Docket Number **RECORDA** ATMI-673/674 TO THE HONORAB 102589003 3 AND TRADEMARKS: Please record the attached original document or copy thereof. 1. Name of conveying party (ies): 2. Name and address of receiving party: ESC, Inc. Advanced Technology Materials, Inc. 115 Research Drive 7 Commerce Drive Bethlehem, PA Danbury, Connecticut 06810 Additional name(s) of conveying Additional name(s) and addresses party (ies) attached? ☐ Yes ☒ No attached? ☐ Yes ☒ No 3. Nature of conveyance: ■ Assignment ☐ Merger ☐ Security Agreement ☐ Change of Name ☐ Other Execution Date: October 23, 2003 4. Application number(s) or patent number(s): SEE ATTACHED If this document is being filed together with a new application, the execution date of the application is: A. Patent Application No.(s) B. Patent No.(s) Additional numbers attached? ☐ Yes ☐ No 5. Name and address of party to whom 7. Total Fee (37 CFR 3.41): \$ 40 correspondence concerning document should be mailed: Enclosed William F. Ryann, Esq. Authorized to be charged to deposit Advanced Technology Materials, Inc. account 7 Commerce Drive Danbury, Connecticut 06810 Telephone: 203-794-1100 6. Total number of applications and patents 8. Deposit account number: involved: 1 50-0860 DO NOT USE THIS SPACE 9. Statement and signature. To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy. October 23, 2003 Date William F. Ryann 30/2003 ECDOPER 00000158 500860 09781859 Reg. No. 44,313

> PATENT REEL: 014636 FRAME: 0451

Attachment to Recordation Coversheet for Assignment of ESC, Inc. toAdvanced Technology Materials, Inc.

ATMI-673	09/781,859	2/12/2001	Post Chemical-Mechanical Planarization (CMP) Cleaning Composition	011545/0892
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ATMI-674	6,627,587 B2	9/30/2003	Cleaning Compositions	011733/0273

PATENT REEL: 014636 FRAME: 0452

ASSIGNMENT

ESC, Inc., having offices at 115 Research Drive, Bethlehem, Pennsylvania, is the assignee and owner of the following patent and patent applications in accordance with Assignments recorded in the assignments records of the United States Patent and Trademark Office as below identified,

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ATMI-674	6,627,587 B2	9/30/2003	Cleaning Compositions	011733/0273

Advanced Technology Materials, Inc, for the benefit of itself, its successors assigns, all inclusively hereinafter referred to as the "Assignee", desires to acquire the entire right, title and interest in and to such inventions, such applications, all inventions disclosed in such applications identified in the above table, and any and all Letters Patents of the United States and of all other countries which may be granted for such invention or inventions, or any of them.

ESC, Inc., hereby conveys, assigns and transfers to the Assignee its full and entire right, title and interest in and to such inventions and such applications, including all priority rights arising therefrom, all inventions disclosed in such application, and any and all Letters of Patents of the United States and of all other countries, together with the right to apply for such Letters of Patents which may be granted for such invention, inventions, or any of them.

PATENT REEL: 014636 FRAME: 0453

ATMI-673/674

By this Assignment, the Assignee has, holds and enjoys such inventions, such application, and such Letters Patents, for its own use and benefit, to the full end of the term or terms for which such Letters Patents may be granted, as fully and entirely as the same would have been held and enjoyed by ESC, Inc., had this assignment not been made.

On behalf of ESC, Inc., the undersigned hereby authorizes and requests the Commissioner of Patents and Trademarks of the United States and the appropriate officers of all foreign countries to issue any and all Letters Patents which may be granted on such applications above referred to or for such inventions, or any of them, to the Assignee in accordance with the terms of this instrument.

ESC, Inc., hereby agrees to execute and sign without further consideration any other legal documents, and any other assignments and any divisional, continuing, renewal, reissue or other applications for all patents that may be appropriate and may be deemed necessary by the Assignee to fully secure to the Assignee its interests in such inventions or any part thereof and in such patents or any of them.

ESC, Inc., further covenants and agrees that ESC, Inc. will communicate to the Assignee, its successors, assigns or other legal representatives, any facts known to ESC, Inc. relating to such invention and any patent that may be granted thereon, and will testify as to the same in any interference or litigation when requested to do so.

ESC, Inc. hereby covenants that ESC, Inc. has not hitherto assigned or granted any license to make, use or sell said invention, and that ESC, Inc. will not hereafter purport to assign, license or execute any instrument to that effect in conflict with this assignment.

Date

10-23-2003

RECORDED: 10/24/2003

Name: Daniel P./Sharkey
Title: Vice President

REEL: 014636 FRAME: 0454