

Belden Chemical Resistant Floor Brick

No other kind of flooring offers such a wide range of protection from aggressive corrosives and solvents – even at elevated temperatures – as a chemical resistant brick/multiple component flooring system.

Monolithic floors can lose bond with the substrate, or split apart, when a crack develops in the substrate, resulting in extensive damage to the floor's chemical resistance. On the other hand, the three-way protection of chemical resistant brick, chemical resistant mortar, and a chemical resistant membrane provides the kind of protective redundancy important in sheltering an operation from work interruptions.

Chemical resistant Belden Brick floors successfully combine the qualities of low maintenance cost, long service life, resistance to impact and abrasion, cleanliness, and efficient appearance, all while providing exceptional chemical and abrasion resistance.

The importance of these characteristics is pointed up by the many destructive physical and chemical forces to which industrial floors are subjected on a continuing

basis. Within a single area of operations the floor may be expected to withstand thermal shock, water, wheeled traffic, oils, acids and alkalis. Abrasion and impact from heavy materials represent additional destructive forces.

Floors requiring chemical resistant characteristics are divided into two broad classifications: General Industrial Floors – those found in plating processes, papermills, pickling tank operations, chemical processing production areas, and Laboratory/Food Plant floors – usually required in dairies, meat processing plants, bakeries, industrial laboratories and similar environments where an attractive appearance is desirable, along with ease of sanitary maintenance.

Quality...from the very beginning

Belden chemical resistant floor brick are carefully manufactured of the highest quality American shales and fire clays. These materials are specifically formulated and blended for density and strength before being fired at over 2000° F. The resultant floor brick is resistant not only to virtually all corrosive liquids with the exception of acid fluorides and strong hot caustics but to the heavy physical abuse of industrial applications.

FOR EXTRA IMPACT RESISTANCE: VERTICAL FIBRE BRICK

Belden Vertical Fibre Floor Brick are the logical choice for installations requiring surer footing and exceptional impact resistance. Typically, areas of oil or grease spillage or caustic soap exposure call for vertical fibre brick.

Belden vertical fibre chemical resistant brick offers slip resistance equal to that of abrasive-style flooring. Moreover, they retain their non-skid surface for a lifetime under all operating conditions.

For particularly critical applications, or those involving hard-to-remove resin-based mortars, Belden vertical fibre floor brick are available pre-waxed for an additional charge.

Mortar manufacturers should be consulted for their recommendations in connection with chemical resistant brick construction. For names and addresses of mortar manu-

facturers, please contact The Belden Brick Company, P.O. Box 20910, Canton, OH 44701-0910.



A PARTIAL LIST OF USERS

Continental Baking Company
I.B.P. Beef Products, Incorporated
Kraft General Foods
Michigan Milk Producers
Monfort
Oscar Mayer Food Corporation
Pillsbury
Stroh's Brewery
Taylor Packing Company
Welch Foods

TYPICAL APPLICATIONS

Typical industries confronted with corrosive conditions that use Belden Chemical Resistant Floor Brick.

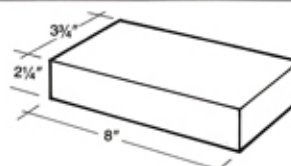
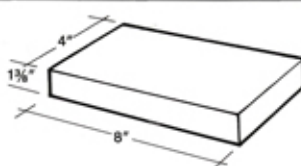
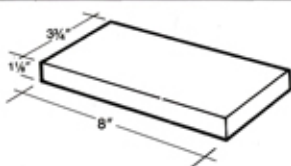
Acid Processing Areas • Bakeries • Battery Plants
• Breweries • Chemical Plants • Dairies •
Electroplating Plants • Fertilizer Plants • Galvanizing
Plants • Meat Packing Plants • Metal Fabricating
Plants • Organic Chemical Plants • Petroleum
Refineries • Pharmaceutical Plants • Pulp and Paper
Mills • Rayon Fibre Plants • Smelting Plants • Steel
Pickling Plants • Textile Dyeing Plants.

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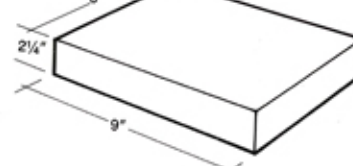
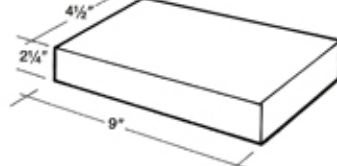
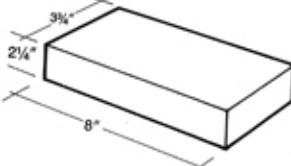
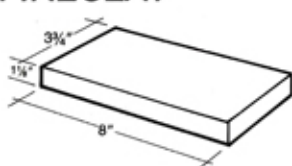
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TYPES & SIZES

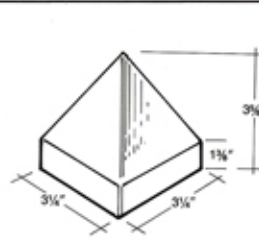
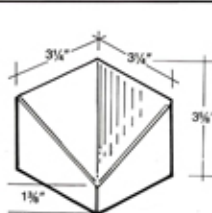
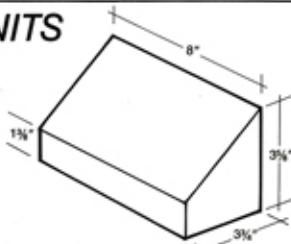
SHALE



FIRECLAY



SLANT BASE UNITS



All Belden chemical resistant brick are manufactured to conform to or exceed ASTM C-279 and generally are available in the Type II designation. Minimum requirements regarding the ASTM C-279 specification are shown in the following table:

PROPERTIES	TYPE I	TYPE II	TYPE III	METHOD OF TEST
Modulus of Rupture Minimum p.s.i.	1250	1250	1250	ASTM Designation C67
Water Absorption Maximum % by 2 hr. Boiling Test	6.0-7.0%	4.0-5.0%	1.0-1.5%	ASTM Designation C20
H ₂ SO ₄ Solubility Maximum % Weight Loss	20	12	8	ASTM Designation C279
Size Variances	± 3%	± 3%	± 3%	ASTM Designation C67
Tolerances on Warpage 8" and under	TABLE 2 C279-88	TABLE 2 C279-88	TABLE 2 C279-88	ASTM Designation C67
over 8"-12", Incl.	TABLE 2 C279-88	TABLE 2 C279-88	TABLE 2 C279-88	ASTM Designation C67

The information provided above has been furnished as a general guide-line for the design of chemical-resistant construction. We cannot guarantee the data reported nor can we assume any liability in connection with its use. Please contact the Belden Brick Company for specific recommendations.

Belden chemical resistant floor brick is manufactured to conform to the specification requirements of both ASTM C-279 and ASTM C-410 (industrial floor brick). Whenever close dimensional tolerances or minimal distortion is required, ASTM C-410, Tables II and III should be used for the dimensional standards of the specification.

Physical and Chemical Requirements

Designation	Modulus of Rupture (Brick or Tile Flat-wise) min. psi (MPa)	Water Absorption Maximum % by 2 hr. Boiling Test	H ₂ SO ₄ Solubility Maximum % Weight Loss
	Average of 5 Brick or Tile Low Individual	Average of 5 Brick or Tile High Individual	Average of 5 Brick or Tile
Type I	1250 (8.6) 1000 (6.9)	6.0 7.0	20
Type II	1250 (8.6) 1000 (6.9)	4.0 5.0	12
Type III	1250 (8.6) 1000 (6.9)	1.0 1.5	8

Physical Properties and Comparison Table - Vertical Fibre Floor Brick

TECHNICAL DATA	Belden - Vertical Fibre Floor Brick Type II	ASTM C-279 Type II	ASTM C-410 Type H	Fed. Spec. SST-3088 Class C
Maximum Permissible Variations in Dimensions (Largest to Smallest)	1/8"	3% ±	3/16"	—
Maximum Permissible Deviation of Face Distortion (in.)	1/32"	3/32"	1/16"	9/64"
Compression (p.s.i.) ¹	18,860	None	None	None
Modulus of Rupture (p.s.i.)	2570	1250	1000	None
Coefficient of Expansion in./in./°F x 10 ⁶	2.4-3.0	None	None	None
Tensile Strength, (p.s.i.) ²	3195-3390	None	None	None
Modulus of Elasticity (p.s.i.) ³	6.48-7.97x10 ⁶	None	None	None
Absorption - 2 Hr. Boil	2.2-3.9%	6.0 max.	None	5.0 max.
Acid Solubility (% of Loss) (H ₂ SO ₄ -48 Hr. Boil)	2.2	12.0 max.	20.0 max.	None
Tabor Abrasion Wear Index ⁴	83	None	None	25 Min.
Abrasion Resistance Index ⁵	.0114	None	None	None

NOTES: 1. Applicable Testing Specification Procedure - ASTM C67
2. Applicable Testing Specification Procedure - ASTM C885
3. Applicable Testing Specification Procedure - ASTM C1006
4. Conforms Under Test Method - ASTM C501
5. Conforms under ASTM C904, Type I Material, Maximum = 0.11, Refer to Table no. 2, Titled 'Abrasion Requirements'. Belden Vertical Fibre Floor Brick has an abrasion resistance index almost 10 times greater than the most stringent requirement of this specification.

THE BELDEN BRICK COMPANY / P.O. BOX 20910 CANTON, OHIO 44701-0910

Telephone: 216/456-0031 FAX: 216/456-2694

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