

BRE Global Assessment Report

An assessment of the fire performance of Janisol 2 single- and double-leaf, steel-framed, glazed sliding doorsets

Prepared for: Jansen AG
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BRE Global Ltd
Watford, Herts
WD25 9XX

Customer Services 0333 321 8811

From outside the UK:
T + 44 (0) 1923 664000
F + 44 (0) 1923 664010
E enquiries@bre.co.uk
www.bre.co.uk


Prepared for:
Jansen AG
Industriestrasse 34
CH-9463 Oberriet SG
Switzerland



Prepared by

Name	Andy Russell
Position	Principal Consultant
Date	27 May 2021
Signature	

Authorised by

Name	Tony Baker
Position	Head of Passive Fire Protection
Date	27 May 2021
Signature	

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1 Introduction

A number of fire resistance tests in accordance with EN 1634-1:2008 have been carried out on Jansen Janisol 2 steel-framed glazed sliding doorsets. This assessment report considers the fire resistance of these doorsets against BS 476: Part 22: 1987.

2 Scope

This assessment report considers the fire resistance of Jansen Janisol 2 single- and double-leaf, steel-framed, glazed sliding doorsets installed in masonry or concrete walls against the integrity and insulation criteria of BS 476: Part 22: 1987, for fire exposures of up to 30 minutes from either side.

3 Supporting data

This assessment is based on supporting test data which is more than five years old. This supporting data has therefore been reviewed against current test procedures.

3.1 ift Rosenheim test report no. 10-000487-PR01

A fire resistance test in accordance with EN 1634-1:2008 was carried out on a Janisol 2 single-leaf steel-framed glazed sliding doorset installed in a 240mm-thick rigid supporting construction on 02 December 2010 for a duration of 38 minutes.

The doorset, overall nominal dimensions 1583.5mm wide x 2720mm high, had a clear opening nominally 1400mm wide x 2500mm high. The door leaf was glazed with a single pane of 15mm Fireswiss Foam 30-15 glass of overall nominal dimensions 1430mm wide x 2452mm high. The glass had an edge cover of 12.5mm and was sealed against the frame and glazing beads by ceramic fibre glazing tape.

The specimen was tested fixed to the unexposed face of the supporting construction with the glazing beads on the unexposed face and in this orientation satisfied the criteria of the standard as follows:

Integrity:	Sustained flaming:	38 minutes
	Gap gauges:	38 minutes
	Cotton pad:	38 minutes
Insulation:	Average value	38 minutes
	Supplementary procedure:	38 minutes
	Normal procedure:	38 minutes

Full details of the tested specimen are given in ift Rosenheim report no. 10-000487-PR01.



3.2 ift Rosenheim test report no. 10-000487-PR02

A fire resistance test in accordance with EN 1634-1:2008 was carried out on a Janisol 2 single-leaf sliding doorset, with integrated single-leaf steel-framed hinged door, installed in a 240mm-thick rigid supporting construction on 02 December 2010 for a duration of 38 minutes.

The doorset, overall nominal dimensions 1434mm wide x 2720mm high, had a clear opening nominally 1250mm wide x 2500mm high. The hinged door leaf was glazed with a single pane of 19mm Fireswiss Foam 30-19 glass of overall nominal dimensions 1100mm wide x 2307mm high. The glass had an edge cover of 12.5mm and was sealed against the frame and glazing beads by ceramic fibre glazing tape.

The specimen was tested fixed to the exposed face of the supporting construction with the glazing beads on the exposed face and in this orientation satisfied the criteria of the standard as follows:

Integrity:	Sustained flaming:	38 minutes
	Gap gauges:	38 minutes
	Cotton pad:	38 minutes
Insulation:	Average value	38 minutes
	Supplementary procedure:	20 minutes
	Normal procedure:	38 minutes

Full details of the tested specimen are given in ift Rosenheim report no. 10-000487-PR02.

3.3 ift Rosenheim test report no. 11-003341-PR01

A fire resistance test in accordance with EN 1634-1:2008 was carried out on a Janisol 2 double-leaf steel-framed glazed sliding doorset, with glazed side panels, installed in a 250mm-thick rigid supporting construction on 22 December 2011 for a duration of 38 minutes.

The specimen, overall nominal dimensions 3640mm wide x 2811mm high, had a clear opening nominally 2800mm wide x 2500mm high.

The fixed side panels were each glazed with a single pane of 15mm Fireswiss Foam 30-15 glass, nominally 286mm wide x 2431mm high.

The door leaves were each glazed with a single pane of 15mm Fireswiss Foam 30-15 glass of overall nominal dimensions 1326mm wide x 2421mm high.

The glass had an edge cover of 13mm on the exposed face and 16.5mm on the unexposed face and was sealed against the frame and glazing beads by a Jansen EPDM seal.

The specimen was tested fixed to the exposed face of the supporting construction with the glazing beads on the exposed face and in this orientation satisfied the criteria of the standard as follows:

Integrity:	Sustained flaming:	38 minutes
	Gap gauges:	38 minutes
	Cotton pad:	38 minutes
Insulation:	Average value	38 minutes
	Supplementary procedure:	34 minutes



Normal procedure: 38 minutes

Full details of the tested specimen are given in ift Rosenheim report no. 11-003341-PR01.

4 Description of the proposed doorsets

The proposed single-leaf doorset has the same construction as that tested in ift Rosenheim report no. 10-000487-PR01 and the proposed double-leaf doorset has the same construction as that tested in ift Rosenheim report no. 11-003341-PR01. The doors may be glazed with either 15mm Fireswiss Foam 30-15 glass or 19mm Fireswiss Foam 30-19 glass. Appendix A provides further details.

The maximum doorset dimensions are the same as those tested and the doors are suitable for installation in masonry supporting constructions only.

5 Assessment

5.1 Comparison of standards

All the tests referenced in this assessment were carried out in accordance with EN 1634-1:2008. This standard is broadly similar to BS 476: Part 22. Although the furnace time/temperature curves of the EN and the BS are the same, the temperature in the EN is measured using plate thermometers whereas in the BS it is measured using bare-wire thermocouples. As the plate thermometers detect the rising temperature in the furnace more slowly, this tends to lead to a more severe exposure.

The two other significant differences relate to the furnace pressure and the location of the thermocouples on the unexposed face. The furnace pressure in the EN is set so that the neutral pressure plane is located 500mm above notional floor level whereas in the BS the neutral pressure plane is located 1000mm above notional floor level. In the case of the tested specimens, this would have resulted in a higher pressure at the top of the specimen than would have been the case had the tests been conducted in accordance with the BS. EN 1634-1, also allows thermocouples to be attached within 25mm of the door leaf edge when using the supplementary procedure whereas the BS does not allow thermocouples to be attached closer than 50mm to the leaf edge. In this respect the EN is again more onerous as higher temperatures would generally be expected closer to the leaf edge.

It should be noted that the doorset tested in ift Rosenheim report no. 10-000487-PR02 only satisfied the insulation criteria (supplementary procedure) for 20 minutes. However, the failures that did occur were related to the frame of the hinged pass door which formed part of this specimen. The other two tests indicate that if this doorset had been tested without the pass door, it would have satisfied the integrity criteria (supplementary procedure) for a period in excess of 30 minutes.

It is therefore reasonable to assume that the doorsets tested in ift Rosenheim report nos. 10-000487-PR01 and 11-003341-PR01 would satisfy the integrity and insulation criteria for 30 minutes if tested against BS 476: Part 22: 1987.



5.2 Powered drive mechanisms

The tested doorsets were fitted with Geze Powerdrive PL and Kaba Gilgen SLX-V drive systems. It is understood that these systems are used to open and close the doorset under day-to-day operation and that they are not designed to operate the door under fire conditions. Any alternatives are considered acceptable provided that the main unit is placed on the supporting construction at least 200 mm from the outside vertical edges of the interlock system and that any wire ropes/chains etc., which cross the opening are Euroclass A1. This should ensure that there is no greater likelihood of failure under fire conditions due to the ignition of any part of the drive system.

5.3 Direction of fire exposure

Tests on the doorsets have been successfully conducted from both sides, i.e. with the suspension system and glazing beads on both the exposed and unexposed faces. The fire resistance performance is therefore valid from either side.

5.4 Supporting construction

The minimum specification for masonry/concrete walls is based on the specimen tested in ift Rosenheim test report 11-003341-PR01; the doorset in this test was installed in a 250mm-thick rigid supporting construction with a nominal density of 500kg/m³. This is therefore the minimum specification of wall considered acceptable.

6 Conclusion

Therefore, it is our opinion that the Jansen Janisol 2 single- and double-leaf, steel-framed, glazed sliding doorsets, as described in section 4, are suitable for applications where a fire resistance of up to 30 minutes is required with respect to the integrity and insulation criteria of BS 476: Part 22: 1987, for fire exposure from either side.

7 Validity of the assessment

7.1 Declaration by applicant

We the undersigned confirm that we have read and complied with the obligations placed on us by the Passive Fire Protection Forum (PFPF) Guide to undertaking technical assessments of the fire performance of construction products based on fire test evidence 2019.

We confirm that the change, which is the subject of this assessment, has not to our knowledge been tested to the standard against which this assessment has been made.

We agree to withdraw this assessment from circulation should the component or element of structure be the subject of a fire test to the standard against which this assessment is being made.

We understand that this assessment is based on test evidence and will be withdrawn should evidence become available that causes the conclusion to be questioned. In that case, we accept that new test evidence may be required.



We are not aware of any information that could affect the conclusions of this assessment.

If we subsequently become aware of any such information, we agree to ask BRE Global to withdraw the assessment.

JANSEN AG
Industriestrasse 34
Postfach 220
CH-9463 Oberriet

Signed:

For and on behalf of: JANSEN AG

7.2 BRE Global declaration

This assessment was reviewed on 27 May 2021. We have received written confirmation from Jansen AG that there have been no changes in the specification of their Janisol 2 single- and double-leaf, steel-framed, glazed sliding doorsets since the original date of the assessment. There have been no changes in the fire test procedures or methods of assessment, which would adversely affect the fire performance of the doorsets. We are therefore satisfied that the validity of this assessment may be extended for a further five years.

This assessment is issued on the basis of test data and information to hand at the time of issue. If contradictory evidence becomes available to BRE Global the assessment will be unconditionally withdrawn and the applicant will be notified in writing. Similarly, the assessment evaluation is invalidated if the assessed construction is subsequently tested since actual test data is deemed to take precedence.

The assessment is valid for a period of five years after which it is recommended that it be submitted to BRE Global for re-evaluation.

This assessment has been carried out in accordance with the Passive Fire Protection Forum (PFPF) Guide to undertaking technical assessments of the fire performance of construction products based on fire test evidence 2019. It relates to the fire performance of the product and does not cover aspects of quality, durability, maintenance nor service requirements. This assessment relates only to the specimen(s) assessed and does not by itself imply that the product is approved under any Loss Prevention Certification Board approval or certification scheme or any other endorsements, approval or certification scheme.

The assessment report is not valid unless it incorporates the declaration duly signed by the applicant.

Next review date: 27 May 2026

Appendix A Technical data

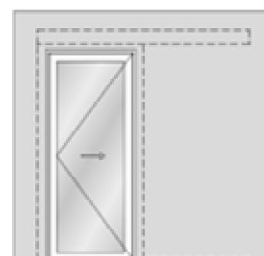
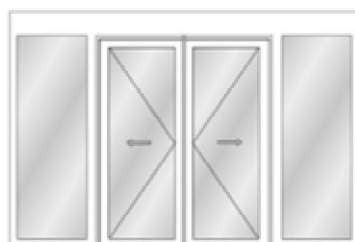
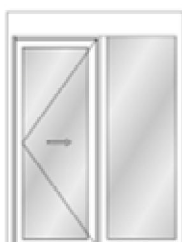
Technical data

Fire-resistant Janisol 2 sliding door EI30

Unit sizes

- Single-vent
Clear opening width/height: max. 1400 × 2500 mm
- Double-vent
Clear opening width/height: max. 2800 × 2500 mm

Types



Vent weight

Max. 225 kg vent including yoke

Approved infill units

- Fireswiss Foam 30-15, 15 mm
- Fireswiss Foam 30-19, 19 mm

Installation of infill units

Dry glazing with EPDM gaskets or wet glazing with ceramic fibre strips

Approved door actuators

- Powerdrive PL, GEZE
- SLX-V, Kaba Gilgen AG

For alternative actuators please see assessment report.

METALFORM

MASTERS OF METAL

UNITED KINGDOM

METALFORM

NORWAYMETAL LTD

53 Chelsea Manor Street

London, SW3 5RZ

SALES@METALFORM.UK

+44 20 81298814

GERMANY

METALFORM GMBH

Carl-Zeiss-Ring 15A

85737 Ismaning

SALES@METALFORMGROUP.DE

+49 17663630406

NORWAY

METALFORM AS

Brochmannsveien 2

1950 Rømskog

SALG@METALFORM.NO

+47 401 62 446

METALFORMGROUP

SALES@METALFORMGROUP.COM