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## CERTIFICATE OF APPROVAL

### No CF 714

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This is to certify that, in accordance with  
TS00 General Requirements for Certification of Fire Protection Products  
The undermentioned products of

**D. P. GARG & CO. PVT. LTD.**

**B-210B, Phase-2, Noida, Gautam Budh Nagar – 201 305, India**

**Tel: +91 120 246 00 85/86/87**

**Fax: +91 120 246 00 83**

Have been assessed against the requirements of the Technical Schedule(s)  
denoted below and are approved for use subject to the conditions  
appended hereto:

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#### CERTIFIED PRODUCT

**D. P. Garg Steel Hinges**

#### TECHNICAL SCHEDULE

**TS24 The Contribution of  
Single Axis Hinges to the Fire  
Resistance of Door Assemblies**

**Signed and sealed for and on behalf of Warringtonfire Testing and Certification Limited**

Paul Duggan  
Certification Manager

Issued: 24<sup>th</sup> November 2009  
Reissued: 9<sup>th</sup> January 2025  
Valid to: 23<sup>rd</sup> November 2029



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### D. P. GARG & CO. PVT. LTD.

1. This certification is provided to the client for their own purposes, and we cannot opine on whether it will be accepted by Building Control authorities or any other third parties for any purpose.
2. This approval relates to the use of D. P. Garg steel, single axis hinges with either square or radiused corners. This approval relates to the following specific hinges:

| <b>Grade 13 – Stainless Steel Ball Bearing Hinges 2BB</b> |                 |                                                  |
|-----------------------------------------------------------|-----------------|--------------------------------------------------|
| <b>SHIN1001100</b>                                        | Stainless steel | 101 x 76 x 3mm square corners                    |
| <b>SHIN1002100</b>                                        | Stainless steel | 101 x 90 x 3mm square corners                    |
| <b>SHIN1003100*</b>                                       | Stainless steel | 101 x 101 x 3mm square corners                   |
| <b>SHIN1005125</b>                                        | Stainless steel | 125 x 76 x 3mm square corners                    |
| <b>SHIN1006150</b>                                        | Stainless steel | 150 x 76 x 3mm square corners                    |
| <b>SHIN1004114*</b>                                       | Stainless steel | 114 x 101 x 3.4mm square corners                 |
| <b>SHIN551R100</b>                                        | Stainless steel | 101 x 76 x 3mm radiused corners                  |
| <b>SHIN553R100</b>                                        | Stainless steel | 101 x 90 x 3mm radiused corners                  |
| <b>SHIN552R100*</b>                                       | Stainless steel | 101 x 101 x 3mm radiused corners                 |
| <b>SHIN551R125</b>                                        | Stainless steel | 125 x 76 x 3mm radiused corners                  |
| <b>SHIN551R150</b>                                        | Stainless steel | 150 x 76 x 3mm radiused corners                  |
| <b>SHIN551R114*</b>                                       | Stainless steel | 114 x 101 x 3.4mm radiused corners               |
| <b>SHIN1021100**</b>                                      | Stainless steel | 101 x 76 x 3 mm square corners – Security Pin    |
| <b>SHIN1022100**</b>                                      | Stainless steel | 101 x 76 x 3 mm radiused corners – Security Pin  |
| <b>SHIN1031100**</b>                                      | Stainless steel | 101 x 76 x 3 mm square corners – Anti-ligature   |
| <b>SHIN1032100**</b>                                      | Stainless steel | 101 x 76 x 3 mm radiused corners – Anti-ligature |

\* Suitable for use on minimum 54 mm thick doors only

\*\* For use with 30 and 60 minute timber-based doorsets only

| <b>Grade 11 - Steel Ball Bearing Hinges (2BB)</b> |                 |                                     |
|---------------------------------------------------|-----------------|-------------------------------------|
| <b>MHIN4515100</b>                                | Mild steel      | 101 x 76 x 2.6 mm square corners    |
| <b>MHIN4517100</b>                                | Mild steel      | 101 x 76 x 3 mm square corners      |
| <b>MHIN4519100</b>                                | Mild steel      | 101 x 88 x 3 mm square corners      |
| <b>MHIN4522100*</b>                               | Mild steel      | 101 x 101 x 3.2 mm square corners   |
| <b>MHIN5515100</b>                                | Mild steel      | 101 x 76 x 2.6 mm radiused corners  |
| <b>MHIN5517100</b>                                | Mild steel      | 101 x 76 x 3 mm radiused corners    |
| <b>MHIN5519100</b>                                | Mild steel      | 101 x 88 x 3 mm radiused corners    |
| <b>MHIN5522100*</b>                               | Mild steel      | 101 x 101 x 3.2 mm radiused corners |
| <b>SHIN4515100</b>                                | Stainless steel | 101 x 76 x 2.6 mm square corners    |

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| <b>Grade 11 - Steel Ball Bearing Hinges (2BB)</b> |                 |                                     |
|---------------------------------------------------|-----------------|-------------------------------------|
| <b>SHIN4517100</b>                                | Stainless steel | 101 x 76 x 3 mm square corners      |
| <b>SHIN4519100</b>                                | Stainless steel | 101 x 88 x 3 mm square corners      |
| <b>SHIN4522100*</b>                               | Stainless steel | 101 x 101 x 3.2 mm square corners   |
| <b>SHIN5515100</b>                                | Stainless steel | 101 x 76 x 2.6 mm radiused corners  |
| <b>SHIN5517100</b>                                | Stainless steel | 101 x 76 x 3 mm radiused corners    |
| <b>SHIN5519100</b>                                | Stainless steel | 101 x 88 x 3 mm radiused corners    |
| <b>SHIN5522100*</b>                               | Stainless steel | 101 x 101 x 3.2 mm radiused corners |

\* Suitable for use on minimum 54 mm thick doors only

| <b>Grade 7 - Steel Ball Bearing Hinges (2BB)</b> |                 |                                     |
|--------------------------------------------------|-----------------|-------------------------------------|
| <b>MHIN4510075*</b>                              | Mild steel      | 76 x 101 x 2 mm square corners      |
| <b>MHIN4511075</b>                               | Mild steel      | 76 x 50 x 2 mm square corners       |
| <b>MHIN4512075</b>                               | Mild steel      | 76 x 62 x 2 mm square corners       |
| <b>MHIN4513075</b>                               | Mild steel      | 76 x 76 x 2 mm square corners       |
| <b>MHIN4515100</b>                               | Mild steel      | 101 x 76 x 2.6 mm square corners    |
| <b>MHIN4517100</b>                               | Mild steel      | 101 x 76 x 3 mm square corners      |
| <b>MHIN4519100</b>                               | Mild steel      | 101 x 88 x 3 mm square corners      |
| <b>MHIN4522100*</b>                              | Mild steel      | 101 x 101 x 3.2 mm square corners   |
| <b>MHIN4523114*</b>                              | Mild steel      | 114 x 101 x 3.2 mm square corners   |
| <b>MHIN5511075</b>                               | Mild steel      | 76 x 50 x 2 mm radiused corners     |
| <b>MHIN5512075</b>                               | Mild steel      | 76 x 62 x 2 mm radiused corners     |
| <b>MHIN5513075</b>                               | Mild steel      | 76 x 76 x 2 mm radiused corners     |
| <b>MHIN5515100</b>                               | Mild steel      | 101 x 76 x 2.6 mm radiused corners  |
| <b>MHIN5517100</b>                               | Mild steel      | 101 x 76 x 3 mm radiused corners    |
| <b>MHIN5519100</b>                               | Mild steel      | 101 x 88 x 3 mm radiused corners    |
| <b>MHIN5522100*</b>                              | Mild steel      | 101 x 101 x 3.2 mm radiused corners |
| <b>MHIN5523114*</b>                              | Mild steel      | 114 x 101 x 3.2 mm radiused corners |
| <b>SHIN4510075*</b>                              | Stainless steel | 76 x 101 x 2 mm square corners      |
| <b>SHIN4511075</b>                               | Stainless steel | 76 x 50 x 2 mm square corners       |
| <b>SHIN4512075</b>                               | Stainless steel | 76 x 62 x 2 mm square corners       |
| <b>SHIN4513075</b>                               | Stainless steel | 76 x 76 x 2 mm square corners       |
| <b>SHIN4515100</b>                               | Stainless steel | 101 x 76 x 2.6 mm square corners    |
| <b>SHIN4517100</b>                               | Stainless steel | 101 x 76 x 3 mm square corners      |
| <b>SHIN4519100</b>                               | Stainless steel | 101 x 88 x 3 mm square corners      |
| <b>SHIN4522100*</b>                              | Stainless steel | 101 x 101 x 3.2 mm square corners   |
| <b>SHIN4523114*</b>                              | Stainless steel | 114 x 101 x 3.2 mm square corners   |
| <b>SHIN5511075</b>                               | Stainless steel | 76 x 50 x 2 mm radiused corners     |

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| <b>Grade 7 - Steel Ball Bearing Hinges (2BB)</b> |                 |                                     |
|--------------------------------------------------|-----------------|-------------------------------------|
| <b>SHIN5512075</b>                               | Stainless steel | 76 x 62 x 2 mm radiused corners     |
| <b>SHIN5513075</b>                               | Stainless steel | 76 x 76 x 2 mm radiused corners     |
| <b>SHIN5515100</b>                               | Stainless steel | 101 x 76 x 2.6 mm radiused corners  |
| <b>SHIN5517100</b>                               | Stainless steel | 101 x 76 x 3 mm radiused corners    |
| <b>SHIN5519100</b>                               | Stainless steel | 101 x 88 x 3 mm radiused corners    |
| <b>SHIN5522100*</b>                              | Stainless steel | 101 x 101 x 3.2 mm radiused corners |
| <b>SHIN5523114*</b>                              | Stainless steel | 114 x 101 x 3.2 mm radiused corners |

\* Suitable for use on minimum 54 mm thick doors only

| <b>Grade 7 - Butt Hinge Plain Joint</b> |                 |                                     |
|-----------------------------------------|-----------------|-------------------------------------|
| <b>MHIN0804076</b>                      | Mild steel      | 76 x 76 x 1.9 mm square corners     |
| <b>MHIN2020076</b>                      | Mild steel      | 76 x 49 x 1.9 mm square corners     |
| <b>MHIN2020100</b>                      | Mild steel      | 101 x 71 x 1.9 mm square corners    |
| <b>MHIN5050075</b>                      | Mild steel      | 76 x 46 x 1.9 mm square corners     |
| <b>MHIN5050100</b>                      | Mild steel      | 101 x 58 x 1.9 mm square corners    |
| <b>MHIN0451075</b>                      | Mild steel      | 76 x 64 x 2.35 mm square corners    |
| <b>MHIN0451100</b>                      | Mild steel      | 101 x 76 x 2.5 mm square corners    |
| <b>MHIN451A100</b>                      | Mild steel      | 101 x 76 x 2.85 mm square corners   |
| <b>MHIN804R076</b>                      | Mild steel      | 76 x 76 x 1.9 mm radiused corners   |
| <b>MHIN2021076</b>                      | Mild steel      | 76 x 49 x 1.9 mm radiused corners   |
| <b>MHIN2021100</b>                      | Mild steel      | 101 x 71 x 1.9 mm radiused corners  |
| <b>MHIN451R075</b>                      | Mild steel      | 76 x 64 x 2.35 mm radiused corners  |
| <b>MHIN451R100</b>                      | Mild steel      | 101 x 76 x 2.5 mm radiused corners  |
| <b>MHIN4510100</b>                      | Mild steel      | 101 x 76 x 2.85 mm radiused corners |
| <b>MHIN2020090</b>                      | Mild steel      | 90 x 49 x 1.9 mm square corners     |
| <b>MHIN1738090</b>                      | Mild steel      | 90 x 49 x 1.9 mm radiused corners   |
| <b>MHIN5050090</b>                      | Mild steel      | 90 x 46 x 1.9 mm square corners     |
| <b>MHIN0451090</b>                      | Mild steel      | 90 x 64 x 2.35 mm square corners    |
| <b>MHIN451R090</b>                      | Mild steel      | 90 x 64 x 2.35 mm radiused corners  |
| <b>MHIN451T100</b>                      | Mild steel      | 101 x 76 x 2.5 mm square corners    |
| <b>MHIN45RT100</b>                      | Mild steel      | 101 x 76 x 2.5 mm radiused corners  |
| <b>MHIN5451100</b>                      | Mild steel      | 101 x 76 x 2.85 mm square corners   |
| <b>MHIN6451100</b>                      | Mild steel      | 101 x 76 x 2.85 mm radiused corners |
| <b>SHIN0453075</b>                      | Stainless steel | 76 x 49 x 1.9 mm square corners     |
| <b>SHIN0453100</b>                      | Stainless steel | 101 x 71 x 1.9 mm square corners    |
| <b>SHIN0451076</b>                      | Stainless steel | 76 x 64 x 2.35 mm square corners    |
| <b>SHIN0451100</b>                      | Stainless steel | 101 x 64 x 2.5 mm square corners    |

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| Grade 7 - Butt Hinge Plain Joint |                 |                                     |
|----------------------------------|-----------------|-------------------------------------|
| SHIN1451100                      | Stainless steel | 101 x 76 x 2.5 mm square corners    |
| SHIN1452100                      | Stainless steel | 101 x 76 x 2.85 mm square corners   |
| SHIN453R076                      | Stainless steel | 76 x 49 x 1.9 mm radiused corners   |
| SHIN453R100                      | Stainless steel | 101 x 71 x 1.9 mm radiused corners  |
| SHIN451R076                      | Stainless steel | 76 x 64 x 2.35 mm radiused corners  |
| SHIN2451100                      | Stainless steel | 101 x 76 x 2.5 mm radiused corners  |
| SHIN2452100                      | Stainless steel | 101 x 76 x 2.85 mm radiused corners |
| SHIN2020090                      | Stainless steel | 90 x 49 x 1.9 mm square corners     |
| SHIN1738090                      | Stainless steel | 90 x 49 x 1.9 mm radiused corners   |
| SHIN0451090                      | Stainless steel | 90 x 64 x 2.35 mm square corners    |
| SHIN451R090                      | Stainless steel | 90 x 64 x 2.35 mm radiused corners  |
| SHIN3451100                      | Stainless steel | 101 x 76 x 2.5 mm square corners    |
| SHIN4451100                      | Stainless steel | 101 x 76 x 2.5 mm radiused corners  |
| SHIN5451100                      | Stainless steel | 101 x 76 x 2.85 mm square corners   |
| SHIN6451100                      | Stainless steel | 101 x 76 x 2.85 mm radiused corners |
| SHIN6463100                      | Stainless steel | 101 x 71 x 1.9 mm square corners    |
| SHIN6461100                      | Stainless steel | 101 x 64 x 2.5 mm square corners    |

3. This approval relates to the use of the above single axis hinges in contributing to the fire resistance performance of timber based doorsets and predominantly steel based doorsets, as defined in BS EN 1634-1 or BS 476: Part 22: 1987.

4. This approval relates to their use with the following door assemblies: -

**Code ITT - 20 minute to 120\*\* minute door assemblies door assemblies incorporating intumescent perimeter seals and consisting of timber faced and edged leaves with timber or cellulosic cores, hung in timber or cellulosic frames.**

**Code MM/IMM - 20 minute to 240\* minute door assemblies consisting of uninsulated or insulated predominantly steel leaves, hung in steel frames with or without intumescent seals.**

\* 240 minute MM/IMM approval relates to Grade 13 Stainless Steel Ball Bearing Hinges only.

\*\*Some hinges restricted to 30 and 60 minute timber-based doorsets only

5. The hinges are approved on the basis of:

- Initial type testing to EN1935 and EN 1634-1
- An appraisal against TS24
- Certification of quality management system.
- Inspection and surveillance of factory production control
- On-going audit testing in accordance with TS24 requirements

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6. The door assembly shall be a CERTIFIRE approved product or have achieved the appropriate fire resistance performance when tested at a laboratory accredited to IS/IEC 17025 (under International Laboratory accreditation Cooperation (ILAC) membership), in accordance with BS 476: Part 22: 1987 and/or BS EN 1634:1 with hinges of a similar size.
7. The hinges may only be fitted in the manner described in this certificate and subject to any limitations on the inclusion of hinges specified for the door leaf. This approval is applicable only to the specified hinges used with door assemblies of proven fire resistance (as defined in BS EN 1634-1 or BS 476: Part 22: 1987) and when using appropriate intumescent protection.
8. For ITT timber-based doorsets the hinges shall only be fitted using the fixings supplied by the hinge manufacturer.
9. Regard should be paid to the maximum door mass permitted to be used with the hinge (see classifications).
10. The ITT doorsets shall be installed in accordance with BS 8214.
11. The hinges should only be used with door assemblies of proven fire resistance (as defined in BS EN 1634-1 or BS 476: Part 22: 1987), the critical aspects of the doorset construction are considered to be the material of the door frame, the leaf to frame clearance gaps and the lipping material. Attention should be paid to these details and these should not be amended from that previously fire tested.

The following minimum specification shall be followed:

- a. 30 and 60 minute timber-based assemblies (ITT):
  - i) Door frame minimum density - 460 kg/m<sup>3</sup> (30 minutes), 640 kg/m<sup>3</sup> (60 minutes)
  - ii) Door leaves shall have a minimum thickness of 44 mm for 30 minute applications and 54 mm for 60 minute applications.
  - iii) Lipping minimum density - 640 kg/m<sup>3</sup>.
- b. Steel-based assemblies (MM/IMM)
  - i) Door leaves shall have a minimum thickness of 44 mm for up to 240 minute applications.
12. For 90 minute and 120 minute timber-based assemblies (ITT), D. P. Garg hinges shall only be fitted to doorsets which have previously been tested with hinges of a similar size, subject to the following requirements:
  - i) The required intumescent protection shall be as tested by the chosen door manufacturer. In all cases this shall be a minimum of a 2 mm thick Interdens mono ammonium phosphate based intumescent sheet material incorporated beneath each hinge blade, however, this protection shall be increased as required based on the chosen doorset manufacturers test data.

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- ii) A minimum of 10 mm of perimeter intumescent fire seal shall by-passed the hinges. Where the perimeter intumescent fire seal on the original test of the chosen doorset by-passes the hinge by more than 10 mm, this shall be maintained on the doorset incorporating the D. P. Garg chosen hinges.
- iii) The critical dimensions of the D. P. Garg hinge to be used shall be based on the size of the hinge tested originally by the chosen doorset manufacturer, with the following tolerance:

| Hinge specification of chosen doorset |                                                                                                                          |
|---------------------------------------|--------------------------------------------------------------------------------------------------------------------------|
| Component/dimension                   | Tolerance/Rule                                                                                                           |
| <b>Hinge blade</b>                    |                                                                                                                          |
| Width                                 | +0/-5% of tested hinge                                                                                                   |
| Height                                | +/-5% of tested hinge                                                                                                    |
| Thickness                             | +/-15% of tested hinge                                                                                                   |
| <b>Knuckle</b>                        |                                                                                                                          |
| Diameter                              | Minimum 11 mm                                                                                                            |
| <b>Fixings</b>                        |                                                                                                                          |
| Quantity                              | Maximum 4No. fixings tested                                                                                              |
| Size                                  | 4.8 mm dia. Minimum                                                                                                      |
| Length                                | No shorter than that tested                                                                                              |
| Position (width)                      | +/-10% from the positions of the fixings in the tested hinge when measured with respect to the centre lines of the blade |

**Note:** Where the D. P. Garg hinge does not comply with the parameters identified above it shall not be used in conjunction with the chosen 90 minute and 120 minute timber-based assemblies (ITT).

13. When fitted to timber-based door assemblies, the required additional intumescent protection will be as follows:

- i) Mono Ammonium Phosphate sheet intumescent material as follows:
- 1 mm thickness shall be fitted behind each blade for 30 minute applications.
  - 2 mm thickness shall be fitted behind each blade for 60 minute applications.
  - Furthermore, it a requirement that the perimeter intumescent fire seal to by-pass the hinges by a minimum of 4 mm for all 60 minute applications.

Or:

- ii) 0.8 mm Flexifire graphite-based intumescent sheet material as follows:
- 0.8 mm thickness shall be fitted behind each blade for 30 minute applications.
  - 0.8 mm thickness shall be fitted behind each blade for 60 minute applications.
  - Furthermore, it a requirement that the perimeter intumescent fire seal to by-pass the hinges by a minimum of 15 mm for all 60 minute applications.

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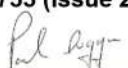
- iii) The required intumescent protection for 90 and 120 minute ITT applications shall be as tested by the chosen door manufacturer. In all cases this shall be a minimum of a 2 mm thick Interdens mono ammonium phosphate based or graphite based intumescent sheet material incorporated beneath each hinge blade, however, this protection shall be increased as required based on the chosen doorset manufacturers test data.
- iv) Additionally or 90 and 120 minute ITT applications only, a minimum of 10 mm of perimeter intumescent fire seal shall by-passed the hinges. Where the perimeter intumescent fire seal on the original test of the chosen doorset by-passes the hinge by more than 10 mm, this shall be maintained on the doorset incorporating the D. P. Garg chosen hinges.

Failure to install the intumescent protection will invalidate this certificate

14. All door hardware is subject to the acceptance by the chosen door assembly supplier's tested, assessed, or certificated scope, which generally identifies the types of hardware approved, the required specification/design based on the key materials/ maximum size (e.g. Blade, knuckle, etc.), and the application of any additional intumescent protection.

On this basis, approval should be sought from the specific door assembly supplier to ensure compliance based on this assessed/certificated scope.

15. The products identified within this certificate/assessment report are marketed under the brand names of GARG, GARGS, TUFF, ELITE, EUROSTAR & SICHERN. In all case the products are identical with only branding and packaging changing.
16. The approval relates to ongoing production. The product and/or its immediate packaging is identified with the manufacturer's name, the product name or number, the CERTIFIRE name or name and mark, together with the CERTIFIRE certificate number and application where appropriate.

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17. Matrix of acceptable doorset types

| Class  | Approved Door Type |    |     |     |
|--------|--------------------|----|-----|-----|
|        | IMM                | MM | ITT | ITM |
| FD20   | ✓                  | ✓  | ✓   | ✗   |
| FD30   | ✓                  | ✓  | ✓   | ✗   |
| FD60   | ✓                  | ✓  | ✓   | ✗   |
| FD120  | ✓                  | ✓  | ✓   | ✗   |
| FD240  | ✓                  | ✓  | ✗   | ✗   |
| E 20   | ✓                  | ✓  | ✓   | ✗   |
| EI 20  | ✓                  | ✓  | ✓   | ✗   |
| E 30   | ✓                  | ✓  | ✓   | ✗   |
| EI 30  | ✓                  | ✓  | ✓   | ✗   |
| E 60   | ✓                  | ✓  | ✓   | ✗   |
| EI 60  | ✓                  | ✓  | ✓   | ✗   |
| E 90   | ✓                  | ✓  | ✓   | ✗   |
| EI 90  | ✓                  | ✓  | ✓   | ✗   |
| E 120  | ✓                  | ✓  | ✓   | ✗   |
| EI 120 | ✓                  | ✓  | ✓   | ✗   |
| E 240  | ✓*                 | ✓* | ✗   | ✗   |
| EI 240 | ✓*                 | ✓* | ✗   | ✗   |

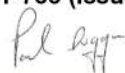
**Key:**

✓ - approved

✗ - Not approved

✓\* Note: 240 minute MM/IMM approval relates to Grade 13 Stainless Steel Ball Bearing Hinges only

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18. Doors are categorised as the following types:

**Code ITT** - 20 minute to 120 minute door assemblies door assemblies incorporating intumescent perimeter seals and consisting of timber faced and edged leaves with timber or cellulosic cores, hung in timber or cellulosic frames.

**Code ITM** - 20 minute to 120 minute door assemblies door assemblies incorporating intumescent perimeter seals and consisting of timber faced and edged leaves with timber or cellulosic cores, hung in steel frames.

**Code MM** - 20 to 240 minute doorsets consisting of uninsulated or insulated predominantly steel leaves, hung in steel frames without intumescent seals.

**Code IMM** - 20 to 240 minute doorsets consisting of uninsulated or insulated predominantly steel leaves, hung in steel frames with intumescent seals.

#### Scope of Approval:

- The hinges may not be fitted to timber doorsets without perimeter intumescent fire seals within the frame rebate or edge of the door leaf.
- Where graphite based intumescent sheet material is to be used in lieu of the mono ammonium phosphate tested, the proposed graphite-based intumescent sheet material, shall have suitable test evidence in the required thickness or less, with timber-based doorset of the required classification period, with steel hinges of a minimum size of 100 mm x 75 mm.
- The following hinges are approved for use on minimum 54 mm thick doors only:

|             |             |
|-------------|-------------|
| SHIN1003100 | MHIN5522100 |
| SHIN1004114 | MHIN5523114 |
| SHIN552R100 | SHIN4510075 |
| SHIN551R114 | SHIN4522100 |
| MHIN4510075 | SHIN4523114 |
| MHIN4522100 | SHIN5522100 |
| MHIN4523114 | SHIN5523114 |

- The following hinges are approved for use on 30 and 60 minute timber-based doorsets only:

|             |             |
|-------------|-------------|
| SHIN1021100 | SHIN1031100 |
| SHIN1022100 | SHIN1032100 |

- 240 minute MM/IMM approval relates to Grade 13 Stainless Steel Ball Bearing Hinges only

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## CERTIFICATE No CF 714 D. P. GARG & CO. PVT. LTD.

### Classification codes

The above approval provides the following classifications:

Grade 13 - Stainless Steel Ball Bearing hinges (2BB):

| Category of duty | Number of test cycles | Test door mass | Fire resistance | Safety | Corrosion resistance | Security | Hinge grade |
|------------------|-----------------------|----------------|-----------------|--------|----------------------|----------|-------------|
| 4                | 7                     | 6              | 1               | 1      | 4                    | 0        | 13          |

Grade 11 - Stainless Steel Ball Bearing hinges (2BB):

| Category of duty | Number of test cycles | Test door mass | Fire resistance | Safety | Corrosion resistance | Security | Hinge grade |
|------------------|-----------------------|----------------|-----------------|--------|----------------------|----------|-------------|
| 3                | 7                     | 4              | 1               | 1      | 3                    | 0        | 11          |

Grade 7 - Steel Ball Bearing Hinges (2BB) and Grade 7 - Butt Hinge Plain Joint:

| Category of duty | Number of test cycles | Test door mass | Fire resistance | Safety | Corrosion resistance | Security | Hinge grade |
|------------------|-----------------------|----------------|-----------------|--------|----------------------|----------|-------------|
| 2                | 7                     | 2              | 1               | 1      | 2                    | 0        | 7           |

### Further Information

Further information regarding the details contained in this certificate may be obtained from D. P. Garg & Co. Pvt Ltd (Tel: + 91 120 246 00 85).

Further information regarding CERTIFIRE certification and other approved products can be obtained from CERTIFIRE (Tel: 01925 646777).

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