

**Classification of Fire
Resistance, Smoke Control
and Durability of Self Closing
Performance
in accordance with
EN 13501-2:2016**

K-5070-DMT-DO

Customer	Metaflex Doors Europe B.V. Postbus 300 NL-7120 AH AALTEN
Compiled by	DMT GmbH & Co. KG DMT Test Laboratory for Fire Protection, Test Body for Fire Protection Hermann-Kemper-Straße 12a 49762 Lathen Germany
Number of notified body	2509
Product	Single leaved sliding doorset as fire-resistance and smoke control doorset with the durability of self closing performance, with or without glazing.
Product designation	Medicare EI1
Nr. of the classification report	K-5070-DMT-DO
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1 Introduction

This classification report of fire resistance performance, smoke control and self-closing performance defines the classification assigned to a fire protection and smoke control doorset with designation „ Medicare EI1“ in accordance with the procedures given in EN 13501-2:2016.

2 Details of classified product

2.1 General

The building component „Medicare EI1“ belongs to the product type fire-resistance and smoke control doorsets according to EN 16034.

The building component „Medicare EI1“ is provided for the appropriation as single-leaved fire-resistance as well as a single leaf smoke control doorset. It fulfils specific performance characteristics for fire resistance behaviour according to section 5 of EN 13501-2 when flamed one-sided from the opening (side of the track rail side) or the closing side (the opposite track rail side) (section 5.2.2, 5.2.3 and 5.2.4).

Furthermore, the product „Medicare EI1“ as a single-leaf smoke control doorset, fulfils the criterion of smoke leakage S (section 5.2.7) and therefore reduces or excludes the passage of gas or smoke from one side of the component to the other, both at ambient temperature (S_a) and at a temperature of 200 °C (S_{200}).

The product „Medicare EI1“ as a single-leaved fire protection doorset as well as a single-leaf smoke control doorset, fulfils the requirement of the ability of self-closing characteristic C (section 5.2.6), with the ability to close completely from the open position.

The product „Medicare EI1“ as a single-leaf fire protection and smoke control doorset, additionally fulfils the requirement of the durability of self-closing characteristic C5 (section 5.2.6), with the ability to close completely from the open position.

A load-side is not determined, the load may occur both from the track rail side as well as the opposite track rail side.

2.2 Detailed product description

The product „Medicare EI1“ is a single-leaved optionally glazed sliding doorset. The building component is described completely in the test reports, which are referred to in section 3.1 for verification of classification, as also the annexes 1.1 of this classification report.

3 Test reports / reports of extended classification and test results for verification of classification

3.1 Test reports

3.1.1 Test reports according to EN 1634-1

No.	Name of Laboratory No. of Notified Body	Name of sponsor	Test report no. dated	Test method
F1	DMT GmbH & Co. KG NB 2509	Metaflex Doors Europe B.V.	DMT-DO-50-808 20.04.2023	EN 1634-1: 2014 +A1:2018 EN 1363-1:2020
F2	DMT GmbH & Co. KG NB 2509	Metaflex Doors Europe B.V.	DMT-DO-50-810 21.04.2023	EN 1634-1: 2014 +A1:2018 EN 1363-1:2020
F3	DMT GmbH & Co. KG NB 2509	Metaflex Doors Europe B.V.	DMT-DO-50-871 21.04.2023	EN 1634-1: 2014 +A1:2018 EN 1363-1:2020
F4	DMT GmbH & Co. KG NB 2509	Metaflex Doors Europe B.V.	DMT-DO-50-1194 21.04.2023	EN 1634-1: 2014 +A1:2018 EN 1363-1:2020
F5	DMT GmbH & Co. KG NB 2509	Metaflex Doors Europe B.V.	DMT-DO-50-1195 21.04.2023	EN 1634-1: 2014 +A1:2018 EN 1363-1:2020

The product was extensively described and illustrated in all test reports F1 to F5. It is the same product type that is classified in this report. The test results are sufficiently presented and comprehensible.

The product standard EN 16034:2014 refers to the standards EN 1634-1 release version 2014 and EN 1363 release version 2012.

The test standard EN 1634-1 will be taken into account with its release versions of 2014 and 2018. The product standard refers to the release versions of 2014, so that the differences to this version must be evaluated.

The test reports in F1 and F5 were tested according to the standard EN 1634-1 release version 2014+A1:2018. The changes compared to the release version 2014 can be seen in the following list (extract from the preface of EN 1634-1:2014+A1:2018).

Extract from the preface of the EN 1634-1:2014+A1:2018:

- a. Changes of the European foreword;
- b. Change of the field of application;
- c. Changes in section 2;
- d. Changes in section 3;
- e. Change in section 5;
- f. Change in section 6;
- g. Change in section 8;
- h. Changes in section 9;
- i. Changes in table 2;
- j. Changes of the figures 11, 12, 16, 24 and 33;
- k. Changes in annex B;
- l. Changes in the references.

This is at one side a change of terminologies and concretizations as also basically the changes regarding for doorsets in particular, changes in the required distance of thermocouples between frame/blind frame and supporting construction from 20 mm to 15 mm.

None of the differences between the mentioned versions of the EN 1634-1 test standard were relevant for the performance of the tests documented in the test reports F1 and F5, so that all results would have been also achieved by using the 2014 release version of the standard. Therefore, reports F1 and F5 can be used for this classification report.

The test standard EN 1363-1 will be taken into account with its release versions of 2020. The product standard refers to the release version of 2012, so that the differences to this version must be evaluated.

The specimen described in test report F1 to F5 were tested according to standard EN 1363-1 edition 2020. In addition to a number of editorial changes and clarifications regarding the evaluation of hot gases escaping during fire testing for the insulation criteria, the main changes in this version affect sustainability criterion “Loadbearing capacity” which is not relevant for this classification report. Regarding the tests F1 to F5 the differences between the 2020 edition of the standard and the 2012 edition are not relevant.

3.1.2 Test results of test reports according to EN 1634-1

Test report number Brief description of the test specimen	Parameter	Results [min]
(F1) DMT-DO-50-808 Single leaf sliding doorset with the designation "Medicare EI1" with glazing, embedded to an associated supporting construction as a lightweight construction with a thickness of 100 mm, with a clear opening (W x H) of 2000 mm x 2700 mm. Fire exposed from the opposite track rail side	Integrity (cotton pad)	70
	Integrity (gap gauge)	79
	Integrity (sustained flaming)	79
	Insulation I ₁	77
	Insulation I ₂	76
	Radiation	79
(F2) DMT-DO-50-810 Single leaf sliding doorset with the designation "Medicare EI1" with glazing, embedded to an associated supporting construction as a lightweight construction with a thickness of 100 mm, with a clear opening (W x H) of 2000 mm x 2700 mm. Fire exposed from the track rail side	Integrity (cotton pad)	68
	Integrity (gap gauge)	68
	Integrity (sustained flaming)	63
	Insulation I ₁	68*)
	Insulation I ₂	68
	Radiation	68
(F3) DMT-DO-50-871 Single leaf sliding doorset with the designation "Medicare EI1", with 3 mm metal sheet embedded to an associated supporting construction as a lightweight construction with a thickness of 100 mm, with a clear opening (W x H) of 2000 mm x 2700 mm. Fire exposed from the track rail side	Integrity (cotton pad)	67
	Integrity (gap gauge)	67
	Integrity (sustained flaming)	67
	Insulation I ₁	63
	Insulation I ₂	67
	Radiation	67

<p>(F4) DMT-DO-50-1194 **) Test of two wooden composite elements with a thickness of 64,4 mm, in conjunction with building hardware "Planline SL20C" "Planline SL20MB" "Lever handle Type HD30" embedded by steel angles to a standard supporting construction with low density rigid with a thickness of 240 mm. Fire exposed from booths side.</p>	F4 a) door 1	
	Integrity (cotton pad)	71
	Integrity (gap gauge)	71
	Integrity (sustained flaming)	71
	Insulation I ₁	71
	Insulation I ₂	71
	Radiation	71
	F4 b) door 2	
	Integrity (cotton pad)	71
	Integrity (gap gauge)	71
	Integrity (sustained flaming)	71
	Insulation I ₁	71
	Insulation I ₂	71
	Radiation	71
<p>(F5) DMT-DO-50-1195 **) Test of two wooden composite elements with a thickness of 60 mm, in conjunction with building hardware "E11 paneel standard opener" embedded by steel angles to a standard supporting construction with low density rigid with a thickness of 240 mm.</p>	Integrity (cotton pad)	102
	Integrity (gap gauge)	102
	Integrity (sustained flaming)	102
	Insulation I ₁	102
	Insulation I ₂	102
	Radiation	102

*) The temperature of TC 96 to TC 98 exceeded 180 K because the intumescent foam expanded so much that the thermocouples was covered. Comparative measurements below and next to thermocouple 97 show that the temperature increase is due to the covering of the intumescent foam (roving tc). Further information's see annex 3.3 of DMT-DO-50-810.

**) Test Report DMT-DO-50-1194 and DMT-DO-50-1195 were carried out as supplementary tests with door leaf assemblies of the type "Medicare E11" with different handle sets as well as glazing panels with and without internal roller blind and will only be used for this purpose.

3.1.3 Test reports according to EN 1634-3

No.	Name of Laboratory No. of Notified Body	Name of sponsor	Test report no. dated	Test method
S1	DMT GmbH & Co. KG 2509	Metaflex Doors Europe B.V.	DMT-DO-52-486 08.05.2023	EN 1634-3:2004
S2	DMT GmbH & Co. KG 2509	Metaflex Doors Europe B.V.	DMT-DO-52-487 04.05.2023	EN 1634-3:2004

All smoke control tests were carried out in accordance with the current standard EN 1634-3:2004, to which the product standard EN 16034:2014 refers and can therefore be used without restriction.

3.1.4 Test results of test reports according to EN 1634-3

Test report number Brief description of the test specimen	Parameter	results
(S1) DMT-DO-52-486 Single leaf sliding doorset with a thickness of 60 mm, with designation „Medicare EI1“ with an open clearance (W x H) of 2000 x 2700 mm, embedded to an associated supporting construction as a lightweight construction with a thickness of 100 mm. Tested from both sides	S _a – Smoke control at ambient temperature	0,97 m ³ /m/h
	S _m – Smoke control at a temperature of 200°C	11,09 m ³ /h
(S2) DMT-DO-52-487 Single leaf sliding doorset with a thickness of 60 mm, with designation „Medicare EI1“ with glazing with an open clearance (W x H) of 2000 x 2700 mm, embedded to an associated supporting construction as a lightweight construction with a thickness of 100 mm. Tested from both sides	S _a – Smoke control at ambient temperature	0,60 m ³ /m/h
	S _m – Smoke control at a temperature of 200°C	7,26 m ³ /h

3.1.5 Test reports according to EN 1191

No.	Name of Laboratory No. of Notified Body	Name of sponsor	Test report no. dated	Test method
D1	DMT GmbH & Co. KG 2509	Metaflex Doors Europe B.V.	DMT-DO-51-318 26.04.2023	EN 1191:2012
D2	DMT GmbH & Co. KG 2509	Metaflex Doors Europe B.V.	DMT-DO-51-351 15.06.2023	EN 1191:2012
D3	DMT GmbH & Co. KG 2509	Metaflex Doors Europe B.V.	DMT-DO-51-368 09.06.2023	EN 1191:2012

The durability of self-closing tests D1 to D3 was tested in accordance with the standard EN 1191:2012, to which the product standard EN 16034:2014 refers and can therefore be used without restriction.

3.1.6 Test results of test reports according to EN 1191

Test report number Brief description of the test specimen	Parameter	Results
(D1) DMT-DO-51-318 Single leaf sliding doorset with a thickness of 60 mm, with designation „Medicare E11“ with glazing with an open clearance (W x H) of 2000 x 2700 mm, embedded to an associated supporting construction as a lightweight construction with a thickness of 125 mm. Door leaf weight 253 kg.	C – durability of self-closing performance	200.000 cycles (without maintenance)
(D2) DMT-DO-51-351 Single leaf sliding doorset with a thickness of 60 mm, with designation „Medicare E11“ with 3 mm lead with an open clearance (W x H) of 2000 x 2700 mm, embedded to an associated supporting construction as a lightweight construction with a thickness of 100 mm. Door leaf weight 340 kg.	C –durability of self-closing performance	200.000 cycles (without maintenance)

<p>(D3) DMT-DO-51-368 Single leaf sliding doorset with a thickness of 60 mm, with designation „Medicare EI1“with an open clearance (W x H) of 2000 x 2700 mm, embedded to an associated supporting construction as a lightweight construction with a thickness of 100 mm. Door leaf weight 199 kg.</p>	<p>C –durability of self-closing performance</p>	<p>200.000 cycles (without maintenance)</p>
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4 Classification and field of application

4.1 Reference of classification

This classification was carried out in accordance with EN 13501-2:2016, section 7.5.5 and 7.5.6.

4.2 Classification

The building component „Medicare EI1“ of Metaflex Doors Europe B.V., may be classified according to the following combinations of performance parameters and classes as appropriate.

R	E	I	W		t	t	-	M	S	C	IncSlow	sn	ef	r
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Fire resistance classification:

EI₁ 60 – C5/

EI₁ 60 – S_a C5/

EI₁ 60 – S₂₀₀ C5/

EI₂ 60 – C5/

EI₂ 60 – S_a C5/

EI₂ 60 – S₂₀₀ C5/

4.3 Field of application

This classification is valid for the following practical application (final application):

EN 16034

The scope of the classified component with direct field of application is given in the test reports and the annex 1.1 of this classification report.

4.4 Field of direct application of test results

4.4.1 Materials and construction

Unless otherwise stated in the following text the materials and construction of the doorset or openable window shall be the same as that tested.

4.4.2 Specific restrictions on materials and construction

Timber constructions:

- The thickness of the door panel(s) shall not be reduced but may be increased.
- The door panel thickness and/or density may be increased provided the total increase in weight is not greater than 25%.
- For timber-based board products (e.g. particle board, blockboard, etc.), the composition (e.g. type of resin) shall not change from that tested. The density shall not be reduced but may be increased.
- The cross-sectional dimensions and/or the density of the timber frames (including rebates) shall not be reduced but may be increased.

Metal constructions:

- The dimensions of metal wrap around frames may be increased to accommodate increased supporting construction thickness. The thickness of the metal may also be increased by up to 25%.
- The type of metal shall not be changed from that tested.

- The number of stiffening elements for uninsulated doors and the number and type of fixing such members within the panel fabrication may be increased proportionally with the increase in size but shall not be reduced.

Glazed constructions:

- The type of glass and the edge fixing technique, including type and number of fixings per square metre of perimeter shall not be changed from those tested.
- The number of glazed apertures and each of the dimensions (width and height) of glass in each pane included within a test specimen may be:
 - decreased in proportion with door size reductions; or
 - decreased by a maximum of 25% for integrity only and/or radiation control door sets and for insulation doorsets where the unexposed surface temperature for both the door leaf and the glazing have been maintained for the classification period; or
 - reduced without restriction providing that the total area of the tested pane(s) is less than 15% of the door leaf or side/over panel area.
- The number of glazed apertures and each of the dimensions of glass in each pane included within a test specimen shall not be increased.
- The distance between the edge of glazing and the perimeter of the door leaf, or the distance between glazed apertures shall not be reduced from those incorporated in test specimens. Other positioning within the door can only be modified if this does not involve the removal or re-positioning of structural members relative to the glazing.

4.4.3 Decorative finishes

- Where the paint finish is not expected to contribute to the fire resistance of the door alternative paints are acceptable and may be added to door leaves or frames for which unfinished test specimens were tested. Where the paint finish contributes to the fire resistance (e.g. intumescent paints) then no change shall be permitted.
- Decorative laminates and timber veneers up to 1.5 mm thickness may be added to the faces (but not the edges) of doors that satisfy the insulation criteria (normal or supplementary procedure).

- Decorative laminates and timber veneers applied to door leaves that do not satisfy the insulation criteria (normal or supplementary procedure) and/or those in excess of 1.5 mm thickness shall be tested as part of the test specimen. For all doorsets tested with decorative laminate faces the only variations possible shall be within similar types and thickness of material (e.g. for colour, pattern and manufacturer).

4.4.4 Fixings

- The number of fixings per unit length used to attach doorsets to supporting constructions may be increased but shall not be decreased and the distance between fixings may be reduced but shall not be increased.

4.4.5 Building hardware

- The number of hinges may be increased but shall not be decreased.
- The number of movement restrictors such as locks and latches is not covered by direct application.
- Exchange of building hardware is not covered by the field of direct application.

4.4.6 Seals

As the sealing system is a critical part of the test, no modification may be made to the system tested.

The clearance gaps between components may be varied but shall not be greater than those in the tested assembly and where gaps are smaller they shall not impair the ability of the leaf/leaves/curtain to close especially in cases where both leaves of hinged or pivoted door assemblies are opened or closed simultaneously.

4.4.7 Permissible size variations

Unlimited size reductions are permitted (see also section 13.3 of EN 1634-1:2014 +A1:2018).

The durability of self-closing and/or repeated opening and closing shall be performed with the largest and heaviest variation of the particular product type. Therefore the product's performance is also applicable to smaller and lighter variations of the product

When reducing those dimensions, the following criteria have to be observed:

- The design and materials tested have to be maintained and the door functionality has to be fully ensured.
- For smaller doorset sizes the relative positioning of movement restrictors (e. g. hinges and latches) shall remain the same as tested or any change to the distances between them will be limited to the same percentage reduction as the decrease of test specimen size.
- Where decorative veneers of 1,5 mm or greater thickness, or other claddings which them-selves provide constructive benefits, are part of the test specimen, they shall not be substituted with alternatives of lesser thickness or strength.

4.4.8 Supporting constructions

4.4.8.1 Associated supporting construction

According to section 2.4 the test specimen was embedded to an associated supporting construction. According to EN 1634-1:2014+A1:2018, paragraph 13.6 the fire resistance of a door tested in an associated supporting construction has no field of direct application.

5 Limitations

This classification document does not represent type approval or certification of the product.

Lathen, 17.07.2023



Kruse
(deputy head of test lab)


DMT-Prüfstelle für Brandschutz
DMT



Herbers
(case worker)

Annotations

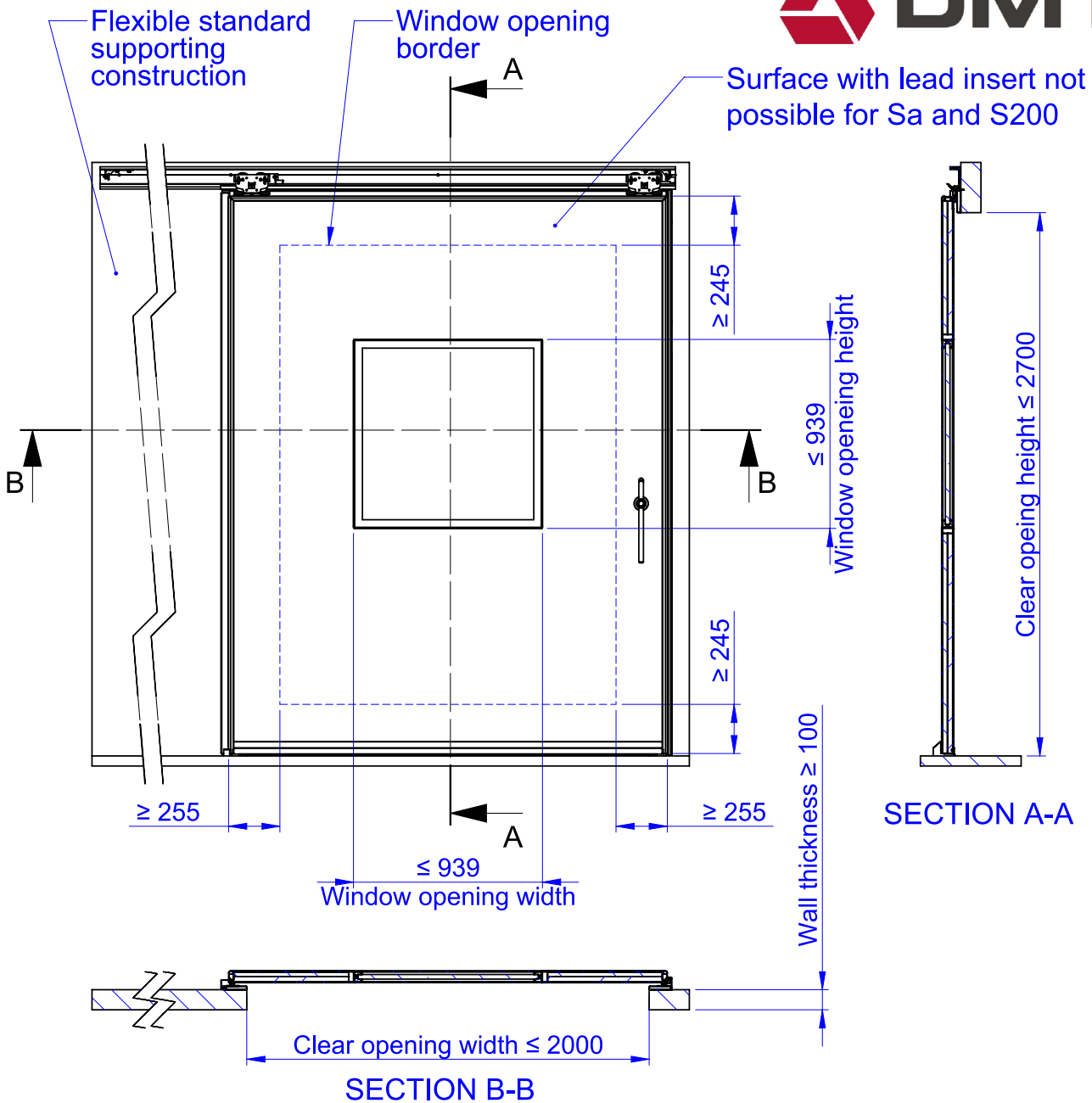
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Translations of this classification report have to include the annotation „Translation of the English original version not proven by DMT GmbH & Co. KG, Test Body for Fire Protection“. In cases of doubt the English original version of the report is valid.



Automation:

- SDA-04 i.c.w. ABI 90W & self closing unit DICTATOR Dictamat 650 320N
- SDA-05 with power supply) i.c.w. Dunker BG75 & self closing unit DICTATOR Dictamat 650 320N
- SDA-05 (with battery back-up) i.c.w. Dunker BG75 & self closing unit DICTATOR Dictamat 650 160N

Window options:

- No window
- Internal blinds manual
- Internal blinds automatic

Door leaf weight ≤ 340 kg



Medicare EI1, E 60/EW 60/EI1 60/EI2 60 - Sa/S200 C5

Annex 1.1