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**Tempered fire resistance glass**

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## Foreword

This translation has been made based on the original Japanese Industrial Standard established by the Minister of Economy, Trade and Industry through deliberations at the Japanese Industrial Standards Committee according to the proposal for establishment of Japanese Industrial Standard submitted by Flat Glass Manufacturers Association of Japan (FGMAJ)/Japanese Standards Association (JSA) with the draft being attached, based on the provision of Article 12 Clause 1 of the Industrial Standardization Law.

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# Tempered fire resistance glass

## 1 Scope

This Japanese Industrial Standard specifies the tempered fire resistance glass which is rectangular or square in shape and used for fire protection equipment in buildings. The tempered fire resistance glass constituting sealed insulating glass, laminated glass and laminated sealed insulating glass is also within the scope of this Standard.

NOTE : The tempered fire resistance glass is a glass manufactured to be suitable for fire protective purposes by the following process: The soda lime glass, used as a base material, is cut to the specified dimensions, given a special polishing around the edge, and then given a controlled thermal treatment to induce compressive stress on the glass surface, and the edge strength is increased so that its heat crack resistance is enhanced.

## 2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this Standard. The most recent editions of the standards (including amendments) indicated below shall be applied.

- JIS A 1304 *Method of fire resistance test for structural parts of buildings*
- JIS A 5430 *Fibre reinforced cement boards*
- JIS B 7502 *Micrometers*
- JIS B 7512 *Steel tape measures*
- JIS B 7516 *Metal rules*
- JIS C 1605 *Mineral insulated thermocouples*
- JIS R 3106 *Testing method on transmittance, reflectance and emittance of flat glasses and evaluation of solar heat gain coefficient*
- JIS R 3202 *Float glass and polished plate glass*
- JIS R 3203 *Patterned glass*
- JIS R 3208 *Heat absorbing glass*
- JIS R 3209 *Sealed insulating glass*
- JIS R 3221 *Solar reflective glass*
- JIS R 3222 *Heat-strengthened glass*

## 3 Terms and definitions

For the purposes of this Standard, the following terms and definitions apply.

### 3.1 float tempered fire resistance glass

tempered fire resistance glass manufactured with float plate glass, polished plate glass, heat absorbing float plate glass or heat absorbing polished plate glass

Float glass and polished plate glass are specified in **JIS R 3202**, and heat absorbing float plate glass and heat absorbing polished plate glass are specified in **JIS R 3208**.

### 3.2 frosted tempered fire resistance glass

tempered fire resistance glass manufactured with frosted plate glass

Frosted plate glass is specified in **JIS R 3202**.

### 3.3 patterned tempered fire resistance glass

tempered fire resistance glass manufactured with patterned plate glass

Patterned plate glass is specified in **JIS R 3203**.

### 3.4 solar reflective tempered fire resistance glass

tempered fire resistance glass manufactured with solar reflective glass

Solar reflective glass is specified in **JIS R 3221**.

### 3.5 low-emitting glass

glass applied with a wavelength-selective optical film on the surface to lower the emissivity, to be used for sealed insulating glass

Sealed insulating glass is specified in **JIS R 3209**.

## 4 Classification and symbols

Tempered fire resistance glass shall be classified as follows according to the base material plate glass and fireproof performance.

- a) Tempered fire resistance glass is classified according to the type of base material plate glass used and nominal thickness (see Table 1).

**Table 1 Designation according to the type of base material plate glass used**

| Classification according to the type of base material plate glass | Nominal thickness |
|-------------------------------------------------------------------|-------------------|
| Float tempered fire resistance glass                              | 3 mm              |
|                                                                   | 4 mm              |
|                                                                   | 5 mm              |
|                                                                   | 6 mm              |
|                                                                   | 6.5 mm            |
|                                                                   | 8 mm              |
|                                                                   | 10 mm             |
|                                                                   | 12 mm             |
| Frosted tempered fire resistance glass                            | 5 mm              |
| Patterned tempered fire resistance glass                          | 4 mm              |
|                                                                   | 5 mm              |
|                                                                   | 6 mm              |
| Solar reflective tempered fire resistance glass                   | 8 mm              |
|                                                                   | 10 mm             |
|                                                                   | 12 mm             |