



# HEAT RESISTANT PLATE GLASS by *Stemmerich, Inc.*

featuring  
Neoceram/Pyroceram,  
Pyrex and Borofloat

## What Type of Heat Resistant Glass is the Right One?

**Pyroceram/Neoceram** Glasses are designed for airtight stove operation. They are a fine quality, light amber colored glass ceramic designed for wood stove service.

**Pyrex/Borofloat** can be used in non airtight stoves or fireplace screens. Seamed edges and loose installation add to its durability.

Tempered soda lime float glass is offered by some manufacturers. We do not recommend its use in wood burning appliances. High temperatures and long term use will rob the glass of its temper. This could cause spontaneous breakage.

### PHYSICAL PROPERTIES of VARIOUS GLASSES

1/4" Thick Materials	Normal Service (°F)	Extreme Service (°F)	Thermal Shock (°F Max)	Thermal Gradient (°F Max)	Coefficient of Thermal Expansion (In/In/°F)	Design Tensile PSI
VYCOR 96% Silica	1652	2192	1800	396	4.2 x 10 <sup>-7</sup>	1000
Borosilicate Tempered	500	554	580	194	18 x 10 <sup>-7</sup>	2000
Borosilicate	446	914	270	97	18 x 10 <sup>-7</sup>	1000
Soda-Lime Tempered	428	482	400	88	52 x 10 <sup>-7</sup>	3000
Soda-Lime	230	860	90	29	52 x 10 <sup>-7</sup>	1000
PYRO CERAM	1202	1382	1400	450	3.3 x 10 <sup>-7</sup>	1500

**Normal Service Temperature** - No breakage from excessive thermal shock is assumed. Nonabused glass should last indefinitely.

**Extreme Service Temperature** - The glass will be very vulnerable to thermal shock and physical degradation. Recommendations in this range are based on Mechanical stability considerations only. Test should be made before adopting final designs.

**Thermal Shock** - The physical shock glass undergoes when evenly heated to the above listed temperature, then plunged into water at 50°F without breakage.

**Thermal Gradient** - The difference in temperature between the two glass surfaces that will cause 1000 psi tensile stress on the cooler surface.

**Coefficient of Thermal Expansion** - The relative increase in size of a material when heated.

## Stemmerich, Inc.

4728 Gravois Avenue · St. Louis, MO. 63116

800-325-9528 · Fax 314-832-7799 · [www.stemmerich.com](http://www.stemmerich.com)

Branch Offices: Kansas City, KS