SEFA Lab-Grade Seating Committee
Agenda
February 12, 2025

I. Call to Order

II. Roll Call

III. Approval of Minutes from November 1, 2024 meeting

IV. Old Business

A. Date for posting of current SEFA 12 with ESD section?

1. Can ESD products be submitted now?

B. Porosity language in the standard was updated per our last meeting

C. Spot test color language was deleted per our last meeting

V. New Business

A. SEFA 12 organization system was approved and edited

1. The co-chairs recommend that the SEFA 12 organization system be implemented by adding the following language in the Forward, in the "SEFA Recommended Practices" section as follows:

SEFA Recommended Practices

SEFA and its committees are active in the development and promotion of Recommended Practices having domestic and international applications. Recommended Practices are developed by the association taking into account the work of other standard-writing organizations. Liaison is also maintained with government agencies in the development of their specifications. SEFA's Recommended Practices are developed in and for the public interest. These practices are designed to promote a better understanding between designers, architects, manufacturers, purchasers, and end-users and to assist the purchaser in selecting and specifying the proper product to meet the user's particular needs. SEFA's Recommended Practices are periodically updated. The Recommended Practices are numbered to include an annual suffix which reflects the year that they were updated. SEFA encourages architects to specify these Recommended Practices as follows: "SEFA 12-2022", within the following classifications:

- SEFA 12.1 – seating products for use in wet laboratories
- SEFA 12.2 – seating products for use in static-sensitive (ESD) areas

For products intended for use in areas which require both wet lab and ESD protection capabilities, a product must meet requirements of both classifications.

B. Cleanroom Seating Test Method

1. A test method outline was reviewed and discussed. Open questions investigated were:

a) *Can all adjustments be made in the bagged environment?*

(1) No – see spreadsheet

(2) Seat height cannot be made in the bagged environment due to the fragile balance of slight positive air pressure needed to keep air flowing through the particle counter

(3) Cushion tests, back pivot tests are OK in the bagged environment

(4) Further investigation required to seek alternative methods for making these adjustments in a test environment

(a) Test component separate from entire chair?

b) *Given multiple adjustments, what should the run time be for the entire test to accomplish all adjustments and get meaningful particle counts?*

(1) See spreadsheet – 77% of all adjustments were made in just over 30 seconds

(a) This does not account for unfamiliarity with specific adjustment methods

(b) It also doesn't account for particle monitoring time after an adjustment has been made

c) *How long will particle counts need to be monitored after an adjustment has been made?*

(1) In the alternative environment the lab has suggested, there is no need to wait between adjustments. All adjustments can be made consecutively and particle generation monitored during and after the test is completed

d) *If getting a big bag is difficult (or unwieldy), could smaller parts be tested in smaller bags?*

(1) Excellent question that may help resolve question *a.* above

e) *Would it be easier to test chair mechanisms without cushions attached to isolate the impact of chair mechanisms?*

(1) Another excellent question that may help resolve question *a.* above

f) *Should casters be tested for particle generation potential?*

(1) Yes – Interstuhl has a standard test that can be used

(2) Co-chairs believe the chair should be loaded for this test, to reflect in-use experience

g) *Are ESD bags needed for this testing to improve accuracy of test results?*

(1) The test lab does not see the need for ESD bags at this time since only seat/backrest cushions and back tilt compressions are being tested

h) What are the optimal number of conditioning cycles required to get chair contamination amounts to a steady level, consistent with real life in-use situations?

(1) Conditioning can be done outside the test environment in a certified clean area – clean level and number of cycles to be determined based on our experience while going through conditioning cycles

i) For testing biological contamination/growth, does the test facility have equipment to test for that?

(1) Seeking test lab advice for this question

2. Alternate test environment

a) Rigid clean box environment with clear flexible side with gloves allowing for any and all adjustments to be made

b) Top of test environment will need an enclosed mechanical piston to apply weight on chair parts for certain tests, such as pneumatic seat height, back flex, etc.

c) Adjustments could be made, one after another with cumulative particle counts taking place during and after the adjustment phase

d) Box would include small "clean" fans to circulate air to keep particles from sticking to the box and the chair

C. How do we leverage the work we've done – getting information out to the entire laboratory market, especially with the new ESD section of SEFA 12?

D. Other business

VI. Adjournment

Comments to: ed.metzger@biofit.com; k.schuler@interstuhl.de

SCIENTIFIC EQUIPMENT & FURNITURE ASSOCIATION

2024 Annual Conference

Hilton Hotel at Torrey Pines, La Jolla, California

Minutes of the SEFA 12 – Lab Grafe Seating Committee

Friday, November 1, 2025 – 9:00 AM – (Grand Ballroom ABC)

Present :

Co-Chairs -	Ed Metzger	Biofit Engineered Products
	Kai Schuler	BIMOS Division of Interstuhl, GmbH
	Mark Scelfo	BIMOS Division of Interstuhl, GmbH
	Jim Connell	Biofit Engineered Products
	John DeVriendt	Biofit Engineered Products
	Lori MacLeod	CiF Lab Solutions
	Jim Dahl	E Com Seating
	Scott Ebersole	E Com Seating
	Leslie Ashor	HOK
	Tara Burke	Omni Lab Solutions
	Rebecca Ransom	Omni Lab Solutions
	Lloyd Fisk	RFD
SEFA Staff:	David Sutton	
Guests:	Alyssa Moore	Lab Design Conference
	Bill Ructor	Simona
	Greg Chapman	Workplace Modular Systems

The Meeting was called to order by co-chair Ed Metzger

OLD BUSINESS:

ESD Section: Language for the ESD section was adapted per a request by the Board of Directors and has now been approved.

Porosity language clarification: In a previous meeting a request was made to clarify the statement regarding porosity, perhaps identifying a specific test method. The SEFA 12 co-chairs discussed the matter and looked at existing test methods, which were not specific to seating surfaces. It was determined that adapting the existing language of the spot test results, with clarifying language, would be the best way to move forward. Co-chairs suggested the following language (shown in red):

- **Results will vary from manufacturer to manufacturer due to differences in finish formulations. Laboratory grade finishes shall result in no more than four (4) Level 3 conditions. In addition, any instances of the seating surface absorbing, or allowing any of the SEFA 49 chemicals to leak through the surface, will result in an immediate failure. Individual test results, for the**

specified 49 reagents, will be verified with the established third party, independent SEFA test submittal form. Suitability for a given application is dependent upon the chemicals used in a given laboratory.

On a motion by Scott Ebersole and seconded by Jim Connell, the committee unanimously agreed to adopt the language as proposed.

NEW BUSINESS:

SEFA 49 Chemical Spot Test language change: The co-chairs suggest that we drop language from the test method requesting specific color tones as many chair surfaces are not available in these colors and color has not impacted the ability to grade surfaces per the test. The language in red, below, is suggested to be removed from the test method.

Provide flat and smooth (6) 4" x 12" (100 mm x 300 mm) test samples of upholstery material or (49) 3" x 3" (75 mm x 75 mm) (or equivalent seating surface to test all 49 chemicals) of the seating surface material (PU or urethane Foam, or other polymer) in a medium gray, blue or tan color, if available.

On a motion by Jim Connell and seconded by Scott Ebersole, the committee unanimously agreed to adopt the language as proposed.

Proposed SEFA 12 Organization System: With SEFA 12 currently envisioned as being broken down into three sections, with the possibility of more in the future, the co-chairs suggest we adopt an organization system to identify each area. Doing so will allow us to adopt additional sections in the event new technologies arise with specific different needs/testing methods (such as BSL requirements). The co-chairs suggest the following organization system:

- SEFA 12.1 – for seating for wet lab use
- SEFA 12.2 – for seating for use in ESD protected areas
- SEFA 12.3 – for seating for use in cleanrooms

On a motion by Jim Dahl seconded by Scott Ebersole, the committee unanimously approved the proposed change.

Cleanroom Chair Progress:

- Per our last committee meeting it was determined that a comprehensive cleanroom seating standard would encompass the following areas:
  - Particle Generation
  - Specifics for Bio-Safety Lab level compatibility
  - Outgassing
  - Accelerated Aging
  - Cleanability
  - Resistance to biological growth/contamination
- Focus for 2024 has been on the first two items

Particle Generation: An outline of a proposed cleanroom seating particle generation test method was discussed in detail.

I. Preparations
   A. Test Chair Documentation
II. Test Chair/Stool Conditioning
   A. Pre-Conditioning
   B. Test Conditioning
III. Testing Process
   A. Test Environment(s)
   B. Test Method
   C. Results

Comments and questions are listed below, with those requiring action noted in red:

Kurt Rindoks: What if no one passes? What if everyone passes? How can we keep it lab grade?

Mark Scelfo: Cushions seem the most suspect for generating particles. Can the chair be tested with non-upholstered or no seats and backs to verify particle generation from the other parts of the chairs?

Greg Chapman: Considering the movement of casters, should the chair be rolled in the mini-environment to determine particle generation from that source?

Mark Scelfo: Regarding the accelerated aging comment, are we suggesting testing chairs that are already older (say 5 years)? Reply is that accelerated aging tests have been developed for other materials, such as plastics, and we will need to look at those. For now, we are concentrating on particle generation.

Lloyd Fisk: For future consideration as we look toward BSL3/BSL4 areas:

- Avoid uncleanable hollow cavities where contamination can collect and not be cleaned
- Be aware of cleaning methods that include vaporized hydrogen peroxide and chlorine dioxide to be sure chair components can resist these decontamination processes
- Also be aware that autoclaves are sometimes used in these areas to sanitize products

Lori MacLeod: For testing for biological growth, does SGS have facilities and equipment to test for that? Reply is that SGS has been looking to acquire additional test equipment for these kind of tests – we need to follow up with them regarding this.

Bill Drucker: If finding a bag big enough to actuate all controls is a challenge, perhaps we could consider testing components separately (cushions, armrests, piston, seat tilt, etc.).

Mark Scelfo: Perhaps we should define the different systems currently in use for upholstered cleanroom seating: sealed, filtered, lung systems.

Ed Metzger: The test process will give us the opportunity to define a suggested method/process for introduction of cleanroom seating from the receiving dock through introduction into the working cleanroom area.

ADJOURNMENT: On a motion by Mark Scelfo seconded by Scott Ebersole the committee unanimously agreed to adjourn the meeting.