#### Record of Letter Ballot Review by TC Chapter for Procedural Review

Region/Locale: North America

**Global Technical Committee: Liquid Chemicals** 

TC Chapter Cochairs: Don Hadder (INTEL), Laura Ledenbach (Peroxy Chemicals), Steve Rogers (KMG

Chemicals), Koh Murai (MegaFluid Systems)

Standards Staff: Inna Skvortsova

|   | Scheduled in Background Statement | Actual               |
|---|-----------------------------------|----------------------|
| Date  | 11/05/2019                        | 11/05/2019           |
| Location  | SEMI HQ, Milpitas CA              | SEMI HQ, Milpitas CA |
| Reason for<br>Change of Date<br>and/or Location<br>(if changed) |                                   |                      |

Note: See Regulations ¶ 9.5 Exceptions for allowable reason to change.

#### I. Document Number and Title

| <b>Document Number</b> | Document Title                          |
|------------------------|---|
| 6490                   | Revision to SEMI C93-0217 GUIDE FOR     |
|                        | DETERMINING THE QUALITY OF ION EXCHANGE |
|                        | RESIN USED IN POLISH APPLICATIONS OF    |
|                        | ULTRAPURE WATER SYSTEM                  |

## II. Tally

Standards staff to fill in.

Voting Tally: As-cast tally after close of voting period

Note: A minimum of 60% of the Voting Interests that have TC Members within the global technical committee that issued the Letter Ballot must return Votes. (*Regulations* ¶ 9.6.2.1.1)

#### Voting Tally (with example values):

| Voting Interest:          | Returned Votes |   | Distribution |      | Return Rate     |      |
|---------------------------|----------------|---|--------------|------|-----------------|------|
| Letter Ballot             | 69             | ÷ | 113          | ] =  | 61.1%           | ≥60% |
| Intercommittee Ballot     | 15             |   |              |      |                 |      |
| Voting Interest Reject(s) | 0              |   | Total        | Vote | rs with Rejects | 0    |
| Voting Interest Accept(s) | 36             | ] |              |      |                 |      |

Note: See Regulations § 3.2.1 for definition of Voting Interest.

# III. Rejects None

# **IV. Other Technical Issues** None

#### **V. Comments**

V- (i) Voters' Comments
Commenter 1 (Chan, Qilin/ 3M) - Comment 1

| enter i (Chan, Qilli) - Comment i                            |   |   |   |  |  |  |  |
|--|---|---|---|--|--|--|--|
| *TF/TC Chapter to fill in section/paragraph #, if necessary. |   |   |   |  |  |  |  |
| (1)7<br>sigr<br>(2)  | Minor changes suggested: (1)Table A2-6 does not report uncertainty for the metal concentrations. It does not explain the '*' sign. It leaves tungsten(W) blank in resin B. (2) Tables A2-1, Figures A2-1, A2-2. These data do not show the lower limit of quantification, and the data at high flush volume appear very noisy and questionable. |   |   |  |  |  |  |
| The  | e TC Chapt  | er aç   | greed to do one of the following actions.   |  |  |  |  |
| *No motion is required in this step.                         |   |   |   |  |  |  |  |
|  | Already addressed by Commenter #, Comment #   |   |   |  |  |  |  |
|  | No further action was taken by the TC Chapter.  |   |   |  |  |  |  |
|  | Refer to the TF for more consideration.   |   |   |  |  |  |  |
| Χ  | New Busir   | ness  |   |  |  |  |  |
|  | Editorial C   | hang  | ge  |  |  |  |  |
|  | 0.46.4.4  |   | Case 1: No vote in this section:  |  |  |  |  |
| for  |   |   | To be included and voted on as a group in § VI. <i>Editorial Changes Other than Those Voted on in § V</i> .   |  |  |  |  |
|  | change  |   | Case 2: Voted in this section:  |  |  |  |  |
|  | (check<br>one)  |   | Original section number and at least one full sentence are required in "FROM" and "TO" fields.  |  |  |  |  |
|  | Min (1) is sign (2) the The   | Minor changes (1)Table A2-6 sign. It leaves a (2) Tables A2- the data at high  The TC Chapt  *No motion is  Already ac No further Refer to th X New Busin Editorial Co  Options for editorial change (check | Minor changes sugg<br>(1)Table A2-6 does<br>sign. It leaves tungs<br>(2) Tables A2-1, Fig<br>the data at high flus<br>The TC Chapter ag<br>*No motion is requ<br>Already addres<br>No further action<br>Refer to the TF<br>X New Business<br>Editorial Change<br>(check |  |  |  |  |

Commenter 2 (Futatsuki, Takashi / Organo) - Comment 1

| Comm  | *TF   | *TF/TC Chapter to fill in section/paragraph #, if necessary. |  |  |  |  |  |  |  |  |
|---|---|--|--|--|--|--|--|--|--|--|
| One anxiety that one of the analysis method referred in the Guide can be achieved instrument commercially available from only one company in the world. |   |  |  |  |  |  |  |  |  |  |
|   | The   | e TC Chapter agreed to do one of the following actions.      |  |  |  |  |  |  |  |  |
| Δ   | *No motion is required in this step.        |  |  |  |  |  |  |  |  |  |
| ction   | Already addressed by Commenter #, Comment # |  |  |  |  |  |  |  |  |  |
| X No further action was taken by the TC Chapter.  |   |  |  |  |  |  |  |  |  |  |
|   |   | Refer to the TF for more consideration.                      |  |  |  |  |  |  |  |  |

|  | New Business                |      |   |  |  |  |
|--|-----------------------------|------|---|--|--|--|
|  | Editorial C                 | hanç | ge  |  |  |  |
|  |                             |      | Case 1: No vote in this section:  |  |  |  |
|  | Options<br>for<br>editorial |      | To be included and voted on as a group in § VI. Editorial Changes Other than Those Voted on in § V. |  |  |  |
|  | change                      |      | Case 2: Voted in this section:  |  |  |  |
|  | (check<br>one)              |      | Original section number and at least one full sentence are required in "FROM" and "TO" fields.      |  |  |  |

Commenter 3 (Yokoi, Ikunori / Kurita) - Comment 1

|         | enter 3 (Tokor, Ikuriott/ Kurita) - Comment 1   |  |   |  |  |  |  |  |
|---------|---|--|---|--|--|--|--|--|
| Comment | *TF/TC Chapter to fill in section/paragraph #, if necessary.  |  |   |  |  |  |  |  |
| nent    | Use the same resin sample ID (1-6 or A-F, spool or baseline or blank). It is inappropriate a standard document. |  |   |  |  |  |  |  |
|         | The   | e TC Chapt                                     | er agreed to do one of the following actions.   |  |  |  |  |  |
|         | *No   | motion is                                      | required in this step.  |  |  |  |  |  |
| A       |   | Already addressed by Commenter #, Comment #    |   |  |  |  |  |  |
| Action  |   | No further action was taken by the TC Chapter. |   |  |  |  |  |  |
|         |   | Refer to the TF for more consideration.        |   |  |  |  |  |  |
|         | Χ   | New Business                                   |   |  |  |  |  |  |
|         |   | Editorial C                                    | change  |  |  |  |  |  |
|         |   |  | Case 1: No vote in this section:  |  |  |  |  |  |
|         |   | Options<br>for<br>editorial                    | To be included and voted on as a group in § VI. Editorial Changes Other than Those Voted on in § V. |  |  |  |  |  |
|         | change  |  | Case 2: Voted in this section:  |  |  |  |  |  |
|         |   | (check<br>one)                                 | Original section number and at least one full sentence are required in "FROM" and "TO" fields.      |  |  |  |  |  |

This table is needed for each Comment accompanied a Vote

# VI. Editorial Changes Other than Those Voted on in § V None

# **VII. Approval Conditions Check**

## VII. - (i). Approval Rate

APPROVAL CONDITION 1: All Negatives have been discussed and were withdrawn, found not related, found not persuasive, or addressed by a technical change. (*Regulations* ¶ 9.6.2.1.2)

APPROVAL CONDITION 2: At least 90% of the sum of valid Voting Interest Accept and Voting Interest Reject Votes must be Accept. (*Regulations* ¶ 9.6.2.1.3)

Note: If both approval conditions are not satisfied, the Document fails.

|               |   | Accepts |   | (Accepts +<br>Valid Rejects) |   |        |      |
|---------------|---|---------|---|------------------------------|---|--------|------|
| Approval Rate | = | 36      | 1 | 36                           | = | 100.0% | ≥90% |
|               |   |         |   |                              |   |        |      |

#### VII. – (ii) Approval Level (check one)

Note: See *Regulations* § 9.6.2 for further information.



#### **Globally Approved (No Ratification Ballot needed):**

The Letter Ballot meets the Letter Ballot approval conditions for the global technical committee.



#### **Need a Ratification Ballot:**

The Letter Ballot meets the Letter Ballot approval conditions for the TC Chapter and a Ratification Ballot will be issued to validate technical changes.

# **VIII. Safety Check**

Note: See Regulations § 15 for further information.

|                             | X  | <b>This is not a Safety Document</b> , when all safety-related information is removed, the Document is still technically sound and complete. ( <i>Regulations</i> ¶ 8.7.1) |                       |  |  |  |  |  |  |
|-----------------------------|--|--|-----------------------|--|--|--|--|--|--|
| Motion                      | This is a Safety Document, when all safety-related information is removed, the Docum technically sound and complete. (Regulations ¶ 8.7.2) |  |                       |  |  |  |  |  |  |
|                             |  |  |                       | ecklist ( <i>Regulations</i> ¶ 15.3) is complete and has been included with the Document the balloting process. ( <i>Regulations</i> ¶ 15.1.2) |  |  |  |  |  |
|                             | Motion by/2 <sup>nd</sup> by   |  | by/2 <sup>nd</sup> by | Slava Libman (FTD Solutions) / Koh Murai (Mega Fluid Systems)  |  |  |  |  |  |
|                             | Discussion   |  |                       | None   |  |  |  |  |  |
| Vote 8 Y-0 N; Motion passed |  |  |                       |  |  |  |  |  |  |

# IX. Intellectual Property (IP) Check

Note: This Letter Ballot may cover all or part of a Standard or Safety Guideline. Regardless of the coverage, this IP check applies to the entire Standard or Safety Guideline\*. See *Regulations* § 16 for further information.

| X | that r | The TC Chapter meeting chair asked those participating, if they were aware of any patented technology that might be relevant (see <i>Regulations</i> ¶ 16.3.1.1) to the Standard or Safety Guideline; or, any copyrighted items or trademarks that are used/reproduced (see <i>Regulations</i> ¶ 16.4.1.2) in the Standard or Safety Guideline. (Also see, <i>Regulations</i> § 8.8) |                                    |  |  |   |  |  |  |
|---|--------|--|------------------------------------|--|--|---|--|--|--|
|   | X      | The question is NOT answered in affirmative (No potentially material patented technology or use/reproduction of copyrighted items/trademarks is known.)  | GO TO SECTION X.                   |  |  |   |  |  |  |
|   |        | The question is answered in affirmative  | Is any of the known IPs a patented |  | Yes, at least one of them is a patented technology | GO TO IX (a) "Patented<br>Technology"<br>subsection |  |  |  |
|   |        |  | technology?                        |  | No   | GO TO IX (b) "Copyright items" subsection           |  |  |  |

# X. Action for This Document

|        | X   |                 | This Document passed TC Chapter review as balloted and will be forwarded to the ISC A&R SC for procedural review.   |  |  |  |  |  |  |  |
|--------|---|-----------------|---|--|--|--|--|--|--|--|
| Mc     | ment passed TC Chapter review with editorial changes and will be forwarded to the SC for procedural review. |                 |   |  |  |  |  |  |  |  |
| Motion |   | editorial ch    | ment passed TC Chapter review with technical changes and with or without hanges and will be forwarded to the ISC A&R SC for procedural review. A n Ballot will be issued to verify the technical changes. |  |  |  |  |  |  |  |
|        |   | This Docu       | ment failed TC Chapter review and will be returned to the TF for rework.  |  |  |  |  |  |  |  |
|        |   | This Docu       | ment failed TC Chapter review and work will be discontinued.  |  |  |  |  |  |  |  |
|        | Moti  | on by/          | Slava Libman (FTD Solutions) / Koh Murai (Mega Fluid Systems)   |  |  |  |  |  |  |  |
|        | 2 <sup>n</sup>  | <sup>d</sup> by |   |  |  |  |  |  |  |  |
|        | Discussion  |                 | None  |  |  |  |  |  |  |  |
|        | ٧   | ote             | 8 Y-0 N   |  |  |  |  |  |  |  |
|        | Final Action  |                 | X Motion passed   |  |  |  |  |  |  |  |
| ľ      | ıııaı   | ACTION          | Motion failed   |  |  |  |  |  |  |  |

Note: If the use of PMPT or copyrighted item is justified by the TC Chapter, LOA or release form must be received before publication can proceed.