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# ASSESSMENT REPORT

## IFCA/02260 REVISION B

Assessment of the contribution towards overall fire resistance provided by Intastop DEG/A and DEG/B door edge guards when installed on previously proven timber doorsets

Prepared on behalf of:

Intastop Ltd Holly House Holly Street Kelham Industrial Estate Doncaster DN1 3QZ

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## **ISSUE RECORD**

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## **AMENDMENT RECORD**

Date	Paragraph	Amendment
April 2005	Various	Inclusion of Pyroplex Ltd intumescent seals as an alternative to
		Intumescent Seals, and the associated fire resistance test
		evidence. Change of client address.
November 2013	Various	Update to current IFC format.
		Review and revalidation of report.

Revision	IFCA/02260	Revision A	Revision B		
Author	MB	DC	MB		
Reviewer	PEJ	PEJ	DC		

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## **1. INTRODUCTION**

This report has been produced by International Fire Consultants Ltd (IFC) for our assessment of the contribution provided by Intastop door edge guards of type DEG/A and DEG/B if fitted to timber doorsets of a design that has previously been tested or assessed to BS476: Part 22: 1987 as being capable of providing 30 or 60 minutes fire resistance. IFC have performed the evaluations/analysis, and preparation of the assessment report, on the instruction of Intastop Ltd.

Fire resisting assemblies are rarely supplied in an identical form to that which was tested. The specification will invariably require the construction to be supplied at a size, in a mode, with glazing apertures, glass, frames, ironmongery, etc. which are different from that tested. The result of a fire resistance test can apply to variations in configurations/ construction as long as they do not reduce the performance to one which is below that specified. The influence of those variations is covered by a judgement, sometimes made by the approving authority.

Where the approving authority does not feel able to make such judgements, an expert opinion is often sought. Such an opinion is often expressed in the form of an assessment of the performance, which may be supported by numerical/quantifiable methods or may be purely an expert judgement.

When establishing the variations in the construction that can achieve the required fire resistance performance, International Fire Consultants Ltd follow the guidance given in BS.ISO/TR12470: 1998, "*Fire resistance tests - Guidance on the application and extension of results"*.

The assessment is based upon the constructional information supplied to us (detailed in Section 2) and upon the fire resistance test evidence for parts of the constructions (detailed in Section 3). A full analysis of the fire resistance performance of these assemblies is presented in Section 4.

## 2. PROPOSAL

It is proposed that this Assessment Report shall establish the fire resistance performance of 45mm thick and 55mm thick fire rated timber double action and single action, double leaf doorsets (of a design that has previously been tested or assessed to BS476: Part 22: 1987 for the required period) when fitted with Intastop aluminium door edge guards of type DEG/A and DEG/B, if the combined doorsets and Intastop door guards were to be tested to the integrity criteria of BS476: Part 22: 1987, "*Methods for determination of the fire resistance of non-load bearing elements of construction*", for 30 and 60 minutes, as appropriate.

Intastop DEG/A and DEG/B door edge guards when installed on previously proven timber doorsets Prepared for: Intastop Ltd Assessment Report IFCA/02260 Revision B Page 4 of 17 The DEG/A and DEG/B products are all described in Section 2.1, based upon details of the aluminium door edge guards provided by Intastop Ltd.

It is proposed that 44mm thick timber doors in timber frames, of a design which the fire resistance has been proven in accordance with BS476: Part 22: 1987 to be 30 minutes, (by test or assessment) will have an integrity performance in accordance with BS476: Part 22: 1987 of at least 30 minutes, when incorporating Intastop aluminium door edge guards described in Section 2.1.

It is also proposed that 54mm thick timber doors in timber frames, of a design which the fire resistance has been proven in accordance with BS476: Part 22: 1987 to be 60 minutes, (by test or assessment) will have an integrity performance in accordance with BS476: Part 22: 1987 of at least 60 minutes when incorporating Intastop aluminium door edge guards described in Section 2.1.

#### 2.1 Intastop Door Edge Guards

The Intastop door edge guards are aluminium extrusions, as indicated in **Figure 02260B/01** in Appendix A. The Intastop door edge guards combine the effect of intumescent (for fire resistance) and brushseal (for smoke sealing).

There are two different profiles for the Intastop aluminium door edge guards, which are each supplied in widths 46mm and 55mm and these are summarised below;

Code	Profile	To Suit Door Thickness/Rating
DEG/B/46	Flat/pencil rounded	45/46mm FD30
DEG/B/55	Flat/pencil rounded	54/55mm FD60
DEG/A/46	Rounded	45/46mm FD30
DEG/A/55	Rounded	54/55mm FD60

#### Table 1. Edge guard details

The Intastop Aluminium door edge guards are to be used at meeting stiles only, and may be utilised for either single or double acting assemblies.

The intumescent materials in the Intastop edge guards are either of the following:

- a) 2no. 10mm x 2mm Intumescent Seals Therm-A-Flex in the rear of the edge guard, and 1no. 10 x 4mm Intumescent Seals Therm-A-Stop (combined brush seal) in the visible edge.
- b) 2no. 10mm x 2mm Pyroplex Ltd graphite based intumescent seals in the rear of the edge guard and 1no. 10 x 4mm Pyroplex Ltd graphite based intumescent seal in a pvc case (combined brush seal) in the visible edge.

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## 3. **TEST EVIDENCE**

Intastop aluminium door edge guards have been included in fire test specimens using differing door types and ratings. Summaries of the test evidence are given in Sections 3.1 to 3.3.

#### 3.1 Chiltern RF99093

This test was performed on 7 September 1999 at Chiltern International Fire Ltd on a double leaf single acting doorset constructed in a stud/plasterboard clad partition. The dimensions of the door leaves were 2040mm high by 826mm wide by 54mm thick. The test was co-sponsored by Noberne Doors Ltd, and they have given permission to use this evidence.

The leaves were constructed with stiles and rails of Russian redwood, dimensions 63mm wide by 36mm thick, density 550kg/m<sup>3</sup>. The door core consisted of Flaxboard in 3 pieces, thickness 36mm, density 450kg/m<sup>3</sup>. The outer facing on the door leaves were made of MDF, 4mm thick, density 850kg/m<sup>3</sup>. The inner facing on the door leaf was made of Cape Board Ltd Masterclad, 4.5mm thick, density 1500kg/m<sup>3</sup>. The door leaves were provided with lippings of dark red Meranti, 10mm thick. Lippings were fixed to 3 edges only, not to the meeting stiles. The lippings were 10mm thick, density 710kg/m<sup>3</sup> hardwood.

The door leaves were hung in a hardwood door frame of dark red Meranti. The dimensions of the head and the jamb were 94mm wide by 57mm thick. The door frame was provided with 19mm deep integral door stops of dark red Meranti.

An architrave was applied of 12.5mm thick plasterboard. The doorset was provided with various intumescent materials. The meeting edges of the door leaves were provided with an aluminium door edge profile containing graphite based intumescent strips and a smoke seal.

The aluminium door edge profiles were of type Intastop Ltd DEG/A/55, dimensions 58mm wide by 26mm thick. The aluminium profiles were screw fixed to the meeting edge of each leaf at 250mm centres using 20mm long steel screws. In the head of the door frame a reveal was made to incorporate an intumescent strip with dimensions 25 x 4mm, Therm-A-Seal, which was centrally fitted in the frame reveal.

In the jambs of the door frame a reveal was made to incorporate a 20 x 4mm intumescent strip of Therm-A-Seal, centrally fitted in the frame reveal.

The centrally fitted intumescent strip was partially interrupted by the hinges, and a remaining strip with dimensions 6mm wide by 4mm thick was present. Smoke seals were centrally fitted into the rear of the doorstop facing the door leaf. The smoke seals were Firetree Reference LE0511. The smoke seal was 4.5mm high (blade size).

Intastop DEG/A and DEG/B door edge guards when installed on previously proven timber doorsets Prepared for: Intastop Ltd The door leaves were hung by 3no. Royde & Tucker H105 lift off hinges, of blade size 100 x 35mm. Door closers were fitted to the exposed face of the door leaves. The door closers were of type Dorma Door Controls Ltd TS83.

Both leaves were hung to open in towards the furnace, which is considered to be the most onerous direction.

The test specimen was tested in accordance with BS476: Part 22: 1987 and satisfied the criteria of the standard as follows:

Integrity	61 minutes*
Insulation	61 minutes

\* Integrity failure was caused by continuous flaming from the lower hinge position on the left leaf. There was no failure of the meeting edge cover strip detail upon termination of the test at 74 minutes.

#### 3.2 **TRADA FR1740**

This test was performed on 7 February 1994 at the TRADA fire laboratory. The test was performed on a single acting double leaf doorset. The door leaves were 2040mm high by 610mm wide by 44mm thick. The leaves were of type Shadmaster 30, manufactured by F R Shadbolt & Sons Ltd. The hanging edge of the leaves was lipped with hardwood. Each leaf was hung on 3no. hinges, type Royde & Tucker 101, lift-off hinges. Closing was effected by overhead closers, type Jebron 4900 SAA. No latches were fitted. The doorset incorporated intumescent seals in the frame reveal and aluminium cappings combined with intumescent materials at the meeting edges. The door frame was hardwood with a 13mm planted stop. The door frame was Utile, nominal density 660kg/m<sup>3</sup>, of section 94mm by 44mm. The planted stop was 13mm deep.

Intumescent materials were provided to the doorset as follows: one 10mm x 4mm Slimfire 60 intumescent strip was fitted into a groove centrally in the frame reveal. The intumescent strip was interrupted at the hinge positions. At the meeting edge, both leaves were fitted with an aluminium capping strip. This strip held two 10mm x 3mm strips of Slimfire F intumescent material concealed against the leaf edge. A 10mm x 4mm strip of Slimfire 60 intumescent seal with a brush smoke seal was fitted centrally into the exposed face of the aluminium capping strip. The aluminium capping strips were manufactured by Intastop Ltd, and of a type subsequently known as DEG/A/46.

The test specimen was constructed in a timber stud/plasterboard clad partition. The doorset was hung to open towards the furnace, which is considered the weaker direction of exposure to fire.

Intastop DEG/A and DEG/B door edge guards when installed on previously proven timber doorsets Prepared for: Intastop Ltd Assessment Report IFCA/02260 Revision B Page 7 of 17 The test specimen was tested in accordance with BS476: Part 22: 1987 and satisfied the criteria of the standard as follows:

Integrity	39 minutes*
Insulation	39 minutes

\* Integrity failure was caused by continuous flaming from across the head of the right leaf.

#### 3.3 Chiltern RF 05035

This test was performed on 12 April 2005 at Chiltern International Fire Ltd on a reduced scale specimen of three door leaves within a timber stud/plasterboard clad partition. Two meeting stiles were created by the door leaves. One was fitted with Intastop door edge guards containing Intumescent Seals graphite based seals and the other with Pryoplex Ltd graphite based seals. The test was designed to enable a comparison to be carried out between the Intastop door edge guards with Intumescent Seals graphite based seals and Pyroplex Ltd graphite based seals.

The test was sponsored by Pryoplex Ltd who have given permission for this evidence to be used.

The leaves were constructed from three layer particleboard core with Oak lippings to all edges. They were 53mm thick and installed in a 45 x 100mm Oak frame. The side leaves were fixed in place by means of screws through the frame at top and bottom and screws into their face from the unexposed face. The central leaf was fixed in place with screws fitted centrally through the frame at the top and bottom and for the first 15 minutes of the test 2no. surface mounted flush bolts at the head of the leaf were also engaged.

Intumescent seals were included around the perimeter of the frame with the two different intumescent seal materials included at the meeting stiles in the Intastop DEG/A/55 door edge guards.

The indicative test was carried out such that the pressure within the furnace simulated that which would be experienced with 2.1 metre high door leaves.

The initial failure of the specimen occurred at 44 minutes at the meeting stile with Therm-A-Seal in the Intastop door edge guards. This was extinguished but returned at 51 minutes and was damped down until 56 minutes where a board was put over the lower half of the meeting stile. This disturbed the meeting stile with Pyroplex seals in the Intastop and at 57 minutes flaming occurred there. The test was terminated at 58 minutes.

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## 4. ANALYSIS

Evaluation of the contribution to overall fire resistance of the proposed Intastop aluminium door edge guards will address the factors that influence the overall fire performance of doorsets under fire test conditions of BS476: Part 22: 1987.

This analysis considers the contribution provided by the Intastop products, as indicated in the test evidence in Sections 3.1 and 3.2, towards the overall fire performance of doorsets of a design that has otherwise been tested or assessed to BS476: Part 22: 1987. It also includes analysis based on the test evidence in Section 3.3 for the substitution of the intumescent seal materials.

This assessment report does not evaluate the doorsets themselves, but will assume that all aspects, e.g. door sizes, configurations, modes, ironmongery, frames are otherwise covered by test evidence or assessment to BS476: Part 22: 1987 for the respective door type chosen, except for those aspects specifically prescribed in the following analysis.

It is the opinion of IFC that the following factors play a dominant role in the behaviour of the door leaves when provided with Intastop aluminium door edge guards stiles during fire exposure.

- 1. The size of the metal in the meeting stile, mainly the dimensions of the exposed part, relative to the unexposed part (stability in the major axis).
- 2. The contribution provided by the expanding intumescent material and the substitution of intumescent seal materials.
- 3. The rigidity of the door leaf and its inherent resistance to distortion.
- 4. The clamping action around the perimeter, particularly the head, to restrict distortion of the door leaf.
- 5. The construction of the door, and mode of operation.
- 6. The variation between the Intastop DEG/B type profile proposed and the DEG/A type profile tested.

#### 4.1 Meeting Stile Stability in the Major Axis

The aluminium of the meeting stile will expand when heated. As the meeting stile is heated from one side only, the expansion of the directly exposed part to the heating will be more than the expansion on the unexposed part of the meeting stile. When the temperature difference between the exposed part and the unexposed part is great, then a large deflection is to be expected. Aluminium is a good heat conductor. Because of the heat conduction from the exposed to the unexposed part the aluminium will exhibit a small temperature difference between the exposed and unexposed part. This was demonstrated in RF99093 and FR1740 where the distortion of the meeting stiles was minimal.

Intastop DEG/A and DEG/B door edge guards when installed on previously proven timber doorsets Prepared for: Intastop Ltd Assessment Report IFCA/02260 Revision B Page 9 of 17 The temperature difference will be greater during the start of the heating time. After a heating period of 15 minutes the aluminium is so hot that it starts to lose both strength and stiffness properties. When aluminium gets soft as a result of the heating it cannot generate axial forces any more. The deflection of the door leaf imposed by the Intastop meeting stile extrusions will therefore be minimal after a heating period of 15 minutes.

# 4.2 Contribution Provided by the Expanding Intumescent Material and Substitution of Intumescent Material

To close the gap between the door leaves an intumescent material is used. The Intastop meeting stiles contain strips of Therm-A-Strip, which expand in thickness upon heating. Test FR1740 has proven that the intumescent strips are sufficient to achieve at least 30 minutes integrity on a 45mm thick leaf. Test RF99093 has demonstrated that integrity of 74 minutes can be achieved at the meeting stiles when Intastop aluminium door edge protector DEF/A/55 is applied in combination with a 54mm thick door leaf.

Furthermore, from the fire tests it can be observed that the activation of intumescent material behind the aluminium door edge guards is an important factor in the integrity performance of the meeting stiles, sealing the gap between the timber edge and the edge guard. The expanding Therm-A-Flex takes over and closes the gap when aluminium is melted, as proven in the two tests referenced.

Test RF 05035 demonstrated that the substitution of Intumescent Seals with Pyroplex Ltd graphite based intumescent material is not detrimental to the fire resistance performance of the Intastop door edge guard; with the premature failures being attributed to the bespoke specimen, rather than the intumescent material. Based on this evidence it is the opinion of IFC that either Intumescent Seals or Pyroplex Ltd graphite based intumescent material may be utilised in the Intastop door edge guard.

#### 4.3 The Rigidity of the Door Leaf

The more rigid the door leaf, the more resistance it can provide against the thermal bow of the aluminium door edge guard. When the door is weak in lateral stiffness it will follow the deflection of the aluminium door edge guard. As the meeting stile bows the most during the first 15 minutes of the test this is the most critical period. However, during the first part of the test the door leaf is only partly affected by the fire and most of the leaf will still be intact and deflection will be low. After 15 minutes when the aluminium has lost most of its strength, the bowing of the aluminium meeting stile decreases. By this time the door leaf will have been partly exploited by the fire and loses its strength against lateral bow. However, due to the decrease in the thermal bow and the decrease in the strength of the aluminium, less resistance against lateral bow will be required from the door leaf. These "neutralising" effects were successfully proven in the fire tests upon the two door types.

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Assessment Report IFCA/02260 Revision B Page 10 of 17 Notwithstanding this, the inherent stability/rigidity of generic door leaves must be considered within this overall evaluation. When considering use on other door types, and/or with larger sizes, there are a number of individual and cumulative factors that must be borne in mind. Most of the individual factors can be calculated/predicted, based upon empirical evidence or from first principles. However, others cannot, and this leads to complications when evaluating the cumulative effects, which will all have potential to adversely affect overall characteristics under fire test conditions. In order to provide confidence for the generic approval, limitations are, by necessity, imposed, and these are summarised in Section 4.7.

#### 4.4 Clamping Action to Prevent Distortion of the Door Leaf

Intumescent strips were applied along the perimeter of the door frames in tests RF99093 and FR1740 which demonstrated that the 'clamping' action from the strips was sufficient to achieve 30 and 60 minutes integrity performance, as appropriate. The intumescent strips at the head of the frame play a major role in obtaining the integrity performance. The overpressure in the furnace at the head of the door is higher than at the sill. For this reason it is important that the strips in the head of the door are able to provide the required volume and pressure in order to meet the integrity performance.

In addition, the clamping action of intumescent strips in the head are crucial to reduce lateral deflection of double leaf assemblies. It may be perceived that the expansion and lateral deflection of the Intastop edge guards could affect the leaf movement. Both tests RF99093 and FR1740 demonstrated that the intumescent strips applied at the head of the frame were able to provide sufficient gap sealing and clamping to achieve the required fire resistance with respect to the integrity criterion of 60 and 30 minutes, respectively. Furthermore, the intumescent seals were not enhanced (compared with levels proven on standard doors without Intastop profiles) demonstrating that this is not a major issue with conservative sized leaves as tested.

#### 4.5 The Construction and Mode of Operation of the Door Leaf

The construction of the door leaf is of vital importance for the integrity of the doorset. The FD30 doorsets as tested with the Intastop product in FR1740 used Shadmaster 30 door leaves. In test RF99093 the door leaf was constructed of Flaxboard with hardwood stiles and hardwood top and bottom rails. Neither type of door leaf showed any signs of burn-through.

In order to generate this generic approval, consideration has been given to the various parameters and factors that will be affected if it is to be ensured that the performance of the door leaf will not be adversely affected by the mounting of Intastop door edge guards, at the proposed leaf sizes/modes.

Intastop DEG/A and DEG/B door edge guards when installed on previously proven timber doorsets Prepared for: Intastop Ltd Assessment Report IFCA/02260 Revision B Page 11 of 17 The Intastop door edge guards have not been tested in a double acting mode, as proposed herein. However, the change of mode does not affect the potential orientation or alignment of meeting stiles, per se, and so the performance and characteristics of the Intastop system under fire test conditions will not be adversely affected. (This is subject to there being evidence and/or assessment for the proposed door type in this mode).

#### 4.6 Variation in Intastop Profile

The tests referenced in Section 3 demonstrate the efficacy of the DEG/A type profile when fitted to proprietary timber doorsets for both FD30 and FD60 ratings. During both tests RF99093 and FR1740 it was observed that integrity failure did not occur at the meeting stiles. In both tests integrity failure occurred due to flaming at the door/frame interface.

It is proposed that this report will include the DEG/B product, and this is evaluated from first principles. The two main factors are that the B profile has a flatter surface where it opposes the other leaf, and, thus, includes larger volume/section of aluminium.

The latter aspect has potential to vary the thermal inertia exhibited by the DEG/A profile originally tested, although our analysis indicates that this will not adversely affect the overall characteristics of issues such as conduction and deflection under fire test conditions, especially since the leaves will act in harmony.

The flatter DEG/B profile actually presents a less onerous condition, in that the gap between leaves is more constant across the door thickness, allowing improved sealing of the gap, and providing a larger surface for clamping action. In addition, it creates more tolerances for slight differences in lateral movement that may occur under fire test conditions.

On this basis, it is the opinion of IFC that the use of DEG/B profiles will not reduce the overall fire performance of the Intastop system, and that the change in profile would not be a mode of integrity failure before the required period.

#### 4.7 Minimum Doorset Specifications

Approval for incorporation of Intastop door edge guards is subject to the following minimum doorset specifications:

- i) The door leaf to be used must have been successfully tested as an unlatched double leaf door and achieved an integrity performance of 30 minutes or 60 minutes, as appropriate, in accordance with BS476: Part 22: 1987.
- ii) The size of leaves used with the Intastop details must not exceed the size of leaves tested for the proposed door construction/type/brand. Notwithstanding this the door height must not exceed 2100mm.

- iii) The intumescent strips in head and hanging edges shall be appropriate for the door type/size/rating.
- iv) The supporting construction used with the doorset incorporating the Intastop details must be similar to that used in the initial type-testing of the proposed door construction.
- v) The gaps at the hanging style and at the head should be as tested with the proposed door construction or  $2 \pm 1$ mm, whichever is the smaller. The gaps between aluminium surfaces at the meeting stiles shall be  $3 \pm 1$ mm in all cases. (The intumescent seals in the edge guards must always contain a combined brush seal). All leaves must be aligned flush with each other at meeting edges.
- vi) The intumescent strips at the head of the assembly must be positioned in the frame to give continuity across the door edge guards in the meeting stile area.
- vii) In the absence of direct test evidence for assemblies fitted with latches/locks, and due to the unique nature of the Intastop door edge guards, it is a condition of this report that such items may not be included in the meeting stiles. If necessary, for security, locks may be morticed in the top or bottom edge of the leaf; subject to the conditions below.
- viii) Limitations upon size and materials of latches, and recommendations for intumescent protection to lock case and forend must be as defined for the relevant door type to achieve the necessary level of fire resistance. However, due to the more onerous interface at the head, there must be at least 10mm width of intumescent strip continuous past the strike plate in FD30 doors and 15mm width in FD60 doors.
- ix) Flush bolts may not be installed in the door edge, (i.e. in the Intastop edge guard). Only face fixed flush bolts may be employed, subject to the limitations upon size, material and intumescent protection for the relevant door type/fire rating.
- x) When installed, the self-closing device must be capable of closing both leaves against the friction of the bush seals, from any angle of opening.
- xi) The maximum deflection exhibited at the head of the meeting edge during testing of the proposed door type (or calculated by the relevant assessment at the proposed maximum height considered herein) shall not be more than 15mm. In addition, the total degree of deflection should not exceed 40mm; e.g. +15mm at the head and -25mm at mid height, or +1mm at the head and -39mm at mid height.

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- xii) The door construction may be any proven timber/cellulosic type, i.e. using timber, chipboard, mdf, plywood, flaxboard. The edges of meeting stiles must be lipped with hardwood (650kg/m<sup>3</sup> minimum) prior to installation of the Intastop profile with species/quality as defined for the particular door type.
- xiii) Only the DEG/B type Intastop profiles may be used on doors with unequal width leaves, or those with a bolted leaf, subject to the particular door type being tested/assessed in this mode. This is to accommodate the increased potential for differential deflection at meeting stiles of such assemblies.

## 5. CONCLUSION

It is the opinion of International Fire Consultants Ltd that, if the proposed Intastop aluminium door edge guards of type DEG/A and DEG/B were manufactured and installed in accordance with the requirements of this Assessment Report, in particular any restrictions given in Sections 4.1 to 4.7, and tested for fire resistance in accordance with BS476: Part 22: 1987, the Intastop edge guards would not be a cause of integrity failure before the proposed period of 30 and 60 minutes, as appropriate.

## 6. LIMITATIONS

This Assessment Report, which is only valid for timber double leaf doorsets using Intastop aluminium door edge guards of type DEG/A and DEG/B, addresses itself solely to the ability of the Intastop profiles described to contribute to the criteria of the fire resistance test. It does not imply any suitability for use with respect to other unspecified criteria.

This assessment report does not evaluate the doorsets themselves, but will assume that all aspects, e.g. door sizes, configurations, modes, ironmongery, frames are otherwise covered by test evidence or assessment to BS476: Part 22: 1987 for the respective door type chosen, except for those aspects specifically prescribed in Section 4.7 herein.

Where the constructional information in this report is taken from details provided to International Fire Consultants Ltd. (IFC) and/or from fire resistance test reports referenced herein, it is, therefore, limited to the information given in those documents. It is necessarily dependent upon the accuracy and completeness of that information. Where constructional or manufacturing details are not specified, or discussed herein, it should not, therefore, be taken to infer approval of variation in such details from those tested or otherwise approved.

Intastop DEG/A and DEG/B door edge guards when installed on previously proven timber doorsets Prepared for: Intastop Ltd Assessment Report IFCA/02260 Revision B Page 14 of 17 The analysis and conclusions within this report are based upon the likely fire resisting performance of a complete assembly that is manufactured and installed in accordance with this document, and offered for fire resistance testing in 'perfect' condition. In practice, management procedures must be in place in any building where the assemblies are installed, to ensure that no parts of the assembly are damaged or faulty. Door leaves must open and close without the use of undue force. The edge gaps/alignment must remain in accordance with the tolerances defined, herein. Any such shortfalls in respect to the condition of the assemblies will invalidate the approval by IFC, and may seriously affect the ability of the assembly to provide the required level of fire resistance performance. Determination of what constitutes wear or damage, and any corrective actions in order to return assemblies to the required condition, should only be carried out following consultation with the manufacturer and IFC.

Where the assessed constructions have not been subject to an on-site audit by International Fire Consultants Ltd., it is the responsibility of anyone using this report to confirm that all aspects of the assemblies fully comply with the descriptions and limitations herein.

Any materials specified in this report have been selected and judged primarily on their fire performance. IFC do not claim expertise in areas other than fire safety. Whilst observing all possible care in the specification of solutions, we would draw the reader's attention to the fact that during the construction and procurement process, the materials used should be subjected to more general examination regarding the wider Health and Safety, and CoSHH Regulations.

This Report is provided to the sponsor on the basis that it is a professional independent engineering opinion as to what the fire performance of the construction/system would be should it be tested to the named standard. It is IFC's experience that such an opinion is normally acceptable in support of an application for building approvals, certainly throughout the UK and in many parts of Europe and the rest of the world.

However, unless IFC have been commissioned to liaise with the Authorities that have jurisdiction for the building in question for the purpose of obtaining the necessary approvals, IFC cannot assure that the document will satisfy the requirements of the particular building regulations for any building being constructed.

It is, therefore, the responsibility of the sponsor to establish whether this evidence is appropriate for the application for which it is being supplied and IFC cannot take responsibility for any costs incurred as a result of any rejection of the document for reasons outside of our control. Early submittal of the Report to the Authorities will minimise any risks in this respect.

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## 7. VALIDITY

This assessment has been prepared based on International Fire Consultants Ltd's present knowledge of the products described, the stated testing regime and the submitted test evidence. For this reason anyone using this document after November 2018 should confirm its ongoing validity.

Prepared by:

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Checked by:

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Intastop DEG/A and DEG/B door edge guards when installed on previously proven timber doorsets Prepared for: Intastop Ltd Assessment Report IFCA/02260 Revision B Page 16 of 17

## **APPENDIX A**

Figure 02260B/01

The figure in this Appendix is not included in the sequential page numbering of this report.

Intastop DEG/A and DEG/B door edge guards when installed on previously proven timber doorsets Prepared for: Intastop Ltd

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Assessment IFCA/02260B Intastop Limited		
Intastop type DEG/A and DEG/B door edge guards		
Job number: 13712		
Drawn by: PB Checked by: MB		
N.T.S. November 2013		
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