

# TEMPERED GLASS SPONTANEOUS COMBUSTION

## Can It Really Happen?

The most common cause of **tempered glass spontaneously exploding** is the presence of **nickel sulfide (NiS) inclusions** within the glass.

### Here's how it happens:

- During the manufacturing process, tiny particles of **nickel sulfide** can become trapped in the glass.
- When glass is heated and rapidly cooled to create tempered glass, these NiS inclusions are trapped in a high-temperature form.
- Over time, especially under temperature changes or mechanical stress, the NiS can slowly transform to a more stable, lower-temperature form, which **expands slightly**.
- This expansion creates internal stress that can cause the tempered glass to suddenly shatter — sometimes even years after installation.



### Other less common causes include:

- **Edge damage** or chips from installation or impact.
- **Improper installation**, like overly tight framing.
- **Thermal stress**, especially in environments with large temperature swings.
- **Surface damage**, such as scratches or impacts from sharp objects.