

WARRANTY, INSTALLATION AND MAINTENANCE INFORMATION

References to “Armstrong”, “we”, “us” or “our company” in India means Armstrong World Industries (India) Ltd., Boomerang, A-Wing, Unit No.304, 3rd Floor, Chandivali Farm Road,(Near Chandivali Studio), Andheri (East), Mumbai – 400 072.

General Provisions

Armstrong offers a number of specialty ceiling products each with their own warranty protections. In addition, certain systems installations involving a combination of Armstrong products carry additional warranty provisions. Please read the following warranty terms carefully, as they are affected by the installation conditions as well as Armstrong’s obligations and conditions which must be met to trigger them. Therefore, they are identified as limited warranties.

What will Armstrong do?

Subject to confirmation by Armstrong of such product failure, Armstrong will deliver, at Armstrong’s expense, F.O.B., to the place of installation, new product, of the same or similar type and grade, in an amount equal to that which is determined to be defective.

What does this warranty not cover?

Damage that may occur from vibrations, fire, water, freezing temperature, accident, or any form of abuse or exposure to abnormal conditions is not covered by this warranty. If subject to abnormal conditions, the products should be removed immediately and replaced once the conditions are normal. Abnormal conditions include exposure to chemical fumes, vibrations, moisture from conditions such as building leaks or condensation, excessive humidity, or excessive dirt or dust build-up.

Notice to Armstrong of Warranty Claim

Armstrong must receive written notice within thirty (30) days after first observation of defects covered by this warranty.

The foregoing constitutes the entire obligation of Armstrong, and there are no other warranties, expressed or implied, including any warranty of merchantability or fitness for any purpose whatsoever. Liability is limited to the above, and Armstrong shall in no event be liable for incidental or consequential damages.

Please Note: Some jurisdictions do not allow exclusion or limitation of incidental or consequential damages or limitations on how long an implied warranty lasts, so the above limitation or exclusion may not apply to you. Please read the following terms carefully, as they are affected by the installation conditions as well as Armstrong’s obligations and conditions which must be met to trigger them. Armstrong does not assume nor does it authorize any person to assume or extend on its behalf, any other

warranty obligation or liability. This limited warranty is subject to further conditions outlined below.

Limited Warranty Terms

Combined RH 99 Ceilings and Steel angles Thirty (30) Year Limited Warranty

Armstrong Commercial Steel angles and Ceiling Panels with RH 99 performance, when installed together are warranted by Armstrong to be free from sagging and warping as a direct result of defects in materials or factory workmanship for thirty (30) years from the date of installation.

- A. All material shall be installed in accordance with Armstrong specifications in effect at the time of installation for RH 99 ceilings and Armstrong Commercial Steel angles that are supplied with a hot-dipped galvanized coating or aluminum base material.
- B. Damage which may occur from chemical fumes, freezing temperature, vibration and abuse is not covered by this warranty.
- C. Installation shall be carried out in temperature conditions up to 120°F (49°C) and relative humidity up to 99% for RH 99 ceiling tiles in spaces before the building is enclosed, where HVAC systems are cycled or not operating.
- D. RH 99 ceilings cannot be used in exterior applications, where standing water is present, or where moisture will come in direct contact with the ceiling.
- E. Performance issues which may result from the presence of standing water, or where moisture is in direct contact with the ceiling, such as those resulting from conditions such as building leaks or condensation, are not covered by this warranty nor are they the responsibility of Armstrong.
- F. The acoustical material must not be used to support any other material except fiberglass thermal/sound control insulation installed in the thickness, density and manner according to Armstrong specifications.
- G. Prior to installation, the acoustical material must be kept clean and dry and below 120°F (49°C) and in spaces outlined in paragraph “C” above.
- H. Before Armstrong ceiling materials are installed, the cartons containing the ceiling tiles should be opened and the tiles should be permitted to reach room temperature for at least 48 hours and have stabilized moisture content.
- I. Refer shaded box “Section I” in warranty dossier. This is addendum to the steel angle warranty terms.

Fiberglass Commercial Ceiling with RH 95 performance and Steel angles Ten (10) Year Limited Warranty

Armstrong Commercial Steel angles and Fiberglass Commercial Ceilings when installed together are warranted by Armstrong to be free from sagging, warping or de-lamination as a direct result of defects in material or factory workmanship for ten (10) years from the date of installation.

A. The material shall be installed in accordance with all applicable Armstrong specifications in effect at the time of the installation.

B. The material may be installed in areas between 40°F (4°C) and 113°F (45°C) and in spaces before the building is enclosed, where HVAC systems are cycled or not operating. These ceilings cannot be used in exterior applications, where standing water is present or where moisture will come in direct contact with the ceiling.

C. The acoustical material must not be used to support any other material except fiberglass thermal/sound control insulation installed in the thickness, density and manner specified by Armstrong.

D. The warranty is void if the acoustical material is installed on furring strips or installed by nailing or stapling, or if any adhesive is used in the installation process.

E. This warranty does not extend to acoustical material which suffers damage caused by fire, or the elements, or any form of physical abuse.

F. Performance issues which may result from the presence of standing water, or where moisture is in direct contact with the ceiling, such as those resulting from conditions such as building leaks or condensation, are not covered by this warranty nor are they the responsibility of Armstrong.

G. Prior to installation, the acoustical material must be kept clean and dry. In conditions specified in paragraph "B" above.

H. Before Armstrong ceiling materials are installed, the cartons containing the ceiling tiles should be opened and the tiles should be permitted to reach room temperature for at least 48 hours and have stabilized moisture content.

I. Refer shaded box "Section I" in warranty dossier. This is addendum to the steel angle warranty terms.

Commercial Ceilings with RH 95 & RH 100 Performance and Steel Angles Ten (10) Year Limited Warranty

Armstrong Commercial Steel angles and Ceiling Panels with RH 100 or RH90 performance, when installed together are warranted by Armstrong for ten (10) years from the date of installation against sagging, or warping as a direct result of defect in material or factory workmanship.

A. The material shall be installed in accordance with all applicable Armstrong specifications in effect at the time of the installation.

B. Damage which may occur from chemical fumes, freezing temperature, vibration and abuse is not covered by this warranty, with the sole exception being Armstrong FINE FISSURED Ceramaguard® RH 100 ceilings, which are covered by this warranty even if exposed to chemical fumes and extreme temperatures up to 120°F (49°C), steam to 275°F (135°C) when installed on either Armstrong 24mm SS, PRELUDE XL or Armstrong 24mm AL steel angle system.

C. Installation shall be carried out in temperature conditions up to 104°F (40°C), and relative humidity up to 90% for RH90 performance ceiling tiles and in spaces before the building is enclosed, where HVAC systems

are cycled or not operating. These ceilings cannot be used in exterior applications where standing water is present, or where moisture will come in direct contact with the ceiling. FINE FISSURED Ceramaguard Ceilings with RH100 performance can be installed in conditions up to 120°F (49°C) and maximum humidity exposure, including, swimming pools, and other standing water applications, so long as they are installed with either Armstrong 24mm SS, PRELUDE XL or Armstrong 24mm AL steel angle system. For swimming pool applications, install only with AL (Armstrong 24mm AL steel angle system).

D. Performance issues which may result from the presence of standing water, or where moisture is in direct contact with the ceiling, such as those resulting from conditions such as building leaks or condensation, are not covered by this warranty nor are they the responsibility of Armstrong.

E. The acoustical material shall not be used to support any other material except fiberglass thermal/sound control insulation installed in the thickness, density and manner specified by Armstrong.

F. Prior to installation, the acoustical material must be kept clean and dry and below 104°F (40°C) and in spaces outlined in paragraph "C" above.

G. Before Armstrong ceiling materials are installed, the cartons containing the ceiling tiles should be opened and the tiles should be permitted to reach room temperature for at least 48 hours and have stabilized moisture content.

H. Refer shaded box "Section I" in warranty dossier. This is addendum to the steel angle warranty terms.

Commercial Ceilings with RH 90 Performance and Steel Angles Five & Three (5 & 3) Year Limited Warranty

Armstrong Commercial Steel angles and Ceiling Panels with RH 90 performance : Beauti – Sky & New Lotus, when installed together are warranted by Armstrong to be free from sagging and warping as a direct result of defects in materials or factory workmanship for Five (5) years for Beauti – Sky & Three (3) years for New Lotus from the date of installation.

A. All material shall be installed in accordance with Armstrong specifications in effect at the time of installation for RH99 ceilings and Armstrong Commercial Steel angles that are supplied with a hot-dipped galvanized coating or aluminum base material.

B. Damage which may occur from chemical fumes, freezing temperature, vibration and abuse is not covered by this warranty.

C. Installation shall be carried out in temperature conditions up to 120°F (49°C) and relative humidity up to 90% for RH 90 ceiling tiles in spaces before the building is enclosed, where HVAC systems are cycled or not operating.

D. RH 90 ceilings cannot be used in exterior applications, where standing water is present, or where moisture will come in direct contact with the ceiling.

E. Performance issues which may result from the presence of standing water, or where moisture is in direct contact with the ceiling, such as those resulting from conditions such as building leaks or condensation, are not covered by this warranty nor are they the responsibility of Armstrong.

F. The acoustical material must not be used to support any other material except fiberglass thermal/sound control insulation installed in the thickness, density and manner according to Armstrong specifications.

G. Prior to installation, the acoustical material must be kept clean and dry and below 120°F (49°C) and in spaces outlined in paragraph "C" above.

H. Before Armstrong ceiling materials are installed, the cartons containing the ceiling tiles should be opened and the tiles should be permitted to reach room temperature for at least 48 hours and have stabilized moisture content.

I. Refer shaded box "Section I" in warranty dossier. This is addendum to the steel angle warranty terms.

MetalWorks Ceilings and Steel Angles Ten (10) Years Limited Warranty

Armstrong Commercial Steel angles and MetalWorks (GI or Aluminum) Ceiling Panels with RH 95 performance, when installed together are warranted by Armstrong for Ten (10) years from the date of installation against manufacturing defects.

A. The material shall be installed in accordance with all applicable Armstrong specifications in effect at the time of the installation.

B. The material may be installed in areas between 40°F (4°C) and 113°F (45°C) and in spaces before the building is enclosed, where HVAC systems are cycled or not operating. These ceilings cannot be used in exterior applications, where standing water is present or where moisture will come in direct contact with the ceiling.

C. The acoustical material must not be used to support any other material except fiberglass thermal/sound control insulation installed in the thickness, density and manner specified by Armstrong.

D. The warranty is void if the acoustical material is installed on furring strips or installed by nailing or stapling, or if any adhesive is used in the installation process.

E. This warranty does not extend to acoustical material which suffers damage caused by fire, or the elements, or any form of physical abuse.

F. Performance issues which may result from the presence of standing water, or where moisture is in direct contact with the ceiling, such as those resulting from conditions such as building leaks or condensation, are not covered by this warranty nor are they the responsibility of Armstrong.

G. Prior to installation, the acoustical material must be kept clean and dry. In conditions specified in paragraph "B" above.

H. Before Armstrong ceiling materials are installed, the cartons containing the ceiling tiles should be opened and the tiles should be permitted to reach room temperature for at least 48 hrs and have stabilized moisture content.

I. Refer shaded box "Section I" in warranty dossier. This is addendum to the steel angle warranty terms.

WoodWorks: Ceilings & Wall Panels; Optra Wall Panels; SoundScapes (Shapes, Canopies & Blades) combined with Steel Angles and Accessories One (1) Year Limited Warranty

Armstrong WoodWorks Ceiling Panels & Wall Panels with RH 70 performance; Optra Wall Panels; SoundScapes Shapes, Canopies & Blades, when installed with their respective Commercial Steel angles and accessories (as suggested by Armstrong) together are warranted by Armstrong for One (01) years from the date of installation against

manufacturing defects.

A. The material must be installed in accordance with all applicable Armstrong specifications in effect at the time of installation.

B. Installation must not be carried out in areas with humidity in excess of 70%, chemical fumes, freezing temperature, and/or vibration. Following installation, these environmental conditions must be maintained.

C. The material must not bear the weight of any un-authorized loads.

D. Prior to installation, the material must be stored in a dry and clean area that is enclosed and protected from the elements, (i.e. rain, snow or their causes of excessive moisture) and stabilized in the area for not less than 24 hours prior to installation.

E. Refer shaded box "Section I" in warranty dossier. This is addendum to the steel angle warranty terms.

Commercial Steel Angle Systems and Axiom Ten (10) Year Limited Warranty

Section I:

Armstrong Commercial Steel angle systems and Axiom are warranted by Armstrong against the occurrence of 50% red rust as defined by ASTM B 117 test procedures as a result of defects in materials or factory workmanship, for ten (10) years from the date of installation (except Axiom).

A. Performance issues which may result from the presence of standing water, or where moisture is in direct contact with the system, such as those resulting from conditions such as building leaks or condensation, are not covered by this warranty nor are they the responsibility of Armstrong, with the exception of Armstrong 24mm SS, Armstrong 24mm AL & FireGuard marked steel angles.

B. All material shall be installed in accordance with Armstrong specifications in effect at the time of installation for Armstrong Commercial Steel Angle Systems that are supplied with a hot-dipped galvanized coating or aluminum base material.

C. Damage which may occur from chemical fumes, freezing temperature, vibration and abuse is not covered by this warranty.

D. Installation may be carried out in temperature conditions up to 120°F (49°C) and relative humidity up to 99% and in spaces before the building is enclosed, where HVAC systems are cycled or not operating. (These systems cannot be used in exterior applications, where standing water is present, or where moisture will come in direct contact with the ceiling.)

E. Prior to installation, the acoustical material must be kept clean and dry and below 120°F (49°C) and in spaces outlined in paragraph "C" above.

Technical Reference

Installation

Acoustical ceilings that are unsatisfactory in appearance are often the result of poor application or disregard of the manufacturer's instructions. Here are a few recommendations to consider when designing with and specifying an Armstrong ceiling system.

Jobsite Conditions

Before Armstrong ceiling materials are installed, the units (ceiling panels or tile) should be permitted to reach room temperature and have a stabilized moisture content. They should not, however, be installed in spaces where the temperature or humidity conditions vary greatly from the temperatures and conditions that will be normal in the occupied space (exception: RH 100 performance ceiling tiles). Some Armstrong ceiling materials are more abuse-resistant than others. It is not good practice to locate acoustical ceiling tile or panels on low wall or ceiling surfaces

where they might be damaged. Dirty air can soil any ceiling, although ULTIMA™ and OPTIMA have superior resistance to soiling. Proper design for both supply air and return air, and maintenance of the HVAC filters and building interior space are essential to minimize soiling. Before starting the HVAC system, make sure supply air is properly filtered and the building interior is free of construction dust.

Temperatures and Humidities

During Installation

Acoustical materials are interior finish products and are designed for installation to be carried out in temperature conditions up to 86°F (30°C) in spaces where the building is enclosed and HVAC systems are functioning and will be in continuous operation.

There shall be proper ventilation of the plenum in high moisture areas. All plastering, concrete, terrazzo or any other wet work should be complete and dry. All windows and doors should be in place. The heating, ventilating and air-conditioning systems should be installed and operable, where necessary, to maintain proper temperatures before, during and after installation of the acoustical material.

Note: The preceding restrictions do not apply to ceilings with RH 100 performance. One side, always install the vapor barrier in the down position facing the back of the ceiling panel. If the use of batt insulation is required, limit use to 24"x 24" panels (use only non faced batts maximum R-19).

Thermal Insulation Mineral Ceilings

The use of overlaid insulation placed on, and supported by, mineral ceiling panels is not recommended.

The additional weight supported by the panel could result in panel sag in high humidity conditions. If job requirements are such that insulation is necessary at recommended occupancy conditions, limit such insulation to a maximum of .26 lb/ft²(R-19 Fiberglass). Only roll insulation is recommended and must be applied perpendicularly to the cross tees with the grid supporting the weight of the insulation. For roll type insulation that either has a foil or kraft paper vapor barrier on Thermal insulation should not be installed on the back of Fire Guard panels in a fire resistive ceiling membrane unless so designated in the specific UL roof/ceiling or floor/ceiling design assembly assigned to the structure; i.e., P265 or P250.

Fiberglass Ceilings

Armstrong fiberglass ceiling panels are recommended for use when additional thermal insulation is required to be overlaid on the back of the ceiling panels. Specific limitations apply. Please contact TechLine for specific fiberglass backloading recommendations.

Selecting Lighting

When selecting any type of lighting, it is important to evaluate the fixtures (lighting system) and ceiling panels or tile as components that work together in an integrated system. Important considerations include both initial and long-term costs, energy consumption and perhaps even the lighting system's potential impact on worker effectiveness within the space. It is also always advisable to consider the effect it will have on the appearance of an acoustical ceiling. Unfavorable ceiling appearance may be produced by light striking the ceiling surface at small angles. This condition most frequently occurs with ceiling edge lighting from fixtures, cove lighting and/or high windows. This will

accentuate minor surface variations that are beyond the control of manufacturing standards for mineral fiber. Further, minor differences in paint gloss often are magnified by these conditions. Mitigating the problem is best handled at the lighting source with proper shading, diffusing and/or light redirecting devices.

Maintenance

Armstrong Ceiling Systems require no more maintenance than painted DRYWALL ceilings. However, when maintenance is necessary, certain procedures should be followed to insure continued high performance and attractive appearance. Dust and loose dirt may easily be removed by brushing or with a vacuum cleaner. Vacuum cleaner brush attachments such as those designed for cleaning upholstery or walls do the best job. Be certain to clean in one direction only. This will prevent rubbing dust into the surface of the ceiling. After loose dust has been removed, pencil marks, smudges, or clinging dirt may easily be erased with an ordinary art gum eraser. However, a good grade wall cleaner may be preferred. Be certain to use fresh cleaner. Most Armstrong mineral fiber ceilings may be cleaned with a moist cloth or a sponge dampened in water containing mild soap. (This does not apply to cloth-faced ceiling panels.) The cloth or sponge should contain as little soapy water solution as possible. After washing panel face, any moisture remaining should be wiped off with a dry cloth. Bioguard, FINE FISSURED Ceramaguard ceilings, and Mylar-faced ceilings are less affected by moisture and will withstand repeated washings with mild detergents or germicidal cleaners.

Painting Recommendation

Precaution

Armstrong recognizes that ceilings may be repainted and will make recommendations for the type of paint that may be used. However, Armstrong cannot be responsible for the finished appearance or performance for the field-painted acoustical material. Armstrong cannot guarantee that the published surface burning characteristics, fire resistance ratings, acoustical performance, dimensional stability (sag), or light reflectance will remain the same after repainting. All warranties will be voided by field painting. When painting acoustical materials, the painter should be very careful that he/she does not close up the perforations or fissures in the material. It is through these openings in the surface that sound waves enter the body of the acoustical material and are absorbed. Care should be taken that these perforations are not clogged. Spray painting will result in a more uniform coating on embossed or irregular surfaces. For best results, panels should be removed from grid suspension system, laid flat for painting, and allowed to dry thoroughly while still flat before reinstallation. This method eliminates the costly operation of masking walls and covering furniture. It also provides for easier cleaning and/or repainting of the grid while the panels are being repainted. Field painting of laminated faced products is not recommended. The variations which are possible in field-painted applications could affect fire performance.

Painting Method

First remove loose dust from the material with a brush or vacuum cleaner attachment. Thin the paint only as much as necessary. If it is too thick for proper spraying, care should be taken that it is thinned only as recommended by the paint manufacturer. When spray painting, apply the paint with a stream directed perpendicularly to the surface of the material, moving the gun back and forth to get a uniform coating. Under normal conditions, one coat should be sufficient.

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