A Ceramic Glass that is Impact & Safety-Rated with an STC Value of 35. Meets the Fire and Safety-Ratings for up to 90 Minutes. All KFRF has Now Been Upgraded to the More Clear, Polished "Select" Glass.

KFRF SPECIFICATIONS:

Description:	Ceramic glass with a surface-applied safety film.
Thickness:	3/16" (5 mm)
Weight:	2.6 lbs/sq. ft.
Light Transmission:	88% approx.
STC:	35
U Value:	0.88
Haze Value:	.5%
Color Rendering Index:	97.1 out of 100
Film:	3M Scotchshield® Ultra Safety Film (one side)
Warranty:	Three year limited warranty
Fabricated:	USA
Size:	Minimum size 4" x 4", max sheet size 46" x 96"
Options at Additional Cost:	_ _ Etched for obscure effect. _ _ Exterior glazing option.

LABELING:

Fire-Protection Rated Glazing Material Fire Tested under Neutral/Positive Pressure in Accordance with ANSI/UL 9, ANSI/UL10B, ANSI/UL10C
SEE UL Fire Resistance Directory
Marked with Either D-H-NT-90 OR D-H-NT-180 Per Chart Below.
Note: Glazing is labeled in accordance with exposed dimensions when installed in Air Louvers, Inc. VSL or VLFEZ vision kit.

CLASSIFIED (UL)

LISTINGS & RATINGS:

This product is classified by Underwriters Laboratories for fire- and resistance. UL listing #R14212
Tested in accordance with: NFPA 80, NFPA252, NFPA257, UL9, UL10B, UL10C, CAN/ULC—S106, S104.
Impact Safety Rating: CPSC 16CFR 1201 (CAT I & II)
Listing: Up to 3 hours with hose stream test.
Positive Pressure Rating: UL10C
UL Environmental Product Declaration (EPD)

ALL KFRF IS NOW UPGRADED TO KERASHIELD SELECT
KeraShield Select is polished for a nearly distortion-free surface, sharper viewing, truer color and the least haze of any glass ceramics available. High Visible Light Transmission (VLT) contributes to LEED points.

INSTALLATION:

Use glazing compound or glazing tape on both sides of glass, install in an appropriately-listed and labeled vision frame. Certain optical and visual imperfections are inherent in the production process. These characteristics may be evaluated according to the manufacturer's quality standards but do not impair the transparency or affect the performance of the glass in case of fire, and shall not be considered cause for rejection. *Air Louvers frames for KFRF: VLF, VLFEZ, VSL.*

Assembly	Time Rating (minutes)	Maximum Exposed Area	Maximum Width Exposed Area*	Maximum Height Exposed Area*	Building Code Marking	Air Louvers Frame
Door - Non Temp Rise	20	3627 in²	46"	78"	D-H-NT-20	VLF, VLFEZ
Door - Non Temp Rise	20	3627 in²	34"	78"	D-H-NT-20	VSL
Window, Transom Lite, Sidelite	20-45	4500 in²	95"	95"	OH-20 or 45	--
Door - Non Temp Rise	45	3627 in²	45"	78"	D-H-NT-45	VLF, VLFEZ
Door - Non Temp Rise	45	3627 in²	35"	77"	D-H-NT-45	VSL
Door - Non Temp Rise	60	3627 in²	45"	78"	D-H-NT-60	VLF, VLFEZ
Door - Non Temp Rise	60	1296 in²	46"	78"	D-H-NT-60	VSL
Window, Transom Lite, Sidelite	60	4515 in²	95"	95"	OH-60	--
Door - Temp Rise	60-90	100 in²	10"	33"	D-H-NT-60 or 90	ANY
Door - Non Temp Rise	90	3534 in²	46"	78"	D-H-NT-90	VLF, VLFEZ
Door - Non Temp Rise	90	1296 in²	46"	78"	D-H-NT-90	VSL
Window, Transom Lite, Sidelite	90	4515 in²	95"	95"	D-H-NT-90,OH-90	--
Door - Non Temp Rise & Temp Rise	180	100 in²	10"	33"	D-H-NT-180	ANY

* Please note that combined height and width cannot exceed the maximum exposed glazing area measurement. Max sheet size 46" x 96" (45" x 95" usable) **Note:** Glass-ceramics do not act as a barrier to radiant or conducted heat transfer (ASTM E119/UL 263) and as such, use in openings with fire ratings of 60 minutes or greater may require approval from the local authority having jurisdiction (AHJ).

Order Format: KFRF _____ (W) _____ (H)-316 Example: KFRF 2329-316 Note: Order Size is Actual Glass Size

Interpretation of Fire and Building Codes May Vary. Consult with the Local Authority Having Jurisdiction (AHJ) to determine appropriate standards.

Distributor:	**Width: _____ x Height: _____**
Architect:	**Quantity:**
Contractor:	
Project:	**Date:** **Version:** ALPDS1901