



SEMCO BRICK

PRODUCT INFORMATION

The STEBBINS Engineering and Manufacturing Company
Watertown, NY USA
<http://www.StebbinsEng.com>

DESCRIPTION

SEMCO is a pressed fireclay brick that meets ASTM Type II specifications. This brick was developed specifically for elevated temperature and pressure applications in chemical process vessels where low chemical growth is essential for long service life.

SEMCO's impressive history has demonstrated it to be the brick of choice for linings in severe processes in the Chemical, Petrochemical, Mining, and Pulp and Paper Industries.

The proprietary formulation and manufacturing process for SEMCO results in a unique brick, which has proven to outperform standard duty acid brick in pressure vessel service.

Features of the SEMCO Brick include excellent chemical resistance, superior thermal shock and spall resistance, as well as specialty shapes designed specifically for pressure vessels. SEMCO Brick's unique sizing is 15% to 55% larger than traditional brick sizing, allowing for less pieces being required.

TYPICAL PHYSICAL PROPERTIES

Physical State	Solid
Composition	Fireclay Chemical Resistant Brick (Low Growth)
Color	Yellow
Density	140 lb/ft ³ (2243 kg/m ³)
Cold Water Absorption, % (C-20)	2.5 - 4.5%
Cold Crushing Strength (C-133)	5500 psi (37.92 MPa), minimum
Modulus of Rupture (C-133)	1250 psi (8,618 kPa), minimum
Tensile Strength	600 – 800 psi (4.13 MPa – 5.52 MPa)
Modulus of Elasticity	3.0 – 3.5 x 10 ⁶ (2.0 – 2.4 x 10 ⁴ MPa)
Thermal Conductivity	8.0 – 9.0 BTU x in. / sq. ft. x hr. x °F (1.15 – 1.30 W/m °C)
Coefficient of Thermal Expansion	3.0 x 10 ⁻⁶ in. / in. / °F (5.4 x 10 ⁻⁶ mm/mm/°C)

COMPONENT PACKAGING

The standard straight size for SEMCO Brick is 7" x 9" with thicknesses of 2", 2-1/2" and 3". Additionally, it can be offered in a variety of shapes for 9" x 4-1/2" series brick.

SEMCO Brick are available in over 200 shapes that can be utilized to match the contours of a variety of vessel and nozzle configurations. The use of these shapes results in a "fitted lining" with a minimum number of mortar joints.

STEBBINS	SEMCO BRICK
The STEBBINS Engineering and Manufacturing Company Watertown, NY USA http://www.StebbinsEng.com	PRODUCT INFORMATION

APPLICATION

SEMCO Brick is a chemical-resistant fireclay brick designed for use in linings in a number of chemical process conditions. It is intended for use with Stebbins chemical-resistant mortars.

STORAGE

The brick should be dry before use, so optimal storage is a dry, clean area.

SAFETY PRECAUTIONS/DISCLAIMER

Mixes and applications of this product present a number of hazards. The purchaser and user must read and follow the hazard information, precautions and first aid directions on the individual product labels and safety data sheets before using.

All data contained in this Product Information sheet are averaged results of ASTM tests on laboratory prepared samples. Reasonable variations can be expected. The data should not be used for specification purposes.

While all statements, technical information, and recommendations contained herein are based on information our company believes to be reliable, **nothing contained herein shall constitute any warranty, express or implied, including any implied warranty of fitness for a particular purpose or any implied warranty of merchantability with respect to the products described herein and any such warranties are expressly disclaimed.**

We recommend that the purchaser or user independently determine the suitability of any of our products for their intended use. No statement, information, or recommendation with respect to any of our products, whether contained herein or otherwise communicated, shall be legally binding unless expressly set forth in an executed written agreement.

End of PI-38