As commonly known, conventional enamels reduce the mechanical strength of toughened glass. The 227 g ball test at 2 m drop height allows to sort out those weakened roof panes, as samples printed with conventional enamels will fail this test if impacted on CPA.

IWG has identified CPA induced strength reduction, in conjunction with stone impact, as a potential source of sudden breakage of toughened PSG (as reported by Korea). Consequently, the intention of IWG has been to sort out all roof glazing with CPAs larger than required for installation (this minimum CPA width determined in relation to the design glass outline), if a weakening enamel has been used. If an enamel or paint will be used which does not reduce the pane’s mechanical strength, even completely printed samples would pass the 2 m ball test, thus allowing to extend the CPA up to 100% of total glass area.

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