



# RESEARCH NOTES

## SOUND TRANSMISSION CLASS (STC) RATING FOR SPANCRETE HOLLOWCORE WALL PANELS

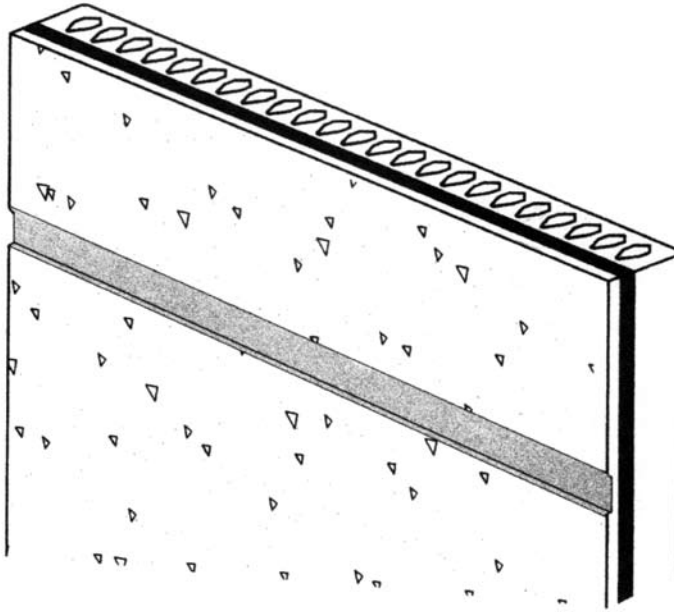
When Spancrete hollowcore wall panels are exposed to airborne sounds, vibrations are produced in the wall and radiate to the opposite side with reduced intensity. The airborne sound transmission loss of the wall is a function of its weight, stiffness and vibration damping characteristics. Weight is Spancrete’s greatest asset when used as a sound insulator.

The Sound Transmission Class (STC) is a rating system used to estimate the sound insulation properties of a wall. For Spancrete insulated wall panels, adding incremental STC adjustments for add-on layers to the STC of the base wall panel can approximate the composite STC of the overall assembly.

<u>Base Wall Panel</u>	<u>STC</u>
6" Spancrete	50
8" Spancrete	56
 <u>Add-On Layer</u>	 <u>STC Increment</u>
2-3" Insulation	Negligible
2" Exterior Wythe*	5
3" Exterior Wythe*	7

\*Connected only by metal ties approximately 4' o/c

*Research Notes are produced periodically by the SMA Technical Committee. SMA Research Notes are based on testing done for the Spancrete Manufacturers Association. The information contained in these Research Notes should be used by those experienced in structural design and should not replace sound engineering judgment.*



The approximate STC for an 8" Spancrete hollowcore wall panel with 2" insulation and a 2" exterior wythe:

$$STC = 56 + 0 + 5 = 61$$

#### EAST

**Oldcastle Precast, Inc.**  
South Bethlehem, NY

**Oldcastle Precast, Inc.**  
Manchester, NY

**Conewago Precast Building Systems**  
Hanover, PA

**MIDWEST**  
**Spancrete, Inc.**  
Green Bay, WI

**Spancrete Industries, Inc.**  
Waukesha, WI

**Hanson Structural Precast Midwest, Inc.**  
Maple Grove, MN

**Spancrete of Illinois, Inc.**  
Arlington Heights, IL

**WEST**  
**Hanson Structural Precast Pacific, Inc.**  
Inwindale, CA

**KIE-CON**  
**Div. of Kiewitt Pacific Co.**  
Antioch, CA

**Owell Precast**  
Sandy, UT

**SOUTHWEST**  
**Manco Structures, Ltd.**  
Schertz, TX

#### SOUTH

**Cement Industries, Inc.**  
Fort Myers, FL

**Florida Precast Industries, Inc.**  
Sebring, FL

**MC Precast, Inc.**  
Atlanta, GA

**CANADA**  
**Burnco Concrete Products Ltd.**  
Calgary, Canada

**EGYPT**  
**Samcrete Egypt**  
Ahram, Giza

**MEXICO**  
**ITISA**

Mexico City, Mexico

**Spancrete Noreste**  
Monterrey, Mexico

**TURKEY**  
**Yapi-Merkezi**  
Camlica-Istanbul, Turkey

**CARIBBEAN**  
**Preconco Limited**  
Barbados, West Indies

**Spancrete Caribbean, Ltd.**  
Trinidad, West Indies

**UAE**  
**Hi-Tech Concrete Products, LLC**  
Abu Dhabi, UAE

**MACHINE MANUFACTURER**  
**Spancrete Machinery Corporation**  
Waukesha, WI

Spancrete is also manufactured in

Armenia	Denmark	Russia
Australia	Guatemala	South Korea
Belgium	Hungary	Spain
Brazil	Ireland	Switzerland
China	Israel	
Croatia	Japan	