Solsys Medical expire.

As a privately held entity, Solsys was not required to comply with the reporting requirements..., page 46

7. We note the reference to corporate governance reforms in Note 10 to the financial statements contained in Misonix's Form 10-Q for the quarterly period ended March 31, 2019. If material, in an appropriate section of your prospectus, please disclose whether New Misonix will be subject to those reforms.

Reasons for the Charter Amendments, page 60

8. Within your disclosure of each amendment, please balance your discussion of advantages of each amendment with disclosure of the disadvantages of the amendment.

The Transactions, page 66

9. You may not disclaim responsibility for your disclosure. Please revise the penultimate sentence of the first paragraph of this section accordingly.

Background of the Transactions, page 67

10. We note the disclosure that on March 8, 2019, the term sheet contemplated that Solsys' unitholders would receive 37% of the outstanding shares of Misonix on a fully-diluted basis as merger consideration. Revise to indicate the basis for the percentage of Misonix that was offered as merger consideration.
11. Please provide us with all materials, including any board books, provided by the financial advisors to either the Misonix or Solsys boards.
12. Please provide the disclosure required by Form S-4 Item 4(b) regarding the report and opinion of Canaccord mentioned on pages 70 and 78 and the report of J.P. Morgan mentioned on pages 77 and 79.

Positive Factors, page 84

13. We note your disclosure that the combined company could achieve annual cost savings and synergies. Please provide more detailed disclosure about the cost savings and synergies, particularly in light of the transaction structure in which it appears that Misonix and Solsys will operate as separate wholly owned subsidiaries of New Misonix. If that transaction structure could limit savings and synergies, please clarify.

Accelerated Vesting of Series F Profits Interest Awards, page 86

14. Disclose how the number of shares of New Misonix common stock will be determined given any changes in the share price of Misonix common stock as of the closing date.

Opinion of Misonix's Financial Advisor, page 87

15. Please clarify if BRG reviewed the new Distribution and Supply Agreement referred to in the second to last paragraph on page 134.
16. Please quantify the fees mentioned in the first and second paragraphs under the heading "Miscellaneous" on page 95. Also, please file the financial advisor's consent to the references to it in the section under the heading "Certain Unaudited Prospective Financial Information Regarding Misonix and Solsys."

Discounted Cash Flow Analysis, page 90

17. Please revise this section to explain how BRG determined the estimated ranges of weighted average cost of capital used in its analysis. Please also revise to provide additional detail on the "beta and financial metrics reflecting the broader financial markets" used in the capital asset pricing model.

Certain Unaudited Prospective Financial Information Regarding Misonix and Solsys, page 95

18. We note your disclosures on page 97 and 109.
- Please be advised that, notwithstanding the inclusion of general disclaimers, you are responsible for considering whether additional specific disclosures of material information are required to make the information included in your filing not misleading.
 - Please reconcile your statement on page 97 that J.P. Morgan and Canaccord disclaim any association with the information with your disclosure on page 96 that portions of the information were prepared with the assistance of those entities, and provide us your analysis of whether the consent of those entities must be filed with your registration statement.

Selected Unaudited Prospective Financial Information, page 98

19. We note that the prospective financial information is subject to assumptions and estimates. Please disclose the principal material assumptions and estimates underlying this information, and the key operating assumptions underlying the projections through 2029 mentioned on page 90.
20. Please tell us how the Misonix projections disclosed here differ from the projections mentioned in the first paragraph on page 71. Also:
- disclose the cash flow and cash needs projections mentioned on page 73 and 74, the quarterly projections mentioned on page 74, and the key cash flow items mentioned on page 90.
 - clarify whether your statement on page 96 regarding "certain significant elements" means that you have disclosed all of the material projections.

Financing Related to the Transactions, page 100

21. Please provide us your analysis of whether the \$4 million offering of Series E units requires investors to make an investment decision in your common stock registered for sale on this registration statement.

Material U.S. Federal Income Tax Consequences of the Mergers, page 102

22. Please revise to clarify why counsel carves out "the unearned income Medicare contribution tax" in this context. Also, clarify (1) the tax consequences of the "distribution" mentioned on page 105, and (2) how consideration placed in escrow affects the disclosure in this section. For example, will the equity holders be deemed to have received the shares placed in escrow at the time of the closing of the merger? What is the effect of those shares being released back to the issuer?
23. Your disclosure in the last full paragraph on page 103 suggests that counsel's tax opinions may not contain the assumptions that are described in the first sentences under "U.S.

Federal Income Tax Consequences to U.S. Holders of Misonix's Shares" and "U.S. Federal Income Tax Consequences to U.S. Holders of Solsys Membership Interests." Since it is not clear if counsel will be making those assumptions, and those assumptions appear to assume away legal determinations necessary for the ultimate opinions on the tax consequences, please tell us why the disclosed assumptions are appropriate.

The Agreement and Plan of Merger, page 106

24. We note your disclosure that the merger agreement and the "Description of the Merger Agreement" discussion are not intended to provide any other factual information about Misonix, Solsys or New Misonix, Merger Sub One, or Merger Sub Two, and that information can be found elsewhere. We also note your disclosure on page 109 regarding assertions made solely for the purposes of the contract. Please revise to remove any potential implication that the referenced merger agreement and discussion do not constitute public disclosure under the federal securities laws.

Certificate of Incorporation, page 107

25. We note your reference to two versions of the certificate of incorporation attached as Annex B; however, Annex B appears to include one version. Please clarify.

Directors and Officers of New Misonix, page 107

26. We note your disclosure regarding who will serve as directors of New Misonix. Please file all consents required by Securities Act Rule 438.

Consideration in the Solsys Merger, page 108

27. Please clarify the consideration to be issued for each membership interest, including units, equity appreciation rights, profit interest units, warrants, and any other relevant interest or right to an interest. The consideration should be stated in terms of the lowest amount that is assured to be issued. Disclosure may be included that there is a possibility of an increase in the stated consideration if amounts remain in the escrow account after the occurrence of stated events.

Clarify how this consideration is based on the relative economic rights as mentioned on the prospectus cover, and how fractional shares will be addressed. Also clarify:

- how the consideration to be received may differ based on the price of Misonix common stock and the terms of the units as mentioned on page 8. Include as appropriate an illustrative table using a reasonable range of prices of Misonix common stock with columns indicating the respective exchange ratios and other relevant information. In this regard, given that it appears that the formula is based on the trading price of Misonix stock after the vote, please (1) disclose when the actual value of the consideration and number of shares to be issued per membership interest will be determined, and disclose, if true, that the actual value of the consideration and the

number of shares to be issued may differ from the examples, and (2) disclose on the cover page that security holders will not know at the time they return their consents the number of shares they will receive.

- the anticipated time period between the vote and closing.
- the amount of partnership liabilities attributable to each of the membership interests exchanged by the Solsys members as mentioned on page 45. In this regard, given your reference to partnership liabilities here and the required dissolution mentioned on page F-16, please provide us your analysis of whether your agreement involves a roll-up transaction as defined in Regulation S-K Item 901(c).
- how the shares remaining in the escrow account will be distributed among each membership unit under the terms of the operating agreement as mentioned on page 67.

If managers and executive officers disproportionately own interests that are subject to an exchange ratio that materially differs from ratio to be received by holders of other interests, clarify the extent of this difference.

Lock-up, page 117

28. Please disclose the number of shares subject to the lock up mentioned here and on page 122. Also, tell us which exhibit represents the lock-up agreement.

Indemnification by the Solsys Unitholders, page 121

29. Clarify how the shares held in escrow will be valued if they are used to satisfy any indemnification claims.

Note 2 - Financing Transactions and Revenue Recognition, page 129

30. We note that you performed a preliminary review of Solsys' revenue streams and determined that no pro forma adjustments related to ASC Topic 606 were necessary for the nine months ended March 31, 2019. We also note from Solsys' disclosures on page F-30 that the company is still in the process of determining the effect related to ASC 606. In light of this disclosure, please explain to us how management concluded no pro forma adjustments were necessary. Clearly describe to us the procedures management performed in making this determination.

Note 3 - Pro Forma Adjustments

a) Preliminary Purchase Price Adjustments, page 129

31. We note intangible assets have been assigned a fair value of approximately \$21.8 million and a weighted average useful life of approximately 20 years. Please revise your filing to disclose how you determined the fair value and useful lives assigned to intangible assets acquired, including any significant uncertainties associated with valuations and useful lives.

32. As a related matter, we note from the disclosures on page F-28 that Solsys' supply and distribution agreement for TheraSkin has a current term through October 26, 2027 and a three year renewal option. Please tell us how these contractual restrictions were considered in determining the fair value and useful life of the TheraSkin trade name.

Pro Forma Adjustments to the Statement of Operations for the Year Ended June 30, 2018 , page 131

33. Reference is made to adjustments (j) and (p). Please revise to disclose the gross impact of the interest expense adjustments.
34. Reference is made to adjustments (l) and (r). Please revise to explain how you determined the depreciation expense adjustments related to your step-up of property, plant and equipment including the useful lives.
35. Reference is made to adjustments (n) and (u). Please explain to us why the elimination of the Solsys interest expense charges for financing exit fees of \$118,000 and \$63,000 for the year ended June 30, 2018 and nine months ended March 31, 2019, respectively, are presented as additions to interest expense.

Business of Solsys, page 133

36. Please tell us whether you or Solsys paid for the studies, publications or data mentioned in this section, and whether there have been material adverse results from use of the product reported in studies or otherwise. If Misonix or Solsys were affiliated with the preparation of any of the data included in the prospectus, please ensure that your disclosure clearly indicates the nature of all such affiliations.

Dependence on LifeNet, page 139

37. We note the second paragraph of this section. Please disclose the material termination provisions. Also disclose in this section the duration of the agreement.

Management's Discussion and Analysis of Financial Condition and Results of Operations of Solsys

Results of Operations, page 145

38. We note in the discussion of your revenue that you present a measure of "if all sales of TheraSkin were reported as net sales, whether by LifeNet or Solsys as vendor of record." As this appears to be a non-GAAP measure, please tell us how you considered the guidance of Item 10(e) of Regulation S-K and Question 100.04 of the Compliance & Disclosure Interpretations on the use of Non-GAAP Financial Measures.

Revenue, page 146

39. Please clarify the extent of the price increases absent the effect of product size mix and contractual price erosion. Also clarify what you mean by contractual price erosion, and describe any known trends related to your contractual prices, shipping and handling costs, or otherwise as required by Regulation S-K Item 303.

General and Administrative Expenses, page 147

40. Please expand your disclosure to discuss the magnitude of the increase absent the modification fee mentioned on page F-18.

Liquidity and Capital Resources, page 147

41. Please address the \$2.1 million obligation mentioned on page F-38.

Borrowing Arrangements, page 148

42. Please clarify whether Solsys is currently in default under the terms of its debt arrangements.

Summary Compensation Table, page 152

43. Please provide the disclosure required by the Instructions to Regulation S-K Item 402(c)(2)(v) and (vi) or Item 402(n)(2)(v) and (n)(2)(vi), as appropriate.

Security Ownership of Certain Beneficial Owners and Management of Solsys, page 157

44. Please provide the information required by Regulation S-K Item 403(a) for each class of Solsys voting securities and Item 403(b) for each class of equity securities. Also disclose (1) the natural person or persons who exercise the sole or shared voting and/or dispositive powers with respect to the Solsys securities held by the legal entities listed in the table, and (2) the effect of the transactions as required by Regulation S-K Item 201(b)(2).

Management of New Misonix, page 159

45. Please provide the information required by Regulation S-K Item 407(a) as required by Form S-4 Item 18(a)(7). Also, disclose all periods during which your CEO served as a director of Misonix.

Description of New Misonix's Capital Stock, page 161

46. Please tell us the authority on which you rely to qualify your disclosure by reference to statutes as you do in the first paragraph of this section.

Classified Board; Election and Removal of Directors; Filling Directors, page 163

47. We note Section 5 of Article VI of Annex B. Please disclose the terms for removing directors and clarify, if true, that removal of directors would only be for cause and require approval by a shareholder vote by the holders of at least a 66-2/3% of the voting power of the then outstanding voting stock of New Misonix. Please ensure your disclosure regarding removal of directors on page 175 is consistent in this regard.

Comparison of Shareholder Rights, page 164

48. Please address sections 10 and 11 of the New Misonix bylaws.
49. Please present separately on your form of proxy each material provision in New Misonix's organizational documents that represents a material change from Misonix's organizational documents if the change would require approval of Misonix shareholders under state law, the rules of a national securities exchange, or the Misonix organizational documents if proposed to be made directly in its own organizational documents. Consider for example the multiple amendments currently presented as one proposal beginning on page 59, the increase in authorized shares mentioned on page 167, and Article VIII Section 2 on page B-5. For guidance, see the Division of Corporation Finance's "Compliance and Disclosure Interpretations (Regarding Unbundling under Rule 14a-4(a)(3) in the M&A Context)" available on the Commission's website.

Incorporation of Certain Documents by Reference, page 185

50. We note your disclosure that you are incorporating by reference the referenced documents filed after the date of your document and prior to the date of the special meeting of the Misonix shareholders. Since a meeting is not being held for the security holders of Solsys, please provide us with your analysis as to why you should not incorporate by reference the filings made by Misonix prior to the date on which the contemplated transactions are consummated. Also, please revise the reference to the Form 8-K filed on "January 22, 2019" to reflect its actual filing date.
51. We note your incorporation by reference of the description of "our common stock" contained in Misonix's Form 8-A and subsequent amendments. Please tell us if this is intended to supersede the description of New Misonix's capital stock included in the S-4 or revise your disclosure as appropriate.
52. Please reconcile the last paragraph on page 185 with the documents filed under Rule 425.

Solsys Medical, LLC Financial Statements for the Years Ended December 31, 2018 and December 31, 2017

Note 1 – Nature of Business and Significant Accounting Policies

Revenue Recognition, page F-10

53. We note that beginning in July 2018 you began recognizing sales of Theraskin on a gross basis. Please describe to us the material changes in your agreement with LifeNet Health that changed your revenue recognition from a net to gross basis. Clearly explain to us the factors you considered in determining to report sales from TheraSkin as a principal.

Solsys Medical LLC Financial Statements for the Three Month Periods Ended March 31, 2019 and 2018

Note 10 – Subsequent Events, page F-37

54. We note that the fair value equity appreciation rights and Profit Interest Units were valued at \$0 and that you were unable to reasonably estimate a fair value. Please tell us why you were unable to reasonably estimate a fair value and explain how these rights were accounted for in your pro forma financial statements.

Exhibit Index, page II-5

55. We note the last footnote on page II-6. Revise your index to mark which exhibits omit schedules, annexes or exhibits. Also, with respect to your reference to Item 601(b)(2) of Regulation S-K in your last footnote, please tell us if you are redacting information from any of your exhibits. If you are relying on Item 601(a)(5) to omit schedules (or similar attachments) to your exhibits, please revise as appropriate.

Exhibits

56. Please file the employment agreements mentioned on page 22. Also, please show us how the proxy statement complies with Regulation S-K Item 402(t) and Rule 14a-21(c).

We remind you that the company and its management are responsible for the accuracy and adequacy of their disclosures, notwithstanding any review, comments, action or absence of action by the staff.

Refer to Rules 460 and 461 regarding requests for acceleration. Please allow adequate time for us to review any amendment prior to the requested effective date of the registration statement.

Stavros G. Vizirgianakis
Misonix, Inc.
June 26, 2019
Page 11

You may contact Eric Atallah at (202) 551-3663 or Kevin Kuhar, Accounting Branch Chief, at (202) 551-3662 if you have questions regarding comments on the financial statements and related matters. Please contact Tim Buchmiller at (202) 551-3635 or Russell Mancuso, Legal Branch Chief, at (202) 551-3617 with any other questions.

Sincerely,

Division of Corporation Finance
Office of Electronics and Machinery

cc: Jonn R. Beeson, Esq.