

CLASSIFICATION OF FIRE RESISTANCE PERFORMANCE
IN ACCORDANCE WITH EN 13501-2:2016

Sponsor	: MULCOL INTERNATIONAL BV Arnesteinweg 18, 4338 PD Middelburg / The Netherlands
Prepared by	: EFFECTIS ERA AVRASYA Test ve Belgelendirme A.Ş. Dilovası OSB 5. Kısım Fırat Caddesi No:18 Dilovası, KOCAELİ/TURKEY
Product name	: Mulcol® Multidisc. Electrical sockets, installation in flexible and rigid wall.
Classification report No.	: EEA - 20 - 007
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INDEX

1. INTRODUCTION	3
2. DETAILS OF CLASSIED PRODUCT	3
2.1. General.....	3
2.2. Description	3
2.2.1. General.....	3
2.2.2. Construction	3
2.2.3. Technical description of the products.....	4
2.3. Results	4
2.3.1. Single Electrical Sockets	4
2.3.2. Double Electrical Sockets	7
3. REPORTS AND RESULTS IN SUPPORT OF CLASSIFICATION	11
3.1.Reports	11
4. FIELD OF APPLICATION	11
4.1. Field of application	11
4.1.1. General.....	11
4.1.2. Orientation	11
4.1.3. Flexible wall	11
4.1.4. Services	12
5. LIMITATIONS	13

1. INTRODUCTION

This classification report defines the classification in accordance with the procedures given in EN 13501-2:2016, assigned to Penetration seals; Mulcol® Multidisc, installation in flexible and rigid wall.

2. DETAILS OF CLASSIFIED PRODUCT

2.1. General

The elements, Penetration seals; Mulcol® Multidisc. Electrical sockets, installation in flexible and rigid wall defined as type of product.

2.2. Description

Penetration seals; Mulcol® Multidisc. Electrical sockets, installation in flexible and rigid wall defined as type of product are fully described below.

2.2.1. General

Product identification	: Mulcol® Multidisc. Electrical sockets, installation in flexible and rigid wall.
Manufacturer	: MULCOL INTERNATIONAL BV Arnesteinweg 18, 4338 PD Middelburg / The Netherlands
Sponsor of test	: MULCOL INTERNATIONAL BV Arnesteinweg 18, 4338 PD Middelburg / The Netherlands

2.2.2. Construction

The specimens were installed into a 100 mm thick flexible, insulated supporting construction and tested to evaluate their fire resisting performance.

Sponsor's sub-contractor constructed a nominally 100 mm thick steel stud/plasterboard clad, stone wool insulated partition in accordance with EN 1363-1:2012. The sponsor subsequently installed the systems into the supporting construction, with assistance from Efectis Era Avrasya as required.

The supporting construction comprised of a 3000 mm x 3000 mm (w x h) steel stud/plasterboard clad partition, built in accordance with EN 1366-3: 2009 and EN 1364-1: 2015 into a refractory lined steel restraint frame.

*All dimensions are given in mm.

The supporting construction was fixed on the horizontal edges, the vertical edges remained free. The gap between the vertical edges and restraint frame were sealed with ceramic wool.

2.2.3. Technical description of the products

Mulcol® Multidisc

- Mulcol® Multidisc is a surface mounted self-adhesive intumescent disc device used to form penetration seals where plastic conduits, metal pipes, electrical sockets, aluminium composite pipes and cables penetrate walls and floors.
- The Mulcol® Multidisc is supplied in boxes of 65 mm diameter x 3 mm disks, to be used single or in combination depending upon services.

2.3. Results

2.3.1. Single Electrical Sockets

Single electrical sockets applied at the exposed and unexposed side, back to back. Mulcol® Multidisc was applied inside of each socket. Further details are given in the drawings. See Table 1 for details.

Classification

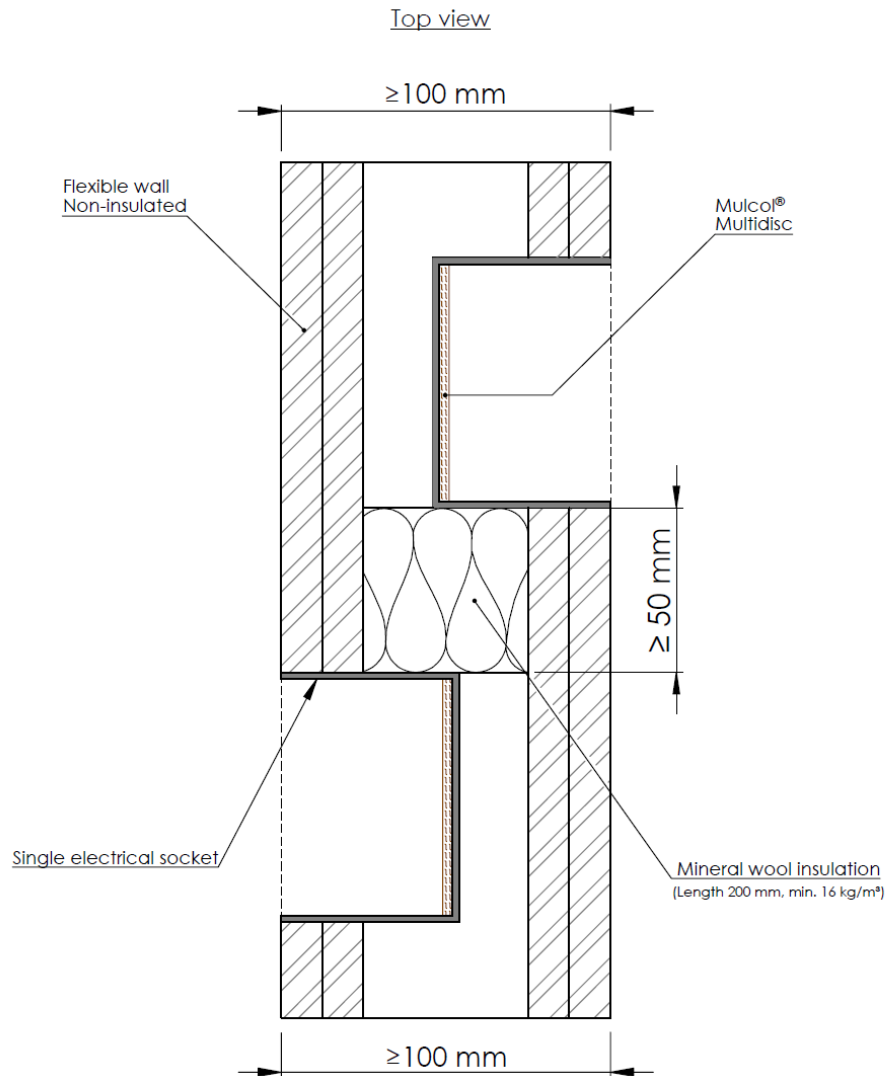
Mulcol® Multidisc, installation in flexible and rigid wall are classified according to the following combinations of performance parameters and classes:

R	E	I	W		t	t	-	M	S	C	IncSlow	sn	ef	r
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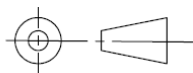
Considering the test evidence submitted for classification, Mulcol® Multidisc, installation in flexible and rigid wall provide the following classification:

Service	Diameter	Wall thickness	Side of application	Sealing Product	Classification
Electrical socket (e.g. Attema, T-Plast)	68-76	1-2,5	Exposed side	Multidisc	E 120, EI 120
Electrical socket (e.g. Attema, T-Plast)	68-76	1-2,5	Unexposed side	Multidisc	E 120, EI 120

Table 1: Single electrical socket details.



American projection



Scale : 1:2

Unit of measure : mm

Date : 4-3-2020

Company : Mulcol International B.V.

Department : Research & Development

Draftsman : K.J.

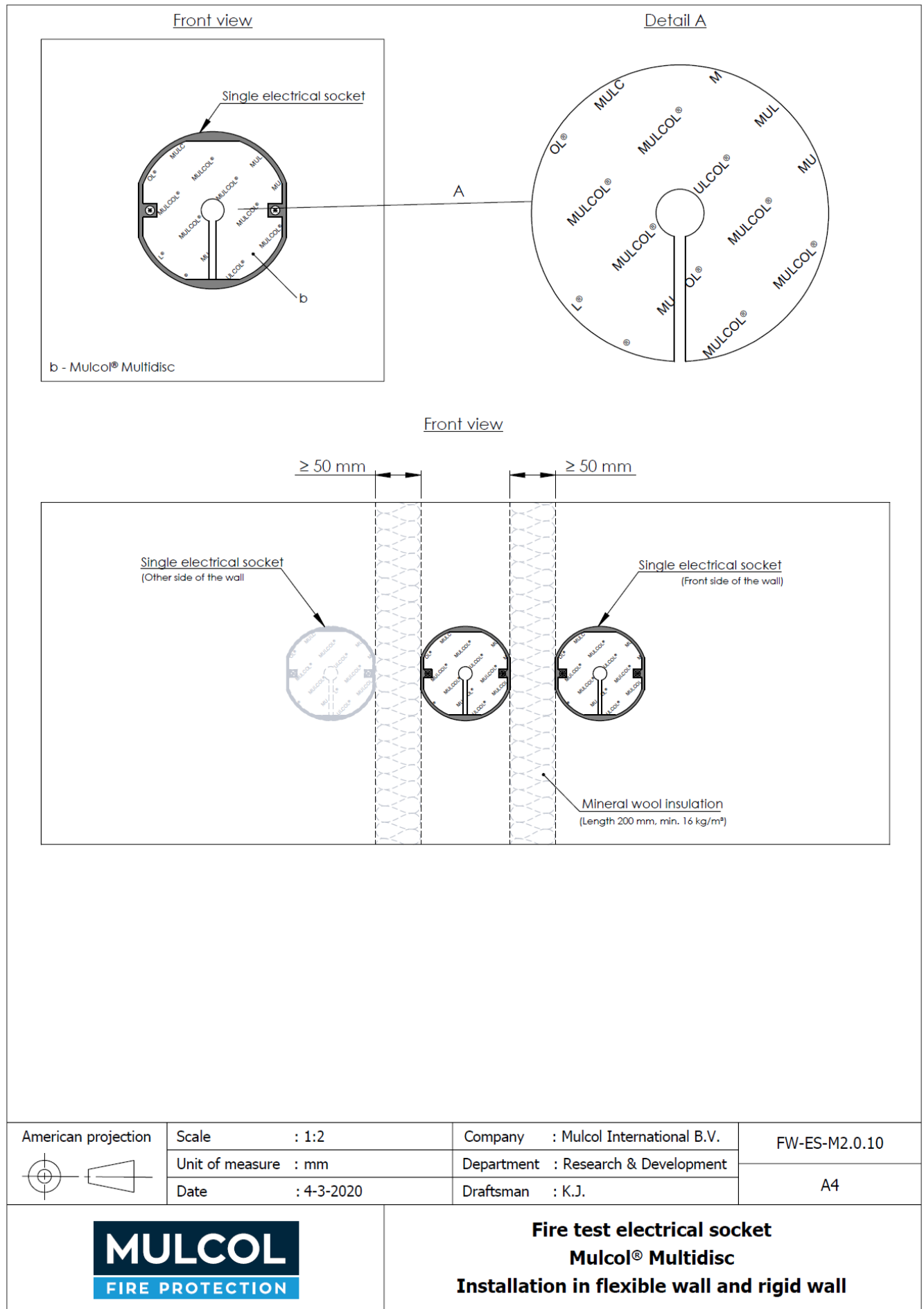
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A4



Fire test electrical socket
Mulcol® Multidisc
Installation in flexible wall and rigid wall

EFKtis



2.3.2. Double Electrical Sockets

Double electrical sockets applied at the exposed and unexposed side, back to back. Mulcol® Multidisc was applied inside of each socket. Further details are given in the drawings. See Table 2 for details.

Classification

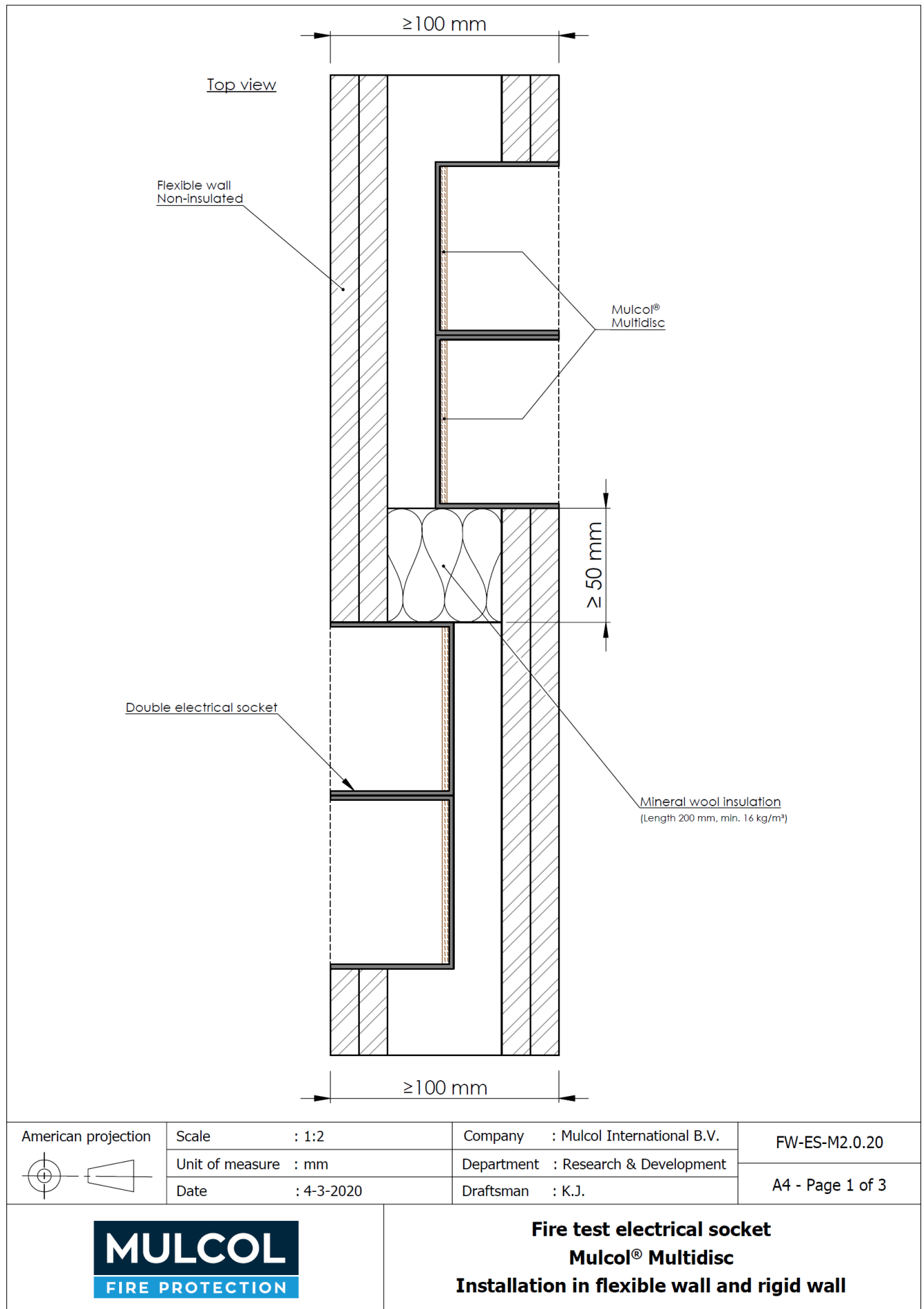
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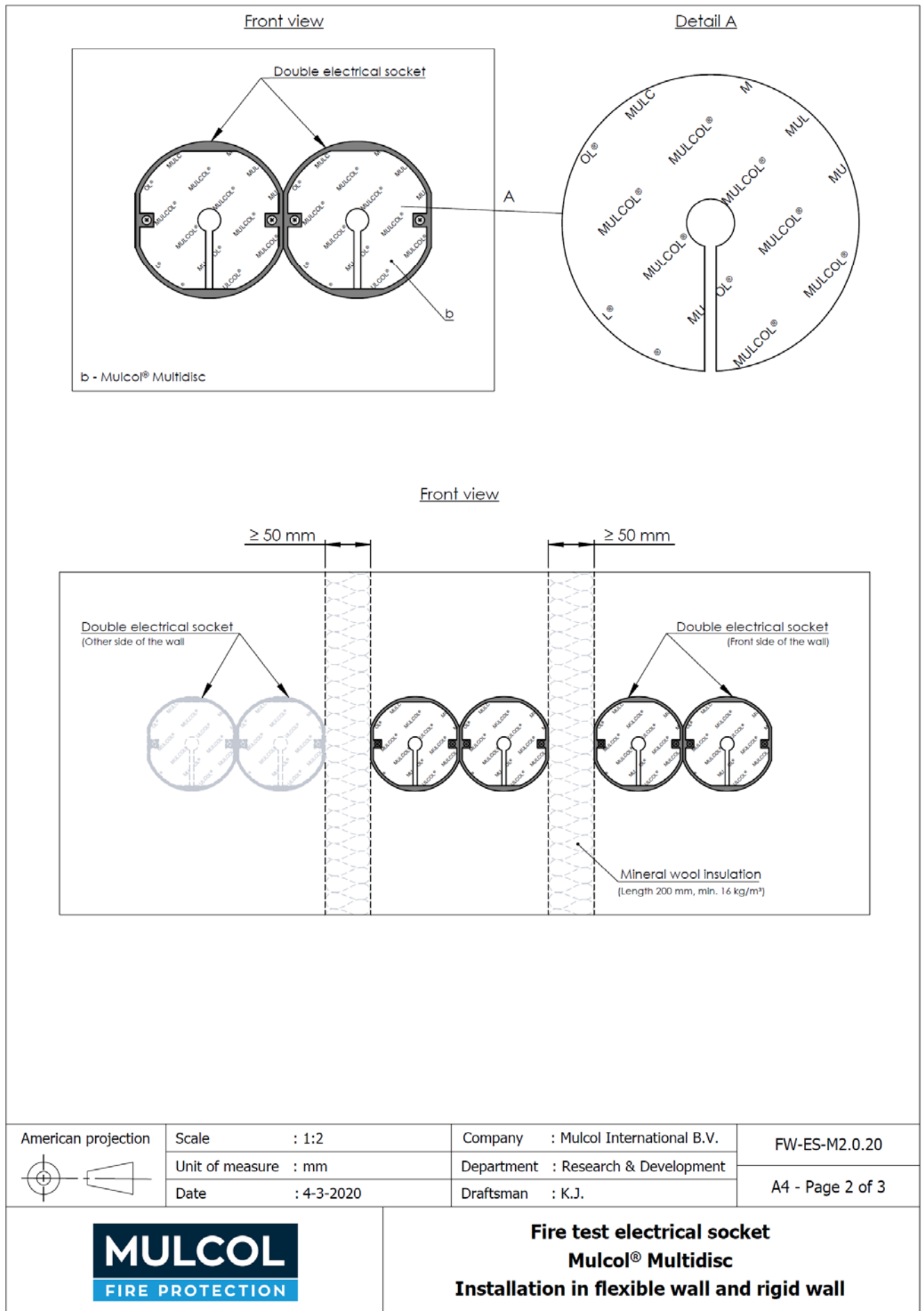
R	E	I	W		t	t	-	M	S	C	IncSlow	sn	ef	r
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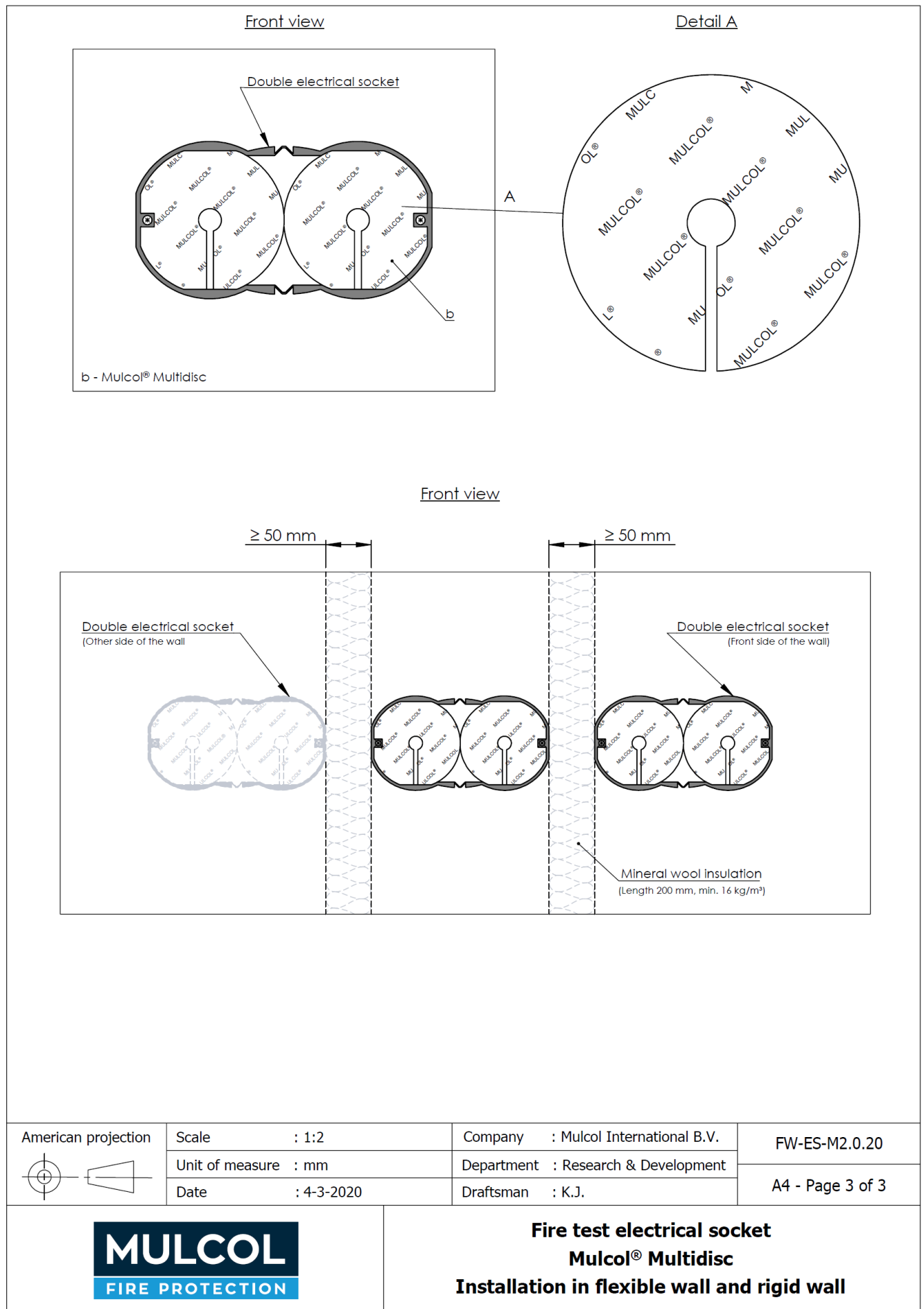
Considering the test evidence submitted for classification, Mulcol® Multidisc, installation in flexible and rigid wall provide the following classification:

Service	Diameter	Wall thickness	Side of application	Sealing Product	Classification
Electrical socket (e.g. Attema, T-Plast)	68-76	1-2,5	Exposed side	Multidisc	E 120, EI 120
Electrical socket (e.g. Attema, T-Plast)	68-76	1-2,5	Unexposed side	Multidisc	E 120, EI 120

Table 2: Double electrical socket details.







3. REPORTS AND RESULTS IN SUPPORT OF CLASSIFICATION

3.1. Report

Name of laboratory	Name of sponsor	Test report ref. no.	Test method
EFFECTIS ERA AVRASYA Test ve Belgelendirme A.Ş	MULCOL INTERNATIONAL BV	RFTR20007	EN 1366-3:2009 EN 1364-1:2015

4. FIELD OF APPLICATION

4.1. Field of application

4.1.1. General

This report details the method of construction, the test conditions and the results obtained when the specific elements of construction described herein was tested following the procedure outlined in EN 1366-3:2009. Any significant deviation with respect to size, constructional details, load stresses, edge or end conditions other than those allowed under the field of direct application in the relevant test method is not covered by this report.

4.1.2. Orientation

The classification is valid for pipe and cable penetration seals passing through perpendicular to a vertical wall.

4.1.3. Flexible wall

Test results obtained with the standard flexible wall constructions according to EN 1366-3:2009 cover all flexible wall constructions of the same fire resistance classification provided

- the construction is classified in accordance with EN 13501-2;
- the construction has an overall thickness not less than 94 mm. This rule does not apply to pipe closure devices positioned within the supporting construction unless the length of the seal is increased by an equal amount and the distance from the surface of the supporting construction remains the same on both sides;
- in the case of penetration seals installed within the wall and where a flexible wall with insulation was used in the test an aperture framing shall be used in practice. The aperture frame and aperture lining shall be made of studs and boards of the same specification as those used in the wall in practice. The thickness of the aperture lining shall be minimum 12,5 mm. This rule does not apply in the case where the insulation was removed around the penetration seal(s).
- the number of board layers and the overall board layer thickness is equal or greater than that tested when no aperture framing is used;
- flexible wall constructions with timber studs are constructed with at least the same number of layers as given in EN 1366-3:2009 Table 4, no part of the penetration seal is closer than 100 mm to a stud, the cavity is closed between the penetration seal and the stud, and minimum 100 mm of insulation of class A1 or A2 according to EN 13501-1 is provided within the cavity between the penetration seal and the stud.

An aperture framing is considered as being part of the penetration seal. Tests without an aperture framing cover applications with aperture framing but not vice versa.

The standard flexible wall construction does not cover sandwich panel constructions and flexible walls where the lining does not cover the studs on both sides. Penetrations in such constructions shall be tested on a case by case basis.

Test results obtained with flexible supporting walls may be applied to concrete or masonry elements of an overall thickness equal to or greater than that of the element used in the tests. This rule does not apply to pipe closure devices positioned within the supporting construction unless the length of the seal is increased by an equal amount and the distance from the surface of the supporting construction remains the same on both sides.

4.1.4. Services

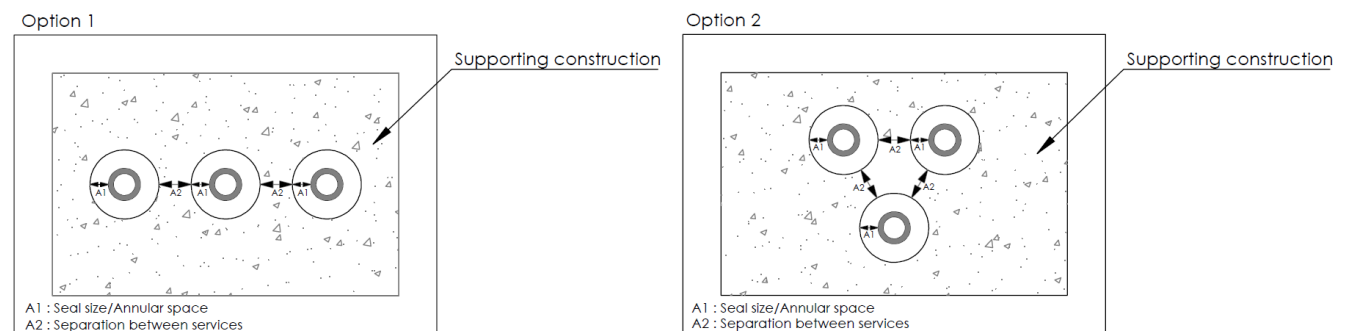
The direct field of application rules apply to the nominal dimensions of services.

➤ Separation

Separation for services directly through the wall

The following minimum distances between the apertures edges and between the electrical sockets shall be applied (distance A_1 to A_3 according to Figure E.1 of EN 1366-3:2009):

- distance $A_1 = 0$ mm;
- distance $A_2 = 0$ mm;



5. LIMITATIONS

This classification report does not represent any type approval or certification of the product. This report is initially valid until **09th June 2021** providing that no significant modifications are made in technical specification of the specimen and related test and classification standards.

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**Approved by:**

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