



ALPOLIC[®] / fr-RF

The second generation
mirror finish ALPOLIC[®] has arrived

ALPOLIC[®]/fr-RF has the reflective finish needed to expand your interiors

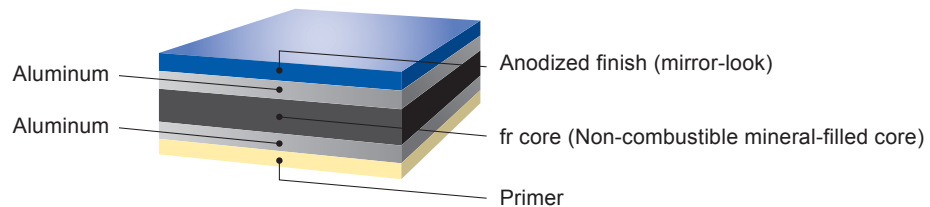
Features of ALPOLIC®/fr-RF

- 1. Shatter-proof and safety** Unlike glass, aluminum composite material (ACM) will not shatter or break.
- 2. Easy installation** It can be easily installed on a rigid substrate using a soft set adhesive and or double sided tape.
- 3. Simple processing** It is easily fabricated and formed. Cutting and drilling can be done on site.
- 4. Fire performance** In Japan it has been certified as a non-combustible material (Certificate No. NM-3415).

Reference image of applications



Material composition



Product dimension & finish

Thickness (mm)	Finish	Core material	Standard size (mm)
3	Anodized finish	fr core	1,220 x 2,440

Material properties

Specific gravity	Unit weight (kg/m ²)	Thermal conductivity (W/m·K)	Coefficient of linear expansion (×10 ⁻⁶ /K)	Flexural elasticity (N/mm ²)	Tensile strength (N/mm ²)
2.0	6.0	0.95	Approx. 25 (-20 to +60°C)	48,000	56

The material properties or data in this document are portrayed as general information only and are not product specifications. Due to product changes, improvements and other factors, Mitsubishi Plastics, Inc. reserves the right to change or withdraw information contained herein without prior notice.

General notes or precautions prior to design and installation

- Avoid using ALPOLIC®/fr-RF outdoors or indoors under a moist environment.
- ALPOLIC®/fr-RF should not be roll formed due to the brittle nature of the anodic layer.
- Contact between different metals will cause an electrochemical reaction under moist conditions. As aluminum has a lower corrosion potential than copper and iron, galvanic corrosion will accelerate the corrosion of aluminum alloy with these metals. Use stainless steel and aluminum for screws and rivets for assembling.
- The protective film on the surface is degraded by direct sunlight and/or moisture and it may cause a paste residue and create other problems on the finish. Store ALPOLIC®/fr-RF sheets in a dry room. The protective film should be removed immediately after installation is completed.
- When adhesive tapes or permanent marker is applied on the protective film, it may transfer and imprint on the surface.
- Installation of ALPOLIC®/fr-RF should be bonded to substrate boards with double sided adhesive tapes and an elastic type of adhesive. Surface distortion may take place on the mirror-look finish due to hardening and shrinking of the adhesive if a hard set adhesive is used. Avoid applying the adhesive unevenly.
- The thermal deformation temperature of ALPOLIC®/fr-RF is approx. 110°C. It can withstand 100°C for a short period if it is not under load. For long duration exposure to high temperatures 70°C is recommended as the maximum.
- Confirm reflection in the mirror-look finish by a large panel to check distortion or brightness of the finish.
- Keep away from acid and/or alkaline agents with direct contact. Corrosion will occur as it would with a conventional solid aluminum sheet.
- Aluminum composite material is hard to break but a physical impact may cause an edge deformation. Also inclusion of hard particles between panels may cause visible dent damages. Extra care is essential in handling the product during transport, storage, fabrication, and installation.
- A cut edge is sharp and dangerous therefore handling must be carefully with protective gloves.
- Compared to acrylic sheets the ALPOLIC®/fr-RF product has higher conductivity and therefore is less prone to dust sticking on the surface. For cleaning, use a soft cloth. Remove stains by using a neutral detergent, rinse by water, and rub with a dry cloth. Do not use an abrasive cleaner or steel wool. Do not use acid or alkaline detergents and solvents as they may cause corrosion of aluminum surface, removing the anodic layer and decreasing the gloss.

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<http://www.alpolic.com>

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