

Product Information: INFRARED REFLECTIVE BOROFLOAT® (IRR)

GENERAL DESCRIPTION

Abrisa Heat reflective Glass is specifically designed to be placed where high radiant heat conditions exist in industry today.

This special glass will effectively reflect the long wave length infrared radiation, while providing high grade transparency. This percentage which is absorbed by the glass will seldom create a problem due to the shock quality of this glass. Note the small percentage of radiant heat that is permitted to pass through our heat reflective glass is illustrated in the chart below. Other types of glass such as heat absorbing glass reflect only 4% infrared. Abrisa Heat Shield reflects both radiant and convected heat. This reflective property is metallic film bonded permanently to the glass surface, Install so that the coated side, as marked, is toward the heat source.

	ABRISA Tempered Heat Reflective Borosilicate	ABRISA Tempered Heat Reflective Safety Glass
Type of Glass	Borosilicate	
Coeff. of Thermal Expansion° C. x 10-7	33	64-80
Transmission % of Infrared Radiation From 2000° F. Source	8	8
Thermal Shock	very good	fair-good
Protection-Molten Metal Splash	good	poor
Haze-Free	yes	yes
Mechanical Strength Flex Resistance and Impact Strength	good	excellent

Application

Used primarily within the steel industry, there are numerous industrial applications needing heat shielding glass.

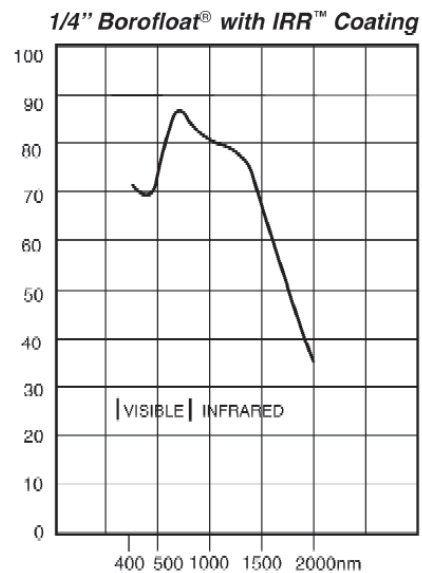
- Crane Service - Ladle, slab handling, furnace charging, soaking pit, teeming, mixing and other hot metal handling types
- Control Stations & Pulpits - Located physically near furnaces, red hot or molten metal
- Foundries - Can use heat shields to protect hot metal carriers, pouring operators and sand removers
- Furnaces - Have or need viewing windows to reduce heat loss and protect the instruments of operating personnel that are looking inside.

Radiation Control

Radiant heat is transmitted through space by wave motion, the intensity and wave length distribution depending on the nature and temperature of the surface. This heat can only be controlled by insulator screening and not by general ventilation, according to Mr. G.F. Haines, Jr., Mellon Institute. Regular glass can not properly insulate direct radiation; but reflective glass makes the most efficient transparent screen. This screening of radiation can reduce fatigue and protect against eye injury of personnel and improve work conditions in "hot spots".

Temperature Control

Double glazing is suggested for most situations. This is especially true when air conditioning is provided. Many times more air conditioning capacity is required for ordinary double glazed window areas compared to insulated walls, therefore, it is necessary to control the BTU/sq. ft. and the direct rays through the glass area. The cooling requirement can be reduced when using heat reflective glass for window areas on high radiant applications. The approach to a heat problem in a radiant environment is substantially different than when ambient air is the major consideration. This includes open control stations, and enclosed cabs and pulpits without air conditioning.



Electrical Conductivity

For applications such as static shielding and refrigeration units to preventing fogging. Ohms/square typically 20 ohms or better