



DIVISION OF
CORPORATION FINANCE

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

Mail Stop 3720

August 10, 2007

Mr. John A. Martell
Chief Executive Officer
MISCOR Group, Ltd.
1125 South Walnut Street
South Bend, Indiana 46619

Re: MISCOR Group, Ltd.
Registration Statement on Form S-1
File No. 333-144557
Filed June 13, 2007

Dear Mr. Martell:

We have limited our review of your Form S-1 to consideration of the structure of your offering, the disclosure concerning the convertible debt securities and stock underlying warrants, and related matters, and we 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 or may not 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 you are registering the sale of approximately 263 million shares of common stock. Given the size relative to the number of shares outstanding held

by non-affiliates, the nature of the offering and some of the selling security holders, the transaction appears to be a primary offering. Because you are not eligible to conduct a primary offering on Form S-3, you are not eligible to conduct a primary at-the-market offering under Rule 415(a)(4). Therefore, you should withdraw the current registration statement, file a new registration statement for the resale offering at the time of each conversion, include a fixed price at which the security holder will sell the securities and identify the selling security holders as underwriters in the filing. If you disagree with our analysis, please advise us of your basis for determining that the transaction is appropriately characterized as a transaction that is eligible to be made under Rule 415(a)(1)(i). In your analysis, please address the following among any other relevant factors:

- The number of selling shareholders and the percentage of the overall offering made by each shareholder;
 - The date on which and the manner in which each selling shareholder received the shares and/or the overlying securities;
 - The relationship of each selling shareholder with you, including an analysis of whether the selling shareholder is your affiliate;
 - Any relationships among the selling shareholders;
 - The dollar value of the shares registered in relation to the proceeds that you received from the selling shareholders for the securities, excluding amounts of proceeds that were returned (or will be returned) to the selling shareholders and/or their affiliates in fees or other payments;
 - The discount at which the shareholders will purchase the common stock underlying the debentures and notes (or any related security, such as the warrants) upon conversion or exercise; and
 - Whether or not any of the selling shareholders is in the business of buying and selling securities.
2. Please explain the discrepancies in the following disclosure:
- your statement on your prospectus cover page that the prospectus relates to the resale by the selling shareholders of 262,503,252 shares of your common stock;
 - your statement in the summary of the offering on page three that the selling shareholders are offering 235,065,484 shares; and
 - that the sum of all shares being offered in the principal and selling shareholder table on pages 16-19 equals 239,007,495 shares.

Furthermore, tell us in your response letter whether you are continuing to register shares issuable upon conversion of debt held by Laurus Master Fund that was repaid in January 2007. Lastly, explain why you are unable to determine the number of shares that the selling shareholders have already sold, as disclosed on page 14. Explain what other steps you have taken to determine the number of shares already sold, such as contacting the selling shareholders.

The Offering, page 3

3. Please disclose that you are registering for resale substantially all of your outstanding shares. Disclose that the shares being registered represent ___% of your shares currently outstanding and ___% of your shares held by non-affiliates.
4. Disclose the total dollar value of the securities underlying the convertible notes, debentures, and warrants that you have registered for resale (using the number of underlying securities that you have registered for resale and a recent market price per share for those securities).

Principal and Selling Shareholders, page 15

5. Disclose in a table the dollar amount of each payment (including the value of any payments to be made in common stock) in connection with the convertible debt securities transactions that you have made or may be required to make to the selling shareholders, any affiliate of the selling shareholders, or any person with whom any selling shareholder has a contractual relationship regarding the transaction (including any interest payments, liquidated damages, payments in warrants, payments made to “finders” or “placement agents,” and any other payments or potential payments). Please provide footnote disclosure of the terms of each such payment. Please do not include any repayment of principal on the convertible securities in this disclosure.

Further, disclose the net proceeds to you from the sale of the convertible debt and the total possible payments to the selling shareholders and any affiliates in the first year following the sale of the convertible notes.

6. Please disclose the total possible profit the selling shareholders could realize as a result of any conversion and exercise price discount for the securities underlying the convertible debt and warrants, presented in a table with the following information disclosed in separate columns or rows:
 - the current market price per share of the securities underlying the convertible debt and warrants;
 - the current conversion and exercise price per share of the underlying

securities, calculated by using the price per share established in the convertible notes and warrants;

- the total possible shares underlying the convertible debt and warrants (assuming no interest payments and complete conversion and exercise throughout the term of each convertible debt and warrant);
- the combined market price of the total number of shares underlying the convertible debt and warrants, calculated by using the current market price per share and the total possible shares underlying the convertible debt and warrants;
- the total possible shares the selling shareholders may receive and the combined conversion and exercise price of the total number of shares underlying the convertible note and warrants calculated by using the conversion and exercise prices of the convertible note and warrants and the total possible number of shares the selling shareholders may receive; and
- the total possible discount to the market price of the convertible notes and warrants, calculated by subtracting the total conversion and exercise price from the combined market price of the total number of shares underlying the convertible note and warrants on that date.

If there are provisions in the convertible debenture and warrants that could result in a change in the price per share upon the occurrence of certain events, please provide additional tabular disclosure as appropriate. For example, if the conversion price per share is fixed unless and until the market price falls below a stated price, at which point the conversion price per share drops to a lower price, please provide additional disclosure.

7. Please provide us in your response letter, with a view toward disclosure in the prospectus, a table showing the total possible profit to be realized as a result of any conversion or exercise price discounts for securities underlying any other warrants, options, notes, or other MISCOR Group securities that are held by the selling shareholders or any affiliates of the selling shareholders, presented in a table with the following information disclosed in separate columns or rows:

- the current price per share of the underlying securities;
- the current conversion/exercise price per share of that other security, calculated as follows:
 - if the conversion/exercise price per share is set at a fixed price, use the current price per share; and

- if the conversion/exercise price per share is not set at a fixed price and, instead, is set at a floating rate in relationship to the market price of the underlying security, use the conversion/exercise discount rate and the current market price per share and determine the conversion/exercise price per share as of that date;
 - the total possible shares to be received under the particular securities (assuming complete conversion/exercise);
 - the combined market price of the total number of underlying shares, calculated by using the current market price per share and the total possible shares to be received;
 - the total possible shares to be received and the combined conversion/exercise price of the total number of shares underlying that other security calculated by using the current conversion/exercise price and the total possible number of underlying shares; and
 - the total possible discount to the current market price, calculated by subtracting the total conversion/exercise price from the combined current market price of the total number of underlying shares.
8. Please provide us in your response letter, with a view to disclosure in the prospectus, a table of all prior securities transactions between you (or any of your predecessors) and the selling shareholders, any affiliates of the selling shareholders, or any person with whom any selling shareholder has a contractual relationship regarding the transaction (or any predecessors of those persons), with the table including the following information disclosed separately for each transaction:
- the date of the transaction;
 - the number of shares of the class of securities subject to the transaction that were outstanding prior to the transaction;
 - the number of shares of the class of securities subject to the transaction that were outstanding prior to the transaction and held by persons other than the selling shareholders, affiliates of the company, or affiliates of the selling shareholders;
 - the number of shares of the class of securities subject to the transaction that were issued or issuable in connection with the transaction;
 - the percentage of total issued and outstanding securities that were issued or

issuable in the transaction (assuming full issuance), with the percentage calculated by taking the number of shares issued or issuable in connection with the applicable transaction, and dividing that number by the number of shares issued and outstanding prior to the applicable transaction and held by persons other than the selling shareholders, affiliates of the company, or affiliates of the selling shareholders;

- the market price per share of the class of securities subject to the transaction immediately prior to the transaction (reverse split-adjusted, if necessary); and
- the current market price per share of the class of securities subject to the transaction (reverse split-adjusted, if necessary).

9. Please disclose the following information:

- a materially complete description of the relationships and arrangements that have existed in the past three years or are to be performed in the future between you (or any of your predecessors) and the selling shareholders, any affiliates of the selling shareholders, or any person with whom any selling shareholder has a contractual relationship regarding the transaction (or any predecessors of those persons) – the information provided should include, in reasonable detail, a complete description of the rights and obligations of the parties in connection with the sale of the convertible debt and warrants; and
- copies of all agreements between you (or any of your predecessors) and the selling shareholders, any affiliates of the selling shareholders, or any person with whom any selling shareholder has a contractual relationship regarding the transaction (or any predecessors of those persons) in connection with the sale of the convertible debt and warrants.

If it is your view that such a description of the relationships and arrangements between and among those parties already is presented in the prospectus and that all agreements between and/or among those parties are included as exhibits to the registration statement, please provide us with confirmation of your view in this regard.

10. Disclose whether – based on information obtained from the selling shareholders – the selling shareholders have an existing short position in your common stock and, if any selling shareholder has an existing short position in your stock, the following additional information:

- the date on which each such selling shareholder entered into that short position; and

- the relationship of the date on which each such selling shareholder entered into that short position to the date of the announcement of the January 2007 private placements and the filing of the registration statement (*e.g.*, before or after the announcement of the January 2007 private placements, before the filing or after the filing of the registration statement, etc.).

Management's Discussion and Analysis, page 35

11. Disclose in a table:

- the gross proceeds paid or payable to you in the convertible debt transactions;
- all payments that have been made or that may be required to be made by you that are disclosed in response to comment five above;
- the resulting net proceeds to you; and
- the combined total possible profit to be realized as a result of any conversion discounts regarding the securities underlying the convertible notes and any other warrants, options, notes, or other MISCOR Group securities that are held by the selling shareholders or any affiliates of the selling shareholders that is disclosed in response to comments six and seven.

Further, please disclose – as a percentage – the total amount of all possible payments as disclosed in response to comment five above and the total possible discount to the market price of the shares underlying the convertible notes and warrants as disclosed in response to comment six divided by the net proceeds to you from the sale of the convertible notes and warrants.

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As appropriate, please amend your filing 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 amendments 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.

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 Paul Fischer, Staff Attorney, at (202) 551-3415, Kathleen Krebs, Special Counsel, at (202) 551-3350, or me at (202) 551-3810, with any other questions.

Sincerely,

Larry Spigel
Assistant Director

Cc: Richard L. Mintz, Esq. (by facsimile)

Mr. John A. Martell
MISCOR Group, Ltd.
August 10, 2007
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