



## **SEMI S2/S8 Evaluations for Buyer Protection and Due Diligence on Used and New Semiconductor Equipment**

### **What is a SEMI S2/S8 evaluation?**

SEMI S2/S8 guidelines were created by the leaders of the SEMI industry to ensure every piece of equipment is compliant to regulatory requirements and is checked against a high standard of safety.

Broken into 27 sections, with the most common services performed being sections S2-0818, S8-218, and S10 sections, the SEMI standards encompass every possible aspect of a machine's functionality and provide strict testing guidelines which must be met depending on the functionalities (chemical, lasers, radiation, etc.) incorporated into the machine.

The SEMI standards encompass topics ranging from fire protection, electrical hazard protection, mechanical hazard mitigation, chemical, radiation, noise and ergonomics hazards, ventilation requirements, emergency shutdown procedures, exhaust specifications, hazard warning alerts and labels, documentation requirements and more.

As a general guideline, our engineer will perform the following tasks in coordination with your engineering team below:

- 1) Review the machine's manuals, BOM (Bill of Materials), and schematics.
- 2) Come to your facility and do a multi-day inspection.
- 3) Provide your team with a punch list of items that failed.
- 4) Communicate back and forth with you to resolve all identified issues.
- 5) Start writing the report and putting together the Technical File.
- 6) Produce a draft report for you to review and make requests.
- 7) Provide the final report and technical file.
- 8) Provide a SEMI S2 certificate.

### **Why is a SEMI S2/S8 evaluation typically requested?**

In the semiconductor industry, the SEMI S2 and S8 directives are relied upon as the gold standard for machine evaluation and many buyers have even begun including them in their terms of contract.

Additionally, SEMI S2/S8 certification proves that your product fulfills the international standards for safety and ergonomics, making international sales of semiconductor equipment an overall smoother process between buyers and sellers.

A SEMI S2/S8 evaluation performed by LBIES provides the final report and technical file that is the key to end-user acceptance of your equipment and can be considered as a form of buyers insurance in marketplace transactions.

### What will be considered in a SEMI S2/S8 evaluation?

A typical SEMI S2/S8 service that we get requests for is usually comprised of the S2-0818, S8-218, and S10 sections, with some clients opting for additional sections due to insurance or facility requirements.

Another common add-on bundle is Sections 21, 22, 23, for machines that deal with chemical and gas components.

The list below encompasses the most common client requests LBIES receives for SEMI S2/S8 services.

	A	B
1	SEMI® S2-0818 <sup>F</sup>	Environmental, Health, and Safety Guideline for Semiconductor Manufacturing Equipment
2	SEMI® S8-0218	Safety Guideline for Ergonomics Engineering of Semiconductor Manufacturing Equipment
3	<b>Sections of SEMI® S2</b>	
4	SEMI® S2 Evaluation Section 9 Documents Provided to User	
5	SEMI® S2 Evaluation Section 10 Hazard Alert Labels	
6	SEMI® S2 Evaluation Section 11 Safety Interlock Systems	
7	SEMI® S2 Evaluation Section 12 Emergency Shutdown	
8	SEMI® S2 Evaluation Section 13 Electrical Design	
9	SEMI® S2 Evaluation Section 14 Fire Protection	
10	SEMI® S2 Evaluation Section 15 Process Liquid Heating Systems (SEMI® S3)	
11	SEMI® S2 Evaluation Section 16 Ergonomics and Human Factors	
12	SEMI® S2 Evaluation Section 17 Hazardous Energy Isolation	
13	SEMI® S2 Evaluation Section 18 Mechanical Design	
14	SEMI® S2 Evaluation Section 19 Seismic Protection	
15	SEMI® S2 Evaluation Section 20 Automated Material Handlers	
16	SEMI® S2 Evaluation Section 21 Environmental Considerations	
17	SEMI® S2 Evaluation Section 22 Exhaust Ventilation	
18	SEMI® S2 Evaluation Section 23 Chemicals	
19	SEMI® S2 Evaluation Section 24 Ionizing Radiation	
20	SEMI® S2 Evaluation Section 25 Non-Ionizing Radiation and Fields	
21	SEMI® S2 Evaluation Section 26 Lasers	
22	SEMI® S2 Evaluation Section 27 Sound Pressure Level	

### Have a need for a SEMI S2/S8 evaluation at your facility?

LBIES is known for being cost effective and minimizing turnaround time in completing SEMI S2/S8 evaluations.

Please call our Customer Service Department at 408-942-8000 for expedited service requests or email us at [customersupport@lewisbass.com](mailto:customersupport@lewisbass.com) for scheduling or additional information on this service.