



# 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.

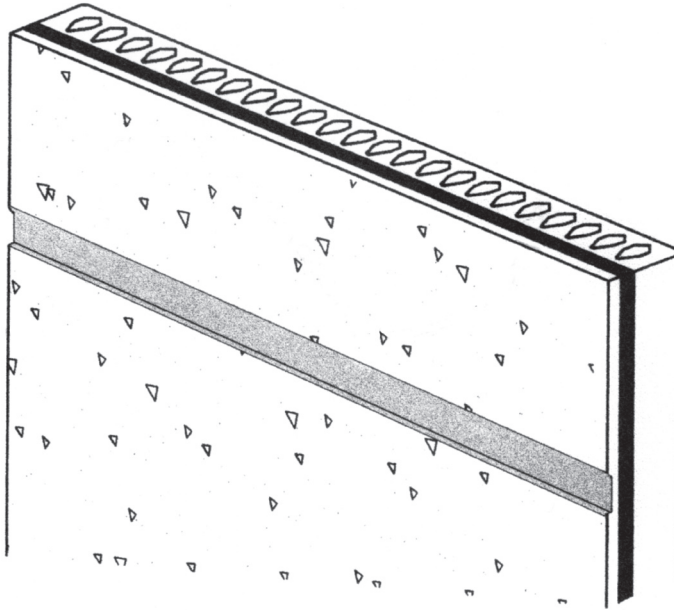
The Sound Transmission Class (STC) is a rating system used to estimate the sound insulation properties of a wall. For Spancrete insulated wall panels, adding incremental STC adjustments for add-on layers to the STC of the base wall panel can approximate the composite STC of the overall assembly.

<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.*

## DESIGN EXAMPLE



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

$$\text{STC} = 56 + 0 + 5 = 61$$

### MIDWEST

Hanson Structural  
Precast Midwest, Inc.  
Maple Grove, Minnesota

Spancrete, Inc.  
Green Bay, Wisconsin

Spancrete Industries, Inc.  
Waukesha, Wisconsin

Spancrete of Illinois, Inc.  
Arlington Heights, Illinois

Wells Concrete  
Wells, Minnesota

### WEST

Hanson Structural  
Precast Pacific, Inc.  
Irwindale, California

### KIE-CON

Division of Kiewit Pacific Co.  
Anitoch, California

Owell Precast  
Sandy, Utah

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

### SOUTH

Cement Industries, Inc.  
Fort Myers, Florida

Florida Precast Industries, Inc.  
Sebring, Florida

### EAST

Mid-Atlantic Precast, LLC.  
King George, Virginia

**EGYPT**  
Samcrete Egypt  
Ahram, Giza

**MEXICO**  
ITISA  
Mexico City, Mexico

Spancrete Noreste  
Monterrey, Mexico

**CROATIA**  
Mucic & Co  
Dugopolje, Croatia

### CARIBBEAN

Preconco Limited  
Barbados, West Indies

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

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

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### SPANCRETE IS ALSO MANUFACTURED IN:

Armenia	Ireland
China	Japan
Denmark	Russia
Guatemala	South Korea
Hungary	Switzerland

Spancrete® hollowcore is a registered trademark