IS YOUR SEMICONDUCTOR FACILITY DETECTION-READY?

Modern semiconductor manufacturing relies on a wide range of toxic and flammable gases essential to advanced fabrication processes. Even small leaks or exposure events can create serious safety risks, production losses and regulatory concerns, making constant awareness and dependable safety systems critical.

Effective gas hazard management requires more than detection alone. It depends on rapid response procedures, reliable monitoring technologies and well-trained personnel. Any weakness in these areas can lead to unplanned downtime and increased risk to workers and operations.

This short, 2-minute quiz helps assess how prepared your facility is to detect, respond to and manage gas hazards while protecting your workforce and minimizing disruptions.

Assign points from 4 (best case) to 1 (worst case) for each answer. **For more information, see Scoring Your Results on page 3.**

TOTAL:

01

How comprehensive is your current gas detection system?

- [ ] Covers all critical zones and gas types
- [ ] Covers most areas but not all gases
- [ ] Limited coverage in high-risk zones
- [ ] Unsure

02

Do you have real-time visibility into gas levels across your facility?

- [ ] Yes, with centralized dashboards
- [ ] Partial visibility via manual checks
- [ ] No real-time monitoring
- [ ] Not sure

03

Is your gas detection system integrated with alarms, ventilation and shutdown protocols for rapid response?

- [ ] Fully integrated
- [ ] Partially integrated
- [ ] Standalone system
- [ ] Not integrated at all

04

How often is your detection equipment calibrated and maintained?

- [ ] On a regular automated schedule
- [ ] Manually but consistently
- [ ] Occasionally or reactively
- [ ] Rarely or never

05

Are your systems aligned with current semiconductor safety regulations (e.g., SEMI S2, OSHA)?

- [ ] Fully compliant and audit-ready
- [ ] Mostly compliant with some gaps
- [ ] Unsure of compliance status
- [ ] Not compliant

06

Have you experienced any gas-related incidents or near misses in the past 12 months?

- [ ] No incidents
- [ ] One or two minor incidents
- [ ] Multiple incidents or near misses
- [ ] Prefer not to say

07

Do you have plans to upgrade your gas detection system in the next 6–12 months?

- [ ] Yes, actively evaluating solutions
- [ ] Considering it, but not urgent
- [ ] No plans currently
- [ ] Not sure

08 WORKFORCE TRAINING AND PREPAREDNESS:

Have your staff received regular training on gas detection systems and emergency response?

- [ ] Yes, fully trained and certified
- [ ] Partially trained
- [ ] Minimal training
- [ ] Not trained

09 ALARM RESPONSE AND INCIDENT PROCEDURES:

When a gas alarm occurs, are response procedures clear and tested regularly?

☐ Yes, fully documented and tested

☐ Partially documented

☐ Procedures exist but are rarely tested

☐ Not documented or tested

10 DATA ANALYTICS AND TREND MONITORING:

Beyond real-time monitoring, do you use gas detection data to identify trends, prevent incidents and optimize operations?

☐ Yes, with automated analytics and dashboards

☐ Partial use of data

☐ Minimal use of data

☐ No use of data

SCORING
YOUR RESULTS

POINTS	READINESS	NEXT STEPS
ABOVE 32 POINTS	**WELL PREPARED** Your facility demonstrates strong detection maturity with comprehensive coverage, integration and compliance.	Stay ahead of evolving risks by leveraging advanced detection technologies and continuous optimization.
20–32 POINTS	**NEEDS IMPROVEMENT** You have foundational detection capabilities in place, but gaps may exist in coverage, integration or visibility.	A targeted review of your detection ecosystem can help close gaps and improve operational resilience.
BELOW 20 POINTS	**AT RISK** Your facility may be vulnerable to safety incidents, regulatory exposure or unplanned downtime.	A safety audit can help identify critical risks and improvement opportunities.

For more information
automation.honeywell.com

Honeywell Industrial Automation
2101 CityWest Blvd.
Houston, TX 77042

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