



Pharmaceutical Cleanroom Noise Control at Pfizer with All Noise Acoustic Wall Panels

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OVERVIEW

Pfizer operates advanced pharmaceutical manufacturing and vaccine production facilities where sterile environments and strict contamination control are critical to product safety and regulatory compliance. These cleanroom environments contain high-capacity air handling systems, automated filling lines, and laboratory equipment that operate continuously to support pharmaceutical production and research activities.

Elevated reverberation levels and background noise generated by ventilation systems, laboratory instrumentation, and processing equipment created the need for a high-performance cleanroom acoustic solution. To address these challenges while maintaining strict sanitation standards, Pfizer partnered with All Noise Control to implement a customized VibraCore® Acoustic Cleanroom Wall Panel System engineered to improve sound absorption and reduce reverberation within pharmaceutical cleanroom environments.

CHALLENGES

Pharmaceutical cleanrooms are designed with hard, non-porous surfaces to maintain sterile conditions and allow for frequent sanitation. While necessary for contamination control, these surfaces can reflect sound energy, increasing reverberation levels throughout the space. Equipment such as sterile filling lines, HVAC filtration systems, pumps, and laboratory instrumentation can generate continuous operational noise that travels across production areas.

SOLUTION:

All Noise Control designed and installed VibraCore® Acoustic Cleanroom Wall Panel Systems to improve acoustic performance inside the pharmaceutical manufacturing facility. The installation utilized 2' x 4' x 2" thick cleanroom acoustic panels engineered with a 6–7 PCF rigid fiberglass core encapsulated in a durable PVF cleanroom surface designed specifically for sterile environments.

These cleanroom acoustic wall panels deliver high sound absorption performance with an NRC rating of 0.85, effectively reducing reverberation created by mechanical systems and laboratory equipment. The fully encapsulated panel construction provides a sanitary, washable surface suitable for controlled pharmaceutical environments while maintaining Class 100 cleanroom compliance and ASTM E84 Class A fire performance.

RESULTS:

- Reduced cleanroom reverberation and equipment noise reflections
- Improved communication clarity for pharmaceutical technicians
- Maintained Class 100 sterile cleanroom standards
- Enhanced acoustic comfort in pharmaceutical production areas
- Installed durable cleanroom acoustic wall panel systems