

SGG 19MM TOUGHENED GLASS PANELS- CE EN12150 / BS 6206 /CCC

Standard Quality

Tempered Glass is cut clear float glass into customized size, then pass them into tempered furnace, which the heating to near glass softening point of 700 degrees, then rapidly cooled, which let the outer surface of the glass in a state of high compression, and the core or center of glass in compensating tension. This production process make clear tempered glass to be a safety glass that 4-5 times stronger than ordinary annealed glass, that is why tempered glass also called safety toughened glass.

Please note that tempered glass can not be cut any more, even grinding edges, or other processing. Thus all design details of toughened glass must be confirmed before mass production. Like edge polishing, drilling holes, cut outs, etc.

Tempered process:

1. **physical tempered glass**, also known as hardened tempered glass/strengthened tempered glass. It is putting ordinary flat glass in the heating furnace and heating the glass near softening temperature (600 °C), through its own deformation to eliminate internal stress and then take the glass out of the furnace and use a long nozzle to high-pressure cold air blowing glass on both sides, so that it quickly and evenly cooled to room temperature, can be tempered glass. The glass is internally tension, externally stressed and when locally damaged, stress is released and the glass is broken into numerous small pieces that do not have sharp edges and corners.

2. **chemical tempered glass** by changing the glass surface of the chemical composition to improve the strength of the glass, the general application of exchange for tempered glass.

Degree of tempered:

1. **Full tempered glass**: tempered degree = $2 \sim 4 \text{ N / cm}$, tempered glass surface stress $\alpha \geq 95 \text{ Mpa}$;
2. **Half tempered glass**: tempered degree = 2 N / cm , semi-tempered glass surface stress $24 \text{ Mpa} \leq \alpha \leq 69 \text{ Mpa}$;

Featurers:

1, **high impact strength**, 5 times higher than ordinary glass

2.**bending strength**, 5 times higher than ordinary flat glass

3.**thermal stability**, can withstand temperature changes of 200°C

4.**smooth, transparent, non-cutting** and so on

5.**safety glass**, In case of super impact damage, the debris was scattered small granular, no sharp edges and corners, it is also known as safety glass.

6, **Glass will be a slight thickness thinning after tempered**, Thinning of the reason is because the glass in the hot melt softening, after strong winds to make it fast cooling, so that the crystal internal crystal gap becomes smaller, the pressure becomes larger, so the glass after tempered to be thinner than before. Under normal circumstances 4-6MM glass after thinning 0.2-0.8MM thinner, 8-19MM within 0.9-1.8MM thinner.

Applications:

Tempered glass is safety glass. Widely used in high-rise building doors and windows, glass curtain wall, interior partition glass, ceiling, elevator access, furniture, glass railing and so on. Usually tempered glass can be used in the following industries:

1. **construction, building, decoration industry** (such as: doors and windows, curtain walls, interior decoration, etc.)
2. **furniture manufacturing industry** (glass coffee table, furniture, etc.)
3. appliance manufacturing industry (TV, oven, air conditioning, refrigerators and other products)
4. electronics, instrumentation industry
5. automobile manufacturing industry
6. daily-use products industry (glass cutting board, etc.)
7. special industry (military glass)

Specifications:

Sun Global Glass supply tempered glass with full range of colors, thickness and glass substrates.

1. Glass colors: clear, extra clear, frosted, bronze, gray, green, blue, reflective glass colors, printed colors, and low-E tempered glass.
2. Glass thickness: 4mm 5mm 6mm 8mm 10mm 12mm 15mm 19mm
3. Glass size: minimum size 300x300mm, maximum size length 8000mm
4. Edge work: Flat polished edge, chamfer edge, beveled edge, waved edge, OGEE edge, triple OG edge, and others.
5. Drilling holes: holes diameter need to be bigger than glass thickness.
6. Cut outs: all types of cut outs for different accessories. Our accurate cutting and measurements promoted the implementation of installers.
7. Safe corner: safety corner could greatly reduce the hurt to human by attack.

Quality:

1. 19mm toughened glass panels meet BS 6206 UK safety glass standard.

2. 19mm toughened glass panels meet EN 12150 CE European safety glass standard.
3. 19mm toughened glass panels meet Chinese Safety Glass Compulsory Certification (CCC)
4. High strength and pure clean surface. Select 40% of high quality clear glass for tempering.
5. Excellent work on details: smooth edge polishing, drilling holes tolerance $\pm 0.9\text{mm}$
6. Strong wooden crates package.

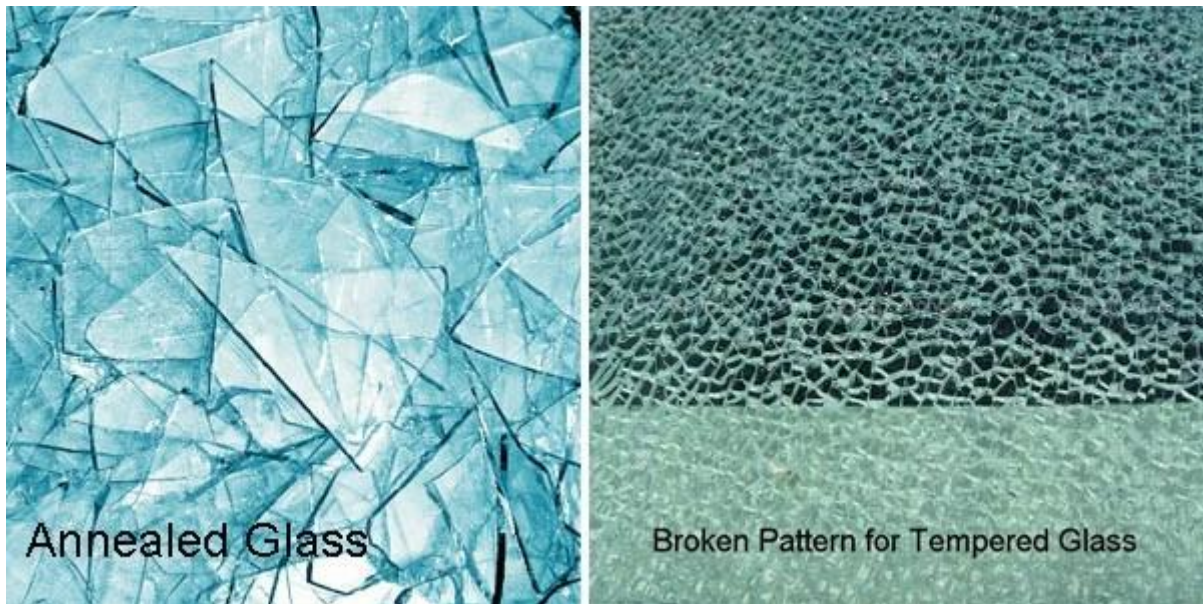
Product Details:

Product pictures of 19mm toughened glass panels:



Differences between Annealed Glass and Tempered Glass:

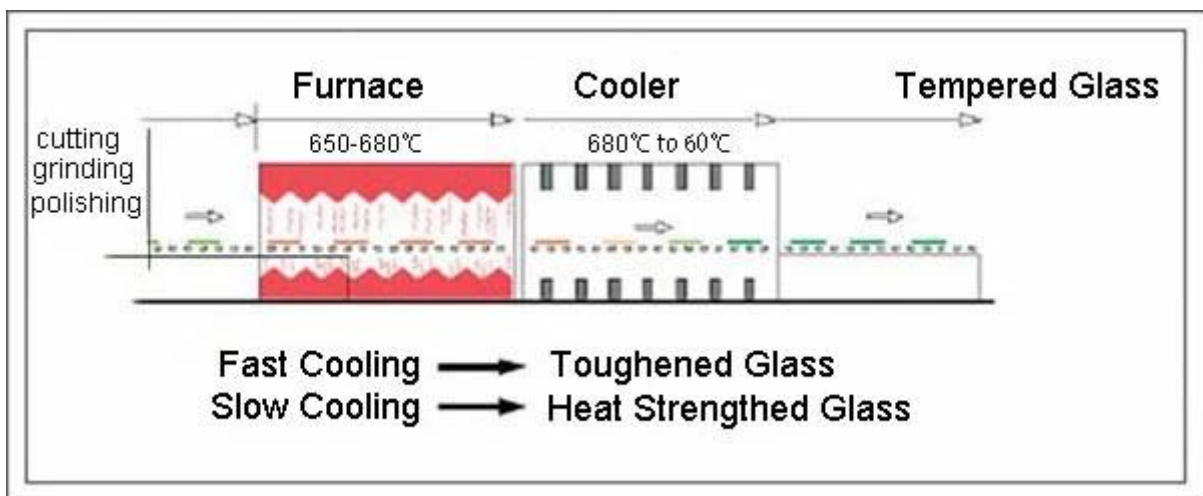
1. 19mm toughened glass panels reduces the risk of injury due to its nature of breaking into small, circular pieces instead of sharp, jagged shards.
2. 19mm toughened glass panels is ease of clean-up if they ever do break.
3. 19mm toughened glass panels is 5 times strength than [19mm clear float glass](#).

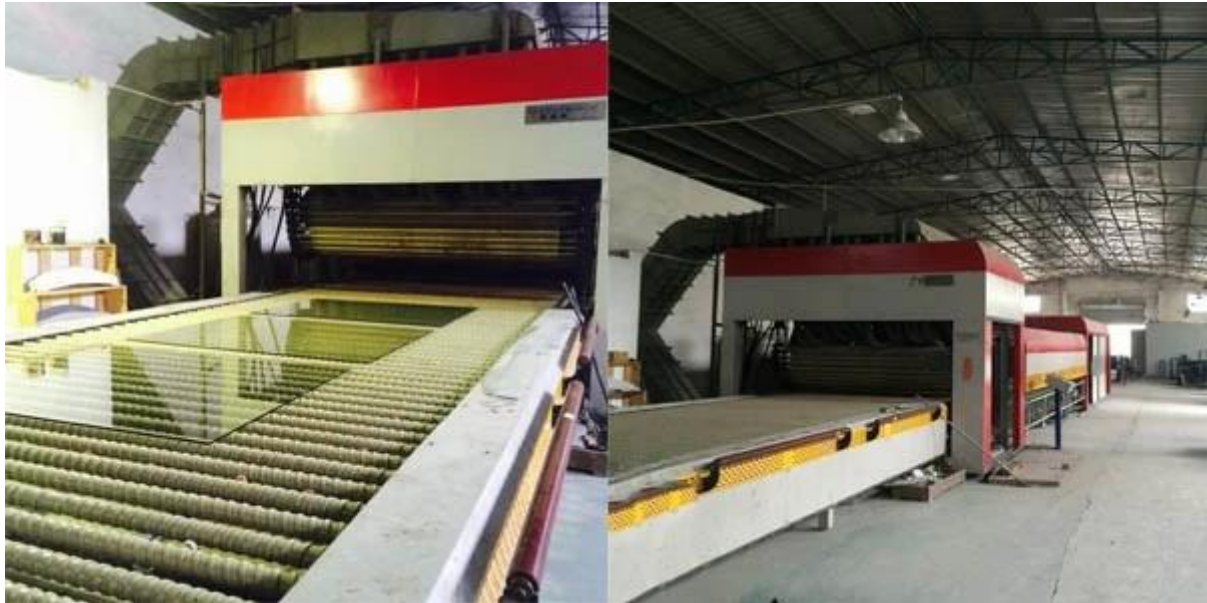


Holes and Cut outs:



Production Line:

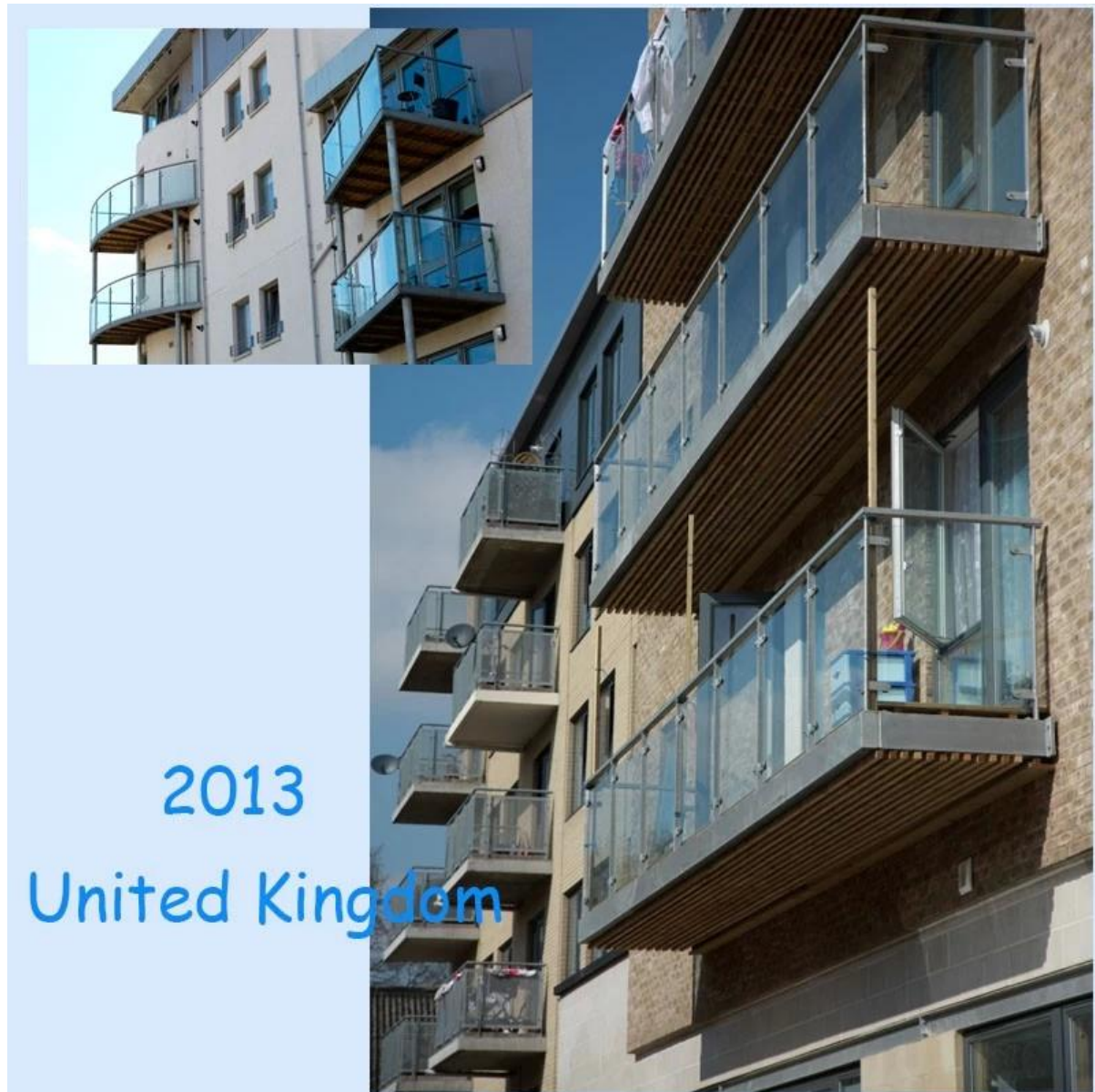




Package and Loading:



Our Projects:



Our promise is that you receiving 19mm toughened glass panels with high quality and safety condition from us.