

In partnership with



Flamatt, Switzerland, February 2021

**Outstanding UV resistance of CONTRAFLAM fire-resistant glass
Durability according to EN ISO 12543-4:2011 confirmed through independent testing**

Dear Valued Customers and Project Stakeholders;

Enclosed please find a summarized test report from **TÜV Rheinland**, which describes and confirms the exceptional UV resistance of CONTRAFLAM fire-resisting glass far beyond the normative requirements.

Many fire resistant glass types with heat absorbing interlayers are sensitive to *direct* or *indirect* **UV radiation**. Over time, this may lead to the appearance of: discoloration, yellowness, haze, cloudiness, as well as the formation of bubbles or even delamination. While its fire resistance performance might well remain unaffected, the glass may become visually undesirable even over a comparatively short period of time.

EN ISO 12543-4:2011 is the test method for the durability of laminated and laminated safety glass, which includes “**fire-resistant**” laminated glass. All such products must demonstrate resistance to: high temperature, condensation from high humidity, and UV radiation simulating natural sunlight. Although UV resistance is typically only measured for products for external use, internal applications are also often exposed to *direct* or *indirect* natural light.

We tested our standard **CONTRAFLAM** makeup to **5000 hours**, without any additional special UV protective films or solar reflective coatings. The test method calls for just 2000 hours of resistance to UV radiation. Hence, our product successfully endured **2.5 times longer** exposure to UV radiation than the normative requirement!

Exceptional UV resistance and durability are major contributors to longer product life-cycles and the reduction of total cost of ownership. CONTRAFLAM's reliability and multi-functionality are among the qualities that have made it the industry's benchmark.

For Vetrotech Saint-Gobain International AG

Thomas Flück
Product Manager Interlayer Products



Summary of test report n°: 89214634-02-rev.2, dated: 31-10-2019

Laminated safety glass – Tests according to EN 12543-2:2011
Glass in building – laminated glass and laminated safety glass – Part 2: laminated safety glass

(For details is referred to the original test report)

The glass product, within the scope of the Regulation (EU) No 305/2011 (the Construction Products Regulation – CPR) with trade mark: **Contraflam**, type: **CF30**, in the configuration: **clear thermally toughened safety glass, 16mm nominal thickness, intumescent interlayer**, manufactured by **Vetrotech Saint Gobain International AG**, was submitted by the manufacturer to Notified Body 0336 TÜV Rheinland Nederland B.V., for Initial Type Testing according to the above-mentioned European standard. The results showed compliance with the applicable requirements. The test results and the content of this Summary exclusively relate to the tested samples, however, the type CF30 constitutes the worst-case make-up and hence represents the entire Contraflam product family. The results remain valid as long as the conditions laid down in the above-mentioned standard or the manufacturing conditions in the factory or the FPC itself are not modified significantly.

Product samples were exposed to 5.000 hours of radiation per EN-ISO 12543-4, 7.3.1 Method A on customer request (normative 2.000 hrs.). Test results on all samples demonstrate full continued compliance with all relevant passing criteria, such as luminous transmittance (< 3% change) and no development of delamination. Formation of bubbles, haze, cloudiness and discoloration is also not observed.

Company	Name	Vetrotech Saint Gobain International AG
	Address	Bernstrasse 43
	City	CH-3175 Flamatt
	Country	Switzerland
Production location	Name	Vetrotech Saint Gobain International AG
	Address	La Maillarde 7,
	City	1680 Romont,
	Country	Switzerland
	Product	Contraflam CF30

Remark: This Summary of test report is not a certificate of CE compliance and/or shall not be confused with the Evaluation of Conformity Certificate as required for CE marking for glass that belongs to AVCP-1 system (glass with fire or bullet or explosion resistance properties).

TÜV Rheinland Nederland B.V.
 Westervoortsedijk 73
 NL – 6827 AV ARNHEM
 The Netherlands
 Notified Body 1750



Arnhem, 06-01-2020

Mr. W. Notten, Local Business Field Manager