

## Fire Resistance Assessment

### CONFIDENTIAL

**Report:** BMT/CNA/F15017 Revision A

**Contract:** BMT/CNA/F15196

Scope of Application of:

Norsound Ltd. Ecoguard for: 30 & 60 Minutes Fire Resistance

**Issue Date:** 03 September 2015

**Valid Until:** 03 September 2020

Page 1 of 14

This document is confidential and remains the property of Chiltern International Fire Ltd. The legal validity of this report can only be claimed on the presentation of the complete report.



## Contents

	Page No.
1 Introduction .....	3
2 Proposal.....	3
3 Proprietary Doorsets .....	4
4 Installation of Ecoguard.....	5
5 Door Frames .....	6
6 Glazed Screens.....	6
7 Structural Opening .....	7
8 Doorset Data Sheets.....	7
9 Conclusion .....	10
10 Declaration by the Applicant.....	10
11 Limitations.....	11
12 Validity .....	11
Appendix A Performance Data.....	12
Appendix B Revisions .....	14

## **1 Introduction**

This document constitutes a scope of application report relating to the Norsound Ltd Ecoguard system; for 30 and 60 minute fire resisting performance, when installed to protect the frame to supporting construction gap for proprietary fire resisting timber based doorsets, based on the associated test and assessment data.

The assessment uses established extrapolation and interpretation techniques in order to extend the scope of application by determining the limits for the design, based on the tested constructions and performances obtained. The assessment is an evaluation of the potential fire resistance performance, if the elements were to be tested in accordance with BS476: Part 22: 1987.

## **2 Proposal**

It is proposed to consider, for 30 and 60 minute applications, the following proprietary fire rated door blanks for inclusion within the document based on the current scope for installation given in the relevant global assessment for each of the door core types.

1. Falcon - Strebord 44 & Strebord 54
2. Halspan - 30 Prima & 60 Prima
3. Blankfort Inc – Blankfort 30 & Blankfort 60
4. Pacific Rim Wood Ltd – Flamebreak 30 & Flamebreak 60
5. Egger – Eurospan 30 & Eurospan 60
6. Moralt – Laminesse FireSafe & FireSmoke 44mm & Laminesse FireSafe & FireSmoke 54mm
7. Bespoke Joinery style doorsets.

The report will summarise the scope of application of the Ecoguard system when used in timber and MDF frames for 30 minutes performance and hardwood frames for 60 minutes; for suitable fire resisting doorset assemblies and will be based on the associated test and assessment data in Appendix A.

### 3 Proprietary Doorsets

It has been proposed to consider the Norsound Ltd Ecoguard system with the following proprietary fire resisting doorsets. For all other details the full construction requirements in the relevant manufacturers' global assessment must be referred to.

Manufacturer	Product	FD Rating	General Description
Falcon Panel Products	Strebord 44	30	Graduated density particle board
	Strebord 54	60	
Halspan	Prima 30	30	Three layered particle board
	Prima 60	60	
Pacific Rim Wood	Flamebreak 30	30	Lamella
	Flamebreak 60	60	
Blankfort	Blankfort 30	30	Lamella
	Blankfort 60	60	
Egger	Decor 30	30	Homogenous Particleboard Blank
	Eurospan 60	60	Particleboard Blank with Additional Facings
Moralt	Laminesse FireSafe & FireSmoke 44mm	30	Layered Veneers
	Laminesse FireSafe & FireSmoke 54mm	60	Layered Veneers

All of the above designs have been tested and proven to BS476: Part 22: 1987 and/or BSEN 1634-1. The global assessment documentation relevant to each manufacturer is referenced before each data sheet.

#### 3.1 Timber based fire resisting doors

It has been proposed to assess the use of the Norsound Ltd Ecoguard system with the following, generic, timber based fire resisting doorset types.

1. Graduated density chipboard and three layered particleboard door blanks
2. Softwood or hardwood laminated door constructions with tested or assessed cellulosic facings
3. Stile and rail constructions with flax, chipboard or timber based cores
4. Stile and rail constructions with non-combustible sub-facings
5. Traditional timber joinery.

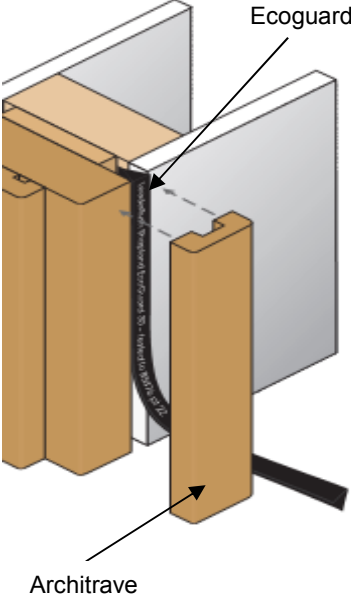
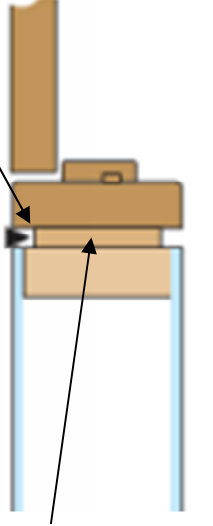
The fire resisting doorset must have suitable supporting test evidence to either BS 476: Part 22: 1987 or BS EN 1634-1 or be supported by a global assessment written by BM TRADA. The fire test evidence for the doorset must have been generated at a UKAS accredited laboratory. The installation method must comply with the details in section 4.

For all other details the full construction requirements in the relevant door blank manufacturer's test evidence or assessment documentation must be complied with.

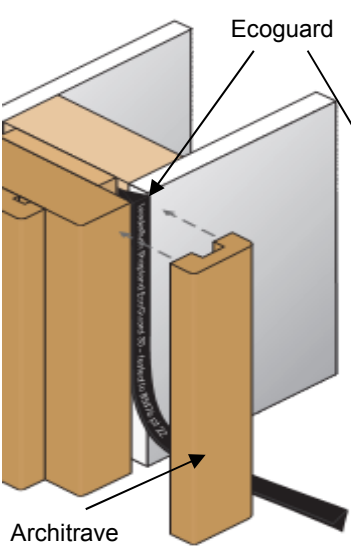
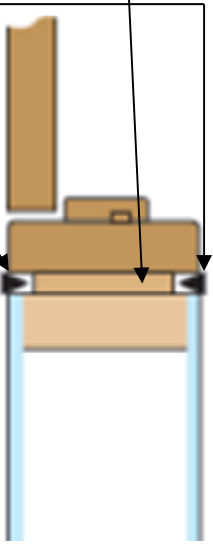
## 4 Installation of Ecoguard

Door frame to structural opening gaps must be appropriately protected using the Norsound Ltd Ecoguard Fire stopping product as illustrated below.

### 4.1 30 Minutes Performance

<p>Gaps between 6 and 14mm may be sealed on either face with Norsound Ltd Ecoguard – as illustrated. Ecoguard must be fully inserted with its' wider edge flush with the supporting construction.</p> <p>Infilling between the Ecoguard and opposite face is optional.</p> <p>Joint must be fitted with minimum 12mm thick architraves overlapping at least 15mm each side.</p> <p>Full details are available from Norsound Ltd.</p>		 <p>Optional Infill (packers will be required at any fixing locations)</p>
--	---	---

### 4.2 60 Minutes Performance

<p>Gaps between 6 and 14mm must be sealed on both faces with Norsound Ltd Ecoguard – as illustrated. Ecoguard must be fully inserted with its' wider edge flush with the supporting construction.</p> <p>Infilling between the 2 Ecoguards is optional.</p> <p>Joint must be fitted with minimum 12mm thick architraves overlapping at least 15mm each side.</p> <p>Full details are available from Norsound Ltd.</p>		
---	--	---

**Note:** Drawings are representative of doorset installation only; actual installations must be as the text within this document specifies.

## 5 Door Frames

Timber based door frames protected utilising the Norsound Ltd Ecoguard product must be constructed using products which meet the following minimum specification.

For 30 minute applications, Softwood, Hardwood or MDF are suitable materials.

For 60 minute applications, Hardwood must be used.

Requirements within the supporting documentation for the specified doorset design(s) take precedence over the details herein.

Material	Min Density (kg/m <sup>3</sup> )
Softwood or Hardwood	450 <sup>1</sup>
Hardwood	640
MDF	700 <sup>1</sup>

### Notes:

1. For 30 minute applications only
2. If a doorset features a transomed overpanel, the door frame must be softwood or hardwood as appropriate to the required integrity period
3. All door frame timber must be joinery quality, free from knots, splits and checks
4. Frame joints may be mortice and tenoned, mitred, half lapped or butted and with no gaps. All jointing methods require mechanical fixing with the appropriate size ring shank nails or screws
5. Norsound Ltd Ecoguard may be used for single and double acting configurations.

## 6 Glazed Screens

Norsound Ltd Ecoguard may be used to provide protection to the gaps between the structural opening and installed glazed screens or side screens; subject to the following restriction:

- The glazing system, glass and timber based screen framing must be able to demonstrate adequate performance when tested as a window or screen in accordance with BS 476: Part 22: 1987 or BS EN 1634-1, at the pane and/or screen dimensions to be installed.

All elements of the installation of the Norsound Ltd Ecoguard must comply with the specifications contained in section 4, including the use of suitable architraves.

**NB:** Glazed screens and doorsets within screen assemblies must have suitable supporting test or assessment data for the framing material being used e.g. MDF, softwood or hardwood.

## **7 Structural Opening**

The supporting construction for the doorset must be capable of staying in place and intact for the full period of fire resistance required from the doorset. Suitable supporting constructions would be expected to comply with the provisions within BS EN 1363-1: 2012 section 7.2; which details high and low density rigid constructions as well as flexible plasterboard faced partition types.

## **8 Doorset Data Sheets**

Door frame provisions within the relevant supporting documentation referenced within the following sections take precedence over the general comments within this assessment.

The scope of application for the Norsound Ltd Ecoguard product given herein is based on the latest revision of the global assessments listed. Subsequent revisions of these assessments may provide for a different scope of application related to door frames and installation, which may alter the scope provided in this document for the Norsound Ltd Ecoguard product.

The global assessment report references given below are current at the time of issue of this report; the manufacturer of the specified doorset should be contacted to ensure the most up to date revision of each global assessment is used. Subsequent revisions to the reports below will supersede them; updated provisions within them may have changed and must be complied with.

### **8.1 Proprietary 30 Minute fire resisting doors**

#### **8.1.1 Falcon Panel Products – Strebord 35+, 38+, 44, Superpan**

<b>Door manufacturer:</b>	Falcon Panel Products Ltd
<b>Door core reference:</b>	Strebord 35+, 38+, 44, Superpan
<b>Global assessment report reference:</b>	Chilt/A02066
<b>Description:</b>	Graduated density chipboard blank
<b>Fire resistance period:</b>	30 minutes fire resistance

#### **8.1.2 Halspan Ltd – Prima 30**

<b>Door manufacturer:</b>	Halspan Ltd
<b>Door core reference:</b>	30 Prima
<b>Global assessment report reference:</b>	FEA/F97174
<b>Description:</b>	Tri-layer particle board
<b>Fire resistance period:</b>	30 minutes fire resistance



### 8.1.3 Pacific Rim Wood Ltd – Flamebreak 30

<b>Door manufacturer:</b>	Pacific Rim Wood Ltd
<b>Door core reference:</b>	Flamebreak 30
<b>Global assessment report reference:</b>	FEA/F98164
<b>Description:</b>	Lamella core door with various facing coverings
<b>Fire resistance period:</b>	30 minutes fire resistance

### 8.1.4 Blankfort Inc – Blankfort 30 & 30+

<b>Door manufacturer:</b>	Blankfort Inc
<b>Door core reference:</b>	Blankfort 30 & 30+
<b>Global assessment report reference:</b>	Chilt/A12151
<b>Description:</b>	Lamella core door with various facing coverings
<b>Fire resistance period:</b>	30 minutes fire resistance

### 8.1.5 Egger (UK) Ltd – Eurospan 30

<b>Door manufacturer:</b>	Egger (UK) Ltd
<b>Door core reference:</b>	Eurospan
<b>Global assessment report reference:</b>	Chilt/A013085
<b>Description:</b>	Graduated density chipboard blank
<b>Fire resistance period:</b>	30 minutes fire resistance

### 8.1.6 Moralt AG – Laminesse FireSafe & FireSmoke 44mm

<b>Door manufacturer:</b>	Moralt Tischlerplatten Gmbh
<b>Door core reference:</b>	Lamincore
<b>Global assessment report reference:</b>	Chilt/A13058
<b>Description:</b>	Lamella core door with various facing coverings
<b>Fire resistance period:</b>	30 minutes fire resistance

## 8.2 Proprietary 60 Minute fire resisting doors

### 8.2.1 Falcon Panel Products – Strebord 54

<b>Door manufacturer:</b>	Falcon Panel Products Ltd
<b>Door core reference:</b>	Strebord 54
<b>Global assessment report reference:</b>	Chilt/A02067
<b>Description:</b>	Graduated density chipboard blank
<b>Fire resistance period:</b>	60 minutes fire resistance

*The legal validity of this report can only be claimed on presentation of the complete report*



**8.2.2 Halspan Ltd – Prima 60**

<b>Door manufacturer:</b>	Halspan Ltd
<b>Door core reference:</b>	60 Prima
<b>Global assessment report reference:</b>	FEA/F96103
<b>Description:</b>	Tri-layer particle board
<b>Fire resistance period:</b>	60 minutes fire resistance

**8.2.3 Pacific Rim Wood Ltd – Flamebreak 60**

<b>Door manufacturer:</b>	Pacific Rim Wood Ltd
<b>Door core reference:</b>	Flamebreak 60
<b>Global assessment report reference:</b>	Chilt/A02141
<b>Description:</b>	Lamella core door with various facing coverings
<b>Fire resistance period:</b>	60 minutes fire resistance

**8.2.4 Blankfort Inc – Blankfort 60**

<b>Door manufacturer:</b>	Blankfort Inc
<b>Door core reference:</b>	Blankfort 60 & 60+
<b>Global assessment report reference:</b>	Chilt/A12152
<b>Description:</b>	Lamella core door with various facing coverings
<b>Fire resistance period:</b>	60 minutes fire resistance

**8.2.5 Egger (UK) Ltd – Eurospan 60**

<b>Door manufacturer:</b>	Egger (UK) Ltd
<b>Door core reference:</b>	Eurospan
<b>Global assessment report reference:</b>	Chilt/A10187
<b>Description:</b>	Graduated density chipboard blank
<b>Fire resistance period:</b>	60 minutes fire resistance

**8.2.6 Moralt AG – Laminesse FireSafe & FireSmoke 54mm**

<b>Door manufacturer:</b>	Moralt AG
<b>Door core reference:</b>	Laminesse
<b>Global assessment report reference:</b>	Chilt/A13059
<b>Description:</b>	Lamella core door with various facing coverings
<b>Fire resistance period:</b>	60 minutes fire resistance

## **9 Conclusion**

If the Norsound Ltd Ecoguard system were fitted protecting the door frame installation to the relevant doorset in accordance with the specification documented in this global assessment and were to be tested in the appropriate configuration in accordance with BS 476: Part 22: 1987, it is our opinion that the doorset would achieve a minimum of 30 or 60 minutes integrity as appropriate.

## **10 Declaration by the Applicant**

- 1) We the undersigned confirm that we have read and comply with obligations placed on us by FTSG Resolution No 82: 2001.
- 2) We confirm that the component or element of structure, which is the subject of this assessment, has not to our knowledge been subjected to a fire test to the Standard against which this assessment is being made.
- 3) 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.
- 4) We are not aware of any information that could adversely affect the conclusions of this assessment.
- 5) If we subsequently become aware of any such information we agree to ask the assessing authority to withdraw the assessment.

Signed:

Name:

For and on behalf of Norsound Ltd



## 11 Limitations

The following limitations apply to this assessment:

- 1) This assessment addresses itself solely to the elements and subjects discussed and does not cover any other criteria. All other details not specifically referred to should remain as tested or assessed.
- 2) This assessment is issued on the basis of test data and information to hand at the time of issue. If contradictory evidence becomes available, BM TRADA reserves the right to withdraw the assessment unconditionally but not retrospectively.
- 3) This assessment has been carried out in accordance with Fire Test Study Group Resolution No 82: 2001.
- 4) Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.
- 5) This assessment relates only to those aspects of design, materials and construction that influence the performance of the element(s) under fire resistance test conditions. It does not purport to be a complete specification ensuring fitness for purpose and long-term serviceability. It is the responsibility of the client to ensure that the element conforms to recognised good practice in all other respects and that, with the incorporation of the guidance given in this assessment, the element is suitable for its intended purpose.

## 12 Validity

- 1) The assessment is valid for the period shown the front cover, after which it must be submitted to BM TRADA for technical review.
- 2) This assessment report is not valid unless it incorporates the declaration given in Section 10 duly signed by the applicant.

<b>Signature:</b>		
<b>Name:</b>	<b>A M Winning</b>	<b>P N Barker</b>
<b>Title:</b>	Senior Product Assessor	Principal Technical Officer

## Appendix A

### Performance Data

#### Proprietary Doorsets

Report No	Configuration	Leaf Size (mm)	Test Standard	Performance (mins)
Chilt/A02066 Revision K Falcon Panel Products: Strebord 44	Various	Various	BS 476: Part 22: 1987	30
Chilt/A02067 Revision G Falcon Panel Products: Strebord 54	Various	Various		60
FEA/F97174 Revision G Halspan: 30 Prima	Various	Various	BS 476: Part 22: 1987	30
FEA/F96103 Revision L Halspan: 60 Prima	Various	Various		60
FEA/F98164 Revision L Pacific Rim Wood: Flamebreak 30	Various	Various	BS 476: Part 22: 1987	30
Chilt/A02141 Revision I Pacific Rim Wood: Flamebreak 60	Various	Various		60
Chilt/A12151 Revision B Blankfort Inc: Blankfort 30 & 30+	Various	Various	BS 476: Part 22: 1987	30
Chilt/A12152 Revision C Blankfort Inc: Blankfort 60 & 60+	Various	Various		60
Chilt/A13085 Revision A Egger (UK): Decor 30	Various	Various	BS 476: Part 22: 1987	30
Chilt/A10187 Revision C Egger (UK): Eurospan 60	Various	Various		60
Chilt/A13059 Revision A Moralt AG: Laminese FireSafe & FireSmoke 54mm	Various	Various	BS 476: Part 22: 1987	60
Chilt/A13058 Revision A Moralt AG: Laminese FireSafe & FireSmoke 44mm	Various	Various		30

*The legal validity of this report can only be claimed on presentation of the complete report*

**Supporting Data**

Report No	Configuration	Leaf Size (mm)	Test Standard	Performance (mins)
Chilt/RF13022 (Ecoguard)	A: LSASD B: ULSADD	A: 2250 895 54  B: 2250 811/811 44	BS 476: Part 22: 1987	Integrity A: 66  Integrity B: 50

## Appendix B

### Revisions

Revision	BM TRADA Reference	Date	Details
A	CNA/F15196	03/09/2015	Correction to section references and introduction of section 6 for glazed screens

**BM TRADA provides independent certification, testing, inspection, training and technical services around the world.** We help customers large and small to prove their business and product credentials and to improve performance and compliance. With an international presence across many industry sectors, we offer a special focus and long history of technical excellence in supply chain certification, product certification and testing, and technical services to the timber, building, fire and furniture industries.



[testing@bmtrada.com](mailto:testing@bmtrada.com)



[bmtradagroup.com](http://bmtradagroup.com)



+44 (0) 1494 569800