

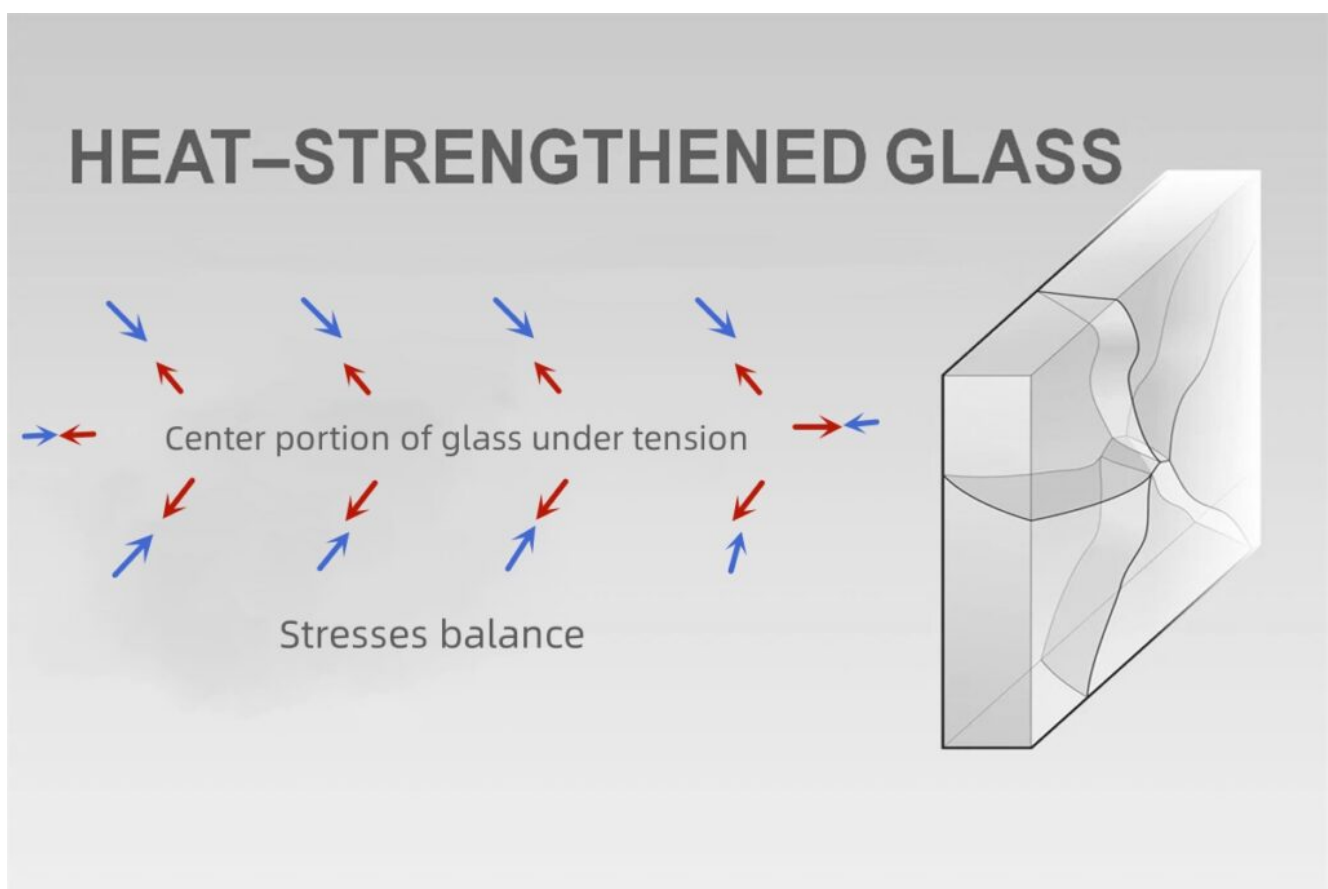
2024 FAQ- Heat Strengthened Glass vs Heat Soaked Glass, Which One is The Best?



What is heat strengthened glass vs heat soaked glass?

In the range of glass products, many people seem to be unfamiliar with or confused about heat-strengthened glass and heat-soaked glass.

As a result, we are often asked questions such as: Is heat-strengthened glass the same as tempered glass? [Can heat-strengthened glass be tempered glass?](#) Can the heat-soak process prevent tempered glass from exploding? Is the cost of heat-soaking the same as the cost of heat-strengthening? To clarify these points, we have compiled a detailed FAQ guide to help distinguish between these two glass processes.



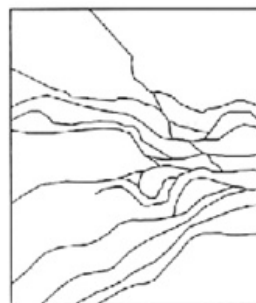
What is heat strengthened glass?

Heat-strengthened glass also called HS glass, semi tempered glass. Heat-strengthening is a process applied to regular [annealed float glass](#). It involves furnace processing (similar to tempered glass) but does not qualify as Grade A safety glass.

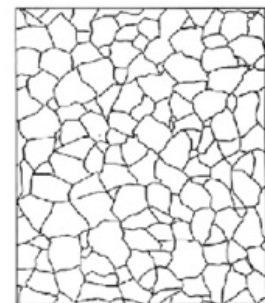
The strength of heat-strengthened glass is about 2 times that of regular annealed glass, whereas the strength of tempered glass is about 5 times that of regular annealed glass and qualifies as Grade A safety glass. When broken, heat-strengthened glass shatters into large pieces, unlike tempered glass, which breaks into small fragments.



annealed



heat-strengthened



fully tempered

Different glass breakage results



Heat strengthened glass process

What is heat soaked glass?

Heat soaked glass is also called [HST glass](#), or heat soak testing glass.

Heat soaking is a quality control process in which tempered glass panels are placed in a furnace chamber and heated to 290 degrees Celsius for an extended period under controlled cycles to accelerate the expansion of nickel sulfide.

As a result, glass containing nickel sulfide impurities are more likely to break in the heat-soaking chamber, thereby reducing the risk of potential breakage after installation.



Dragon Glass, a professional glass processor in China, invests in three machines for different sizes of glass Heat soak testing to meet different project requirements.



Heat soak testing machine from Dragon Glass, all meet [EN 14179](#) by CE

2-When should heat-strengthened glass or heat-soaked glass be used?

Heat-strengthened glass

[Laminated glass](#) typically uses heat-strengthened glass. Overhead glass canopies usually adopt a laminated glass structure, with a tempered panel on the exterior surface and a heat-strengthened panel on the interior surface.

If the heat-strengthened panel breaks, it will shatter into large pieces (unlike tempered glass, which shatters into small fragments), so the panel will remain intact. When tempered glass breaks, its structural integrity is insufficient to keep the panel securely in place for long, causing it to sag and potentially fall from the frame.

Considerations:

- The glass itself is not safety glass.
- Glass cannot be cut or drilled after heat-strengthening.
- It is typically used for custom laminated applications.

Heat-soak test glass

Why is heat soaking performed? Heat soaking helps to identify impurities in the glass during the process. Panels containing nickel sulfide are more likely to break during this process.

Can heat soaking prevent the tempered glass from exploding? Heat soaking does not guarantee that tempered and heat-soaked panels will not spontaneously explode in the future. It is an additional processing measure that helps prevent spontaneous breakage.

Of course, not all glass requires heat soaking. High-end projects, glass with high intrinsic value, or glass that is extremely difficult to process often require heat soaking. This helps save on the risk and cost of future replacements and also ensures safety, considering that this additional processing cost is quite high.

3-Specification of HS glass and HST glass

Heat strengthened glass	Heat soak test glass
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Non-safety glass	Safety glass
Not suggest monolithic use, but laminated or IGU structure	Monolithic, laminated, IGU, curved, etc
3-19mm thickness available	4-19mm thickness available
Maximum size reaches 3300x10000mm	Expensive than the other two types of glass
Cost similar like fully tempered glass	Cost similar to fully tempered glass
24MPa(3500psi)~52MPa(7500psi)	/
No risk of self-destruction	Self-explosion rate less than 0.01%

4-Applications of heat strengthened glass vs heat soaked glass

Heat strengthened glass

- [Railings](#)
- Pool fences
- Spandrels
- Roofs/Skylights
- Flooring and steps
- Commercial glass windows



Heat soak glass

- Curtain Walls
- [Facades](#)
- Spandrels
- Commercial windows
- Over Head Canopies



As a reliable supplier, [Dragon Glass](#) always focuses on high-quality tempered glass processing and export, for different projects, we already won over 370 clients with good feedback, if you are interested in our products or service, contact us by email: info@szdragonglass, or WhatsApp +86 13534049416.

If you have an urgent project and require assistance? [Please get in touch right now.](#)