

GUARANTEE FOR THE COATING OF ALUMINIUM ALLOYS

Thermaset Ltd here by warrants, that their Architectural Matt polyester range, has a gloss level of 30% +/- 5 units, (hereinafter referred to as the product), for heat treated application to aluminium pressings, sheeting and extrusions for above ground constructions, will subject to the provision of this guarantee, have the following properties for a period of 15 years from the effective date.

- I. **Adhesion:** Adhesion of the product as delivered to the Applicator when measured by reference to EN ISO 2409:2013 will have cross-cut coefficient zero (GTO) on a panel prepared and coated in strict accordance with the specified process and coated to a maximum of 80 micrometres.
- II. **Degree of Gloss:** At the time of delivery of the product to the Applicator the degree of gloss will be within five units of the standard for the product. The measurement will be taken using the procedure described in EN ISO 2813:2014 using an incidence angle of 60 degrees and will be measured after the film has been cured at the recommended curing schedule. Any gloss reduction occurs evenly over the surface without adversely affecting the uniform appearance. Defects resulting from unequal exposure to the effects of ultra violet light and the environment shall not be covered by this warranty.
- III. **Colour Retention:** At the time of delivery of the product to the Applicator it meets in full the requirements of BS EN 12206-1:2004 including the colour retention and chalking resistance when tested in Florida. A change may occur in the shade of the coating on the surface of the product, but this will not affect the uniform appearance.

This Guarantee is only applicable where the product has been applied to aluminium alloys ("Metal") providing that the coating is applied by a Qualicoat approved applicator.

1. The Process and Procedure

- a) Pre-treatment and Testing. The aluminium alloys to be coated must be fully pre-treated as follows;
- I. Degreasing
 - II. Rinsing
 - III. Etching
 - IV. Rinsing
 - V. De-smutting
 - VI. Rinsing
 - VII. Chromate or Chromate/phosphate conversion in accordance with ISO 10546. The weight of the chromate conversion shall be between 0.6 and 1.2 g/m² for chemical chromate conversion (yellow coating) and 0.6 to 1.5 g/m² for chemical chromate-phosphate conversion (green coating)
 - VIII. Rinsing
 - IX. Demineralised water rinse, conductivity of the drain off water of the final rinse must not exceed 30 microSiemens@20° C.
 - X. Drying. For continuous treatment maximum drying temperature is 100 degrees C.
For discontinuous coating the drying temperatures are;
-chemical chromate conversion (yellow coating): maximum 65°C
-chemical chromate-phosphate conversion (green coating): maximum 85°C

Before any production runs commence, the APPLICATOR shall pre-treat and coat a test panel in accordance with revised and updated ASTM B449-93 (1998) Sec.5 and DIN 50-939 and ASTM D 1730-67 (1998) type B, method 5 or 7 for control purposes. If the APPLICATOR detects any deviations from the prescribed specifications, the APPLICATOR shall immediately stop the process and notify Thermaset. Test panels shall be coated and checked at least twice per workshift during production. All test panels shall be kept for warranty purposes, and made available to Thermaset upon the assertion of a claim.

b Curing. The APPLICATOR shall check the conditions in the oven at least twice per operating shift to detect any changes in curing conditions. The data obtained shall be entered in the Coating Process Log.

c Coating Thickness. The coating shall be carried out in one operation immediately after pre-treatment of the Metal, to be cured continuous minimum coating thickness of 50 micrometres. To maintain the inherent design capabilities of the Product and to achieve a non porous film it may be necessary to apply it at a thicker film in some instances. Buildings that are exposed to aggressive environmental conditions as defined in BS EN ISO 12944-2 through its corrosive categories C5-1 and C5-M, shall be coated at a cured continuous film thickness of at least 60 micrometres and the film shall be non porous.

d Coating Process Log. A Coating and Process log shall be kept and maintained for Warranty purposes. The coating and Process Log shall be made available to Thermaset upon the assertion of a claim by the APPLICATOR and contain (i) a description and location of the building to be coated, (ii) the delivery date, (iii) the batch number, (iv) the specification and code of the product, (v) the product quantity used, (vi) a specification of the metal to be coated and continuous measurements of the film thickness at different areas of the components of the Metal (vii) the analysed data of pre-treatment and (viii) the cure conditions (temperature and curing time) (ix) the quality control records for adhesion flexibility, impact and pressure cooker testing.

e Cleaning and Maintenance. Components to which the product is applied must be cleaned when they become soiled. The cleaning interval should be determined by the amount of soiling. For locations classified as CM3 it is recommended a maximum period of 18 months between cleaning operations, unless any undue soiling is apparent on the coating in which case cleaning should be more frequent. In locations classified as CM4 cleaning should be carried out every 3 months.

Cleaning should commence with the date of installation at the premises of the building owner, using a mild detergent and warm water on all surfaces and a soft cloth or sponge but nothing harder than a natural bristle brush. Full documented and corroborative cleaning records must be kept for the period of the guarantee, by the client of the building to which the guarantee relates. The record shall include the date of cleaning, detergents used and devices used eg cloth, sponge.

2. Provisions of the guarantee

Thermaset Ltd shall incur no liability hereunder whatsoever in the event that any one or more of the following circumstances apply:

- I. The process and approved procedure as detailed has not been adhered to and the necessary documentation and test panels have not been received by Thermaset Ltd.
- II. On the date of application the gloss level is more than 7 units from the standard for the product when measured at an incidence angle of 60 degrees as specified EN ISO 2813:2014 when the film is cured at the recommended curing schedule.
- III. Where two coats of the product have been applied.

- IV. The product is stored in temperatures exceeding 25 degrees Celsius.
- V. The product was stored at Applicators premises for more than 6 months prior to use.
- VI. The product is not stored in dry conditions
- VII. The coated metal is not installed within 2 months of the coating application.
- VIII. The defect results from lack of adhesion of the product to the metal.
- IX. The defect is limited to less than 5% or one hundred square metres of the total coated surface.
- X. The metal was coated in whole or in part by any coating material other than the Product.
- XI. The coated metal is not cleaned and maintained in accordance with section (1e).
- XII. Touch up systems have been used, the areas coated in these materials are expressly excluded from the guarantee.
- XIII. The coated metal is exposed to continuous heat in excess of 70 degrees Celsius or is in the direct influence zones of the sea, acid, industrial or other aggressive emission sources which are known or believed to be damaging or corrosive to thermosetting powder coatings.
- XIV. The product coating is subjected to mechanical damage.
- XV. Notification in writing is not received within 60 days of any defect becoming apparent to the building owner.

3. Notification

- a. In the event of a defect of the Product, the APPICATOR shall give written notification thereof to Thermaset by means of registered mail within 14 days of the discovery of the defect (the "Notification"), and must give Thermaset the opportunity to inspect the defective Product and the coated Metal claimed to be defective Product and the coated Metal claimed to be defective during regular business hours.
- b. The Notification shall specify and must have attached thereof (i) the type and extent of the damage (ii) the type and location of the damaged object; (iii) the date of installation of the coated Metal; (iv) the Product code, batch number, invoice number, and the date of delivery of the Product; (v) the original Coating and Process Log Record and test panels; (vi) a copy of the sales contract; (vii) a statement of suspected reasons of the defect; (viii) the planned remedial measures and estimated cost of repair; and (ix) the amount claimed.
- c. In the event of a warranty claim the APPLICATOR must prove in writing (i) that the defect was caused by a breach of this warranty by Thermaset and (ii) that the Product was applied in accordance with the process and procedures in section 1.

4. Obligations

Save where we are shown to have failed to exercise reasonable care in the supply of the Product we shall not be liable in any circumstances in respect of death or personal injury and under no circumstances whatsoever shall we be liable for consequential and indirect loss or loss of profits

- 4.1 If the product does not comply with the guaranteed specification set out herein, Thermaset will either (i) replace the product, or (ii) pay for repair works to correct defects results from non-compliance of the Product with the guaranteed specification or (iii) reimburse the APPLICATOR for repair works undertaken by them upon presentation of repair receipts, to the extent of the cost of the Product used and provided that Article 4.5 is complied with.

- 4.2 It is the sole discretion of Thermaset to choose which action will be taken with respect to the remedies listed in Article 4.1
- 4.3 Thermaset's liability whether in respect of one claim or the aggregate of various claims and for any occurrence or series of occurrences, shall not extend to the first £1000 of any loss or damage suffered by reason of any failure, and shall be the lesser of the amounts computed with respect to 4.1 (i)-(iii), and shall not in any event exceed an amount of £50,000 in the aggregate.
- 4.4 Thermaset reserves a period of ninety (90) days from receipt of the Notification and the documents as stipulated in Article 3, to instruct the APPLICATOR as to the repairs to be made and the procedures to be followed. If no instructions have been given by Thermaset within the prescribed period, the APPLICATOR may personally remedy the defects by selecting the least expensive method. Before the expiry of this period, the APPLICATOR may carry out any repair works without loss of its rights under this warranty. The warranty on any repaired or replaced Product shall be for the remainder of the warranty period applicable to the original purchase. If Thermaset has made payments under the Warranty with regard to a particular building in accordance with this warranty, no further claims are possible in relation to this warranty.
- 4.5 Thermaset makes no warranties other than set forth in this Warranty, in particular, but not limited to, the Warranty of fitness for a particular purpose, and assumes no further responsibility for loss or expense, consequential economic or other indirect damage or loss and expense including loss of profits, income, contracts, business, production or goodwill or claims made against the APPLICATOR by third parties based on this Warranty, except as agreed by Thermaset and the APPLICATOR in writing.

- 5** This guarantee shall only apply where the product to which the coating is applied is installed on premises within the United Kingdom and Eire. Furthermore, this warranty is granted to the APPLICATOR alone as the purchaser of the Product and is non-transferable and non-assignable in whole or in part.
- 6** If, whether pursuant to this Warranty, approval of the APPLICATOR as an approved applicator or otherwise, Thermaset carries out any testing of the APPLICATORS procedure or operations or makes any recommendations, suggestions or advice in respect thereof or provides the APPLICATOR, its employees, agents or contractors with technical advice relating to the use or application of the Product (including without limitation the matters set out in the relevant Product Technical Data Sheet) or plant and equipment used in connection therewith or otherwise (any such test, recommendation, suggestion, advice, technical advice, plant or equipment being referred in this clause 6 as "Services"), while using all reasonable efforts to secure that any Services as provided are accurate and useful, Thermaset gives no representation, warranty or undertaking relating to the accuracy, completeness, usefulness, suitability, effect or otherwise of the Services or the quality or condition of such plant and equipment or otherwise and Thermaset shall not be liable in respect of any act, omission, deficiency, neglect or otherwise in the provision of any Services or matter associated therewith.
- 7** The APPLICATOR agrees that it will at all times hereafter hold harmless and indemnify Thermaset against all third party claims for loss, damage or expenses brought against Thermaset of whatsoever nature and howsoever arising caused by or related to the Product, its application, repair or replacement under the warranty or as a result of the provision of any Services, as defined in Clause 6 above.

8 If any provision of this Warranty is or becomes invalid, ineffective or unenforceable as a whole or in part, the validity, effectiveness and enforceability the remaining provisions of this agreement shall not be affected thereby and the Warranty shall be construed and enforced as if the invalid, ineffective or unenforceable provision has never been part thereof.

This warranty shall be construed and interpreted in accordance with English Law, to the exclusion of UN Convention on the International Sale of Goods, and shall be the subject to the jurisdiction of the English courts only. Where by virtue of any United Kingdom Act of Parliament, statutory rights are conferred for the benefit of the customer; such rights shall not be affected in any way by this guarantee. This Warranty supersedes and replaces any other Warranties that are in addition to or in conflict with the terms and conditions stated herein.

Signed on behalf of
Thermaset Ltd

Signed on behalf of

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Managing Director

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Managing Director

Date

Date.....

