

Warranty, Installation and Maintenance Information



LIMITED WARRANTY

Please read the following terms carefully, as they are affected by the installation conditions. Armstrong does not assume nor does it authorize any person to assume or extend on its behalf any other warranty obligation or liability.

This express warranty constitutes the entire obligation of Armstrong World Industries, Inc., 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 World Industries, Inc., shall in no event be liable for incidental or consequential damages.

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

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.

Reference to Armstrong in this section shall mean, for the United States: Armstrong World Industries Inc., Armstrong Building Products, P.O. Box 3001, Lancaster, PA 17604; and shall mean, for Canada: Armstrong World Industries Canada Ltd., Armstrong Building Products, 6911 Decarie Blvd., Montreal, Quebec H3W 3E5.

LIMITED WARRANTY TERMS

HumiGuard Max Ceilings and Armstrong Suspension Systems Fifteen (15) Years FINE FISSURED Ceramaguard

Armstrong Commercial Suspension Systems (listed below) and Commercial Ceiling products with HumiGuard Max performance, when installed together, are warranted to be free from defects in materials or factory workmanship, or sagging and warping as a result thereof, and against the occurrence of 50% red rust as defined by ASTM B117 test procedures, for fifteen (15) years from the date of installation (except for obvious defects in materials or factory workmanship, of which Armstrong must be notified within 30 days of the date of installation). This limited warranty is subject to further conditions outlined below.

All ceiling products shall be installed in accordance with Armstrong specifications in effect at the time of installation for HumiGuard Max ceilings and PRELUDE® XL, PRELUDE ML, PRELUDE XL Fire Guard, PRELUDE PLUS XL Fire Guard, AL PRELUDE PLUS, SS PRELUDE PLUS and PRELUDE XL for Exterior Applications.

Installation of the products shall be carried out where the temperature is between 32° F (0° C) and 120° F (49° C). It is not necessary for the area to be enclosed or for HVAC systems to be functioning. HumiGuard Max's sag performance warranty includes installations of the product where the ceiling product is exposed to chemical fumes, extreme temperatures up to 120° F (49° C) (including steam up to 275° F (135° C)) and relative humidity of 100%, including swimming pools and other standing water applications so long as the product is installed with either SS PRELUDE PLUS, AL PRELUDE PLUS or PRELUDE PLUS XL Fire Guard suspension systems. **Note: For swimming pools,** install only with AL PRELUDE PLUS Suspension systems. Damage that may occur from vibrations is not covered by this warranty. The growth of mold is not covered by this warranty nor is it the responsibility of Armstrong.

The ceiling product must not be used to support any other material.

Prior to installation, the ceiling product must be kept clean and dry and between 32° F (0° C) and 120° F (49° C).

You must notify Armstrong of any product failure covered by this warranty within 30 days of first observation of failure by writing to the following address: Armstrong World Industries, Inc., Post Office Box 3001, Lancaster, Pennsylvania 17604, or call us at 1 877 ARMSTRONG. 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 ceiling panels and/or an installation system, of the same or similar type and grade, in an amount equal to that which is determined to be defective.

HumiGuard Max Ceilings Ten (10) Years FINE FISSURED Ceramaguard

Armstrong Commercial Ceiling products with HumiGuard Max performance are warranted to be free from defects in materials or factory workmanship, or sagging and warping as a result thereof, for ten (10) years from the date of installation (except for obvious defects in materials or factory workmanship, of which Armstrong must be notified within 30 days of the date of installation). This limited warranty is subject to further conditions outlined below.

All ceiling products shall be installed in accordance with Armstrong specifications in effect at the time of installation.

Installation of the products shall be carried out where the temperature does not exceed 120° F (49° C). It is not necessary for the area to be enclosed or for HVAC systems to be functioning. HumiGuard Max's sag performance warranty includes installations of the product where the ceiling product is exposed to chemical fumes, extreme temperatures up to 120° F (49° C) (including steam up to 275° F (135° C)) and relative humidity of 100%.

Note: For swimming pools, aluminum suspension systems are recommended, for example, AL PRELUDE PLUS suspension systems. Damage that may occur from vibrations is not covered by this warranty. The growth of mold is not covered by this warranty nor is it the responsibility of Armstrong.

Prior to installation, the ceiling product must be kept clean and dry and below 120° F (49° C).

You must notify Armstrong of any product failure covered by this warranty within 30 days of first observation of failure by writing to the following address: Armstrong World Industries, Inc., Post Office Box 3001, Lancaster, Pennsylvania 17604, or call us at 1 877 ARMSTRONG. 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 ceiling panels, of the same or similar type and grade, in an amount equal to that which is determined to be defective.

HumiGuard Plus Ceilings and Armstrong Suspension Systems Fifteen (15) Years

ARMATUFF, CIRBUS, CLEAN ROOM MYLAR, CLEAN ROOM VL/VL, CROSSGATE, DUNE, DUNE Second Look, *FINE FISSURED, FINE FISSURED Fine Look, *FINE FISSURED Open Plan, FINE FISSURED Second Look, *GEORGIAN, FINE FISSURED School Zone, TUNDRA, ULTIMA, ULTIMA Vector, *As designated in the Product Catalog.

Armstrong Commercial Suspension Systems (listed below) and Commercial Ceiling products with HumiGuard Plus performance, when installed together, are warranted to be free from defects in materials or factory workmanship, or sagging and warping as a result thereof, and against the occurrence of 50%

red rust as defined by ASTM B117 test procedures, for fifteen (15) years from the date of installation (except for obvious defects in materials or factory workmanship, of which Armstrong must be notified within 30 days of the date of installation). This limited warranty is subject to further conditions outlined below.

All ceiling products shall be installed in accordance with Armstrong specifications in effect at the time of installation for HumiGuard Plus ceilings and PRELUDE XL, PRELUDE ML, PRELUDE XL Fire Guard, SUPRAFINE XL, SUPRAFINE ML, SUPRAFINE XL Fire Guard, PRELUDE PLUS XL Fire Guard, PRELUDE XL 360 Painted, SILHOUETTE XL 1/4" and 1/8" reveal, AXIOM™ (all families), PRELUDE Concealed, CONCEALED Z-bar, Co-extruded Aluminum CLEAN ROOM, INTERLUDE™, SONATA™, SERPENTINA™, TRIMLOK®, and AL PRELUDE PLUS and SS PRELUDE PLUS suspension systems.

Installation of the products shall be carried out where the temperature is between 32° F (0° C) and 120° F (49° C). It is not necessary for the area to be enclosed or for HVAC systems to be functioning. However, all wet work (plastering, concrete, etc.) must be complete and dry. Such installations shall not be exposed to Abnormal Conditions, namely: chemical fumes, vibrations, presence of standing water, or moisture coming into direct contact with the ceiling, such as could result from building leaks or condensation. These products cannot be used in exterior applications.

Armstrong treats these mineral fiber acoustical ceiling products with a mold-inhibiting or retarding agent. However, if the product is installed in, or subsequent to installation is exposed to, Abnormal Conditions (as referred to above), continued mold-inhibiting performance cannot be assured. The growth of mold is not covered by this warranty nor is it the responsibility of Armstrong.

If subject to Abnormal Conditions, the products should be removed immediately and replaced once the conditions of the installation are normal.

The ceiling product 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.

Prior to installation, the ceiling product must be kept clean and dry and between 32° F (0° C) and 120° F (49° C) and not subject to any of the Abnormal Conditions set out above.

You must notify Armstrong of any product failure covered by this warranty within 30 days of first observation of failure by writing to the following address: Armstrong World Industries, Inc., Post Office Box 3001, Lancaster, Pennsylvania 17604, or call us at 1 877 ARMSTRONG. 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 ceiling panels and/or an installation system, of the same or similar type and grade, in an amount equal to that which is determined to be defective.

Warranty, Installation and Maintenance Information

Fiberglass Ceilings with HumiGuard Plus Performance and Armstrong Suspension Systems Fifteen (15) Years

OPTIMA Open Plan, OPTIMA Plank, OPTIMA Vector, PAINTED NUBBY Open Plan, PEBBLE, RANDOM FISSURED, SHASTA, STONEBROOKE

Armstrong Commercial Suspension Systems (listed below) and Commercial Ceiling products with HumiGuard Plus performance, when installed together, are warranted to be free from defects in materials or factory workmanship, or sagging and warping as a result thereof, and against the occurrence of 50% red rust as defined by ASTM B117 test procedures, for fifteen (15) years from the date of installation (except for obvious defects in materials or factory workmanship, of which Armstrong must be notified within 30 days of the date of installation). This limited warranty is subject to further conditions outlined below.

All ceiling products shall be installed in accordance with Armstrong specifications in effect at the time of installation for HumiGuard Plus ceilings and PRELUDE XL, PRELUDE ML, PRELUDE XL Fire Guard, SUPRAFINE XL, SUPRAFINE ML, PRELUDE XL 360° Painted, SILHOUETTE XL 1/4" and 1/8" reveal, Co-extruded Aluminum CLEAN ROOM, INTERLUDE™, SONATA™, TRIMLOK®, and AL PRELUDE PLUS and SS PRELUDE PLUS suspension systems.

Installation of the products shall be carried out where the temperature is between 40° F (4° C) and 120° F (49° C). It is not necessary for the area to be enclosed or for HVAC systems to be functioning. However, all wet work (plastering, concrete, etc.) must be complete and dry. Such installations shall not be exposed to Abnormal Conditions, namely: chemical fumes, vibrations, presence of standing water, or moisture coming into direct contact with the ceiling, such as could result from building leaks or condensation. These products cannot be used in exterior applications.

If the product is installed in, or subsequent to installation is exposed to, Abnormal Conditions (as referred to above), then it may support the growth of mold. The growth of mold is not covered by this warranty nor is it the responsibility of Armstrong.

If subject to Abnormal Conditions, the products should be removed immediately and replaced once the conditions of the installation are normal.

The ceiling product 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. Mineral Fiber ceilings products can be placed directly on top of Optima Open Plan ceilings where approved by Armstrong (to achieve acoustical performance).

Prior to installation, the ceiling product must be kept clean and dry and below 120° F (49° C) and not subject to any of the Abnormal Conditions set out above.

You must notify Armstrong of any product failure covered by this warranty within 30 days of first observation of failure by writing to the following address: Armstrong World Industries, Inc., Post Office Box 3001, Lancaster, Pennsylvania 17604, or call us at 1 877 ARMSTRONG. 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 ceiling panels and/or an installation system, of the same or similar type and grade, in an amount equal to that which is determined to be defective.

HumiGuard Plus Ceilings Ten (10) Years

ARMATUFF, CIRBUS, CLEAN ROOM MYLAR, CLEAN ROOM VL/VL, CROSSGATE, DUNE, DUNE Second Look, *FINE FISSURED, FINE FISSURED Fine Look, *FINE FISSURED Open Plan, FINE FISSURED Second Look, *GEORGIAN, School Zone FINE FISSURED, TUNDRA, ULTIMA, ULTIMA Vector, *As designated in the Product Catalog.

Armstrong Commercial Ceiling products with HumiGuard Plus performance are warranted to be free from defects in materials or factory workmanship, or sagging and warping as a result thereof, for ten (10) years from the date of installation (except for obvious defects in materials or factory workmanship, of which Armstrong must be notified within 30 days of the date of installation). This limited warranty is subject to further conditions outlined below.

All ceiling products shall be installed in accordance with Armstrong specifications in effect at the time of installation.

Installation of the products shall be carried out where the temperature is between 32° F (0° C) and 120° F (49° C). Prior to installation, the ceiling product must be kept clean and dry and between 32° F (0° C) and 120° F (49° C). It is not necessary for the area to be enclosed or for HVAC systems to be functioning. However, all wet work (plastering, concrete, etc.) must be complete and dry. Such installations shall not be exposed to Abnormal Conditions, namely: chemical fumes, vibrations, presence of standing water, or moisture coming into direct contact with the ceiling, such as could result from building leaks or condensation. These products cannot be used in exterior applications.

Armstrong treats these mineral fiber acoustical ceiling products with a mold inhibiting or retarding agent. However, if the product is installed in, or subsequent to installation is exposed to, Abnormal Conditions (as referred to above), continued mold-inhibiting performance cannot be assured. The growth of mold is not covered by this warranty nor is it the responsibility of Armstrong.

If subject to Abnormal Conditions, the products should be removed immediately and replaced once the conditions of the installation are normal.

The ceiling product 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.

Prior to installation, the ceiling product must be kept clean and dry and between 32° F (0° C) and 120° F (49° C) and not subject to any of the Abnormal Conditions set out above.

You must notify Armstrong of any product failure covered by this warranty within 30 days of first observation of failure by writing to the following address: Armstrong World Industries, Inc., Post Office Box 3001, Lancaster, Pennsylvania 17604, or call us at 1 877 ARMSTRONG. 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 ceiling panels, of the same or similar type and grade, in an amount equal to that which is determined to be defective.

Fiberglass Ceiling with HumiGuard Plus Performance Ten (10) Years

OPTIMA Open Plan, OPTIMA Plank, OPTIMA Vector, PAINTED NUBBY Open Plan, PEBBLE, RANDOM FISSURED, SHASTA, STONEBROOKE

Armstrong Commercial Fiberglass Ceiling products with HumiGuard Plus performance are warranted to be free from defects in materials or factory workmanship, or sagging and warping as a result thereof, for ten (10) years from the date of installation (except for obvious defects in materials or factory workmanship, of which Armstrong must be notified within 30 days of the date of installation). This limited warranty is subject to further conditions outlined below.

All ceiling products shall be installed in accordance with Armstrong specifications in effect at the time of installation.

Installation of the products shall be carried out where the temperature is between 40° F (4° C) and 120° F (49° C). It is not necessary for the area to be enclosed or for HVAC systems to be functioning. However, all wet work (plastering, concrete, etc.) must be complete and dry. Such installations shall not be exposed to Abnormal Conditions, namely: chemical fumes, vibrations, presence of standing water, or moisture coming into direct contact with the ceiling, such as could result from building leaks or condensation. These products cannot be used in exterior applications.

If the product is installed in, or subsequent to installation is exposed to, Abnormal Conditions (as referred to above), then it may support the growth of mold and mildew. The growth of mold is not covered by this warranty nor is it the responsibility of Armstrong.

If subject to Abnormal Conditions, the products should be removed immediately and replaced once the conditions of the installation are normal.

The ceiling product 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. Mineral Fiber ceilings products can be placed directly on top of Optima Open Plan ceilings where approved by Armstrong (to achieve acoustical performance).

Prior to installation, the ceiling product must be kept clean and dry and below 120° F (49° C) and not subject to any of the Abnormal Conditions set out above.

You must notify Armstrong of any product failure covered by this warranty within 30 days of first observation of failure by writing to the following address: Armstrong World Industries, Inc., Post Office Box 3001, Lancaster, Pennsylvania 17604, or call us at 1 877 ARMSTRONG. 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 ceiling panels, of the same or similar type and grade, in an amount equal to that which is determined to be defective.

CIRRUS™ Standard Ceilings Ten (10) Years

***CIRRUS, CIRRUS Borders, CIRRUS Classic Motifs, *CIRRUS Open Plan, *CIRRUS Profiles, CIRRUS Second Look, CIRRUS Themes, *As designated in the Product Catalog.**

Armstrong CIRRUS Commercial Ceiling products with “standard” sag resistance are warranted to be free from defects in materials or factory workmanship, or sagging and warping as a result thereof, for ten (10) years from the date of installation (except for obvious defects in materials or factory workmanship, of which Armstrong must be notified within 30 days of the date of installation). This limited warranty is subject to further conditions outlined below.

All ceiling products shall be installed in accordance with Armstrong specifications in effect at the time of installation.

Installation of the products shall be carried out where the temperature is between 32° F (0°C) and 86° F (30°C). These temperature conditions must be met throughout the lifetime of the warranty. It is necessary for the area to be enclosed and for the HVAC systems to be functioning and in continuous operation. All wet work (plastering, concrete, etc.) must be complete and dry. Such installations shall not be exposed to Abnormal Conditions, namely: chemical fumes, vibrations, presence of standing water, or moisture coming into direct contact with the ceiling, such as could result from building leaks or condensation. These products cannot be used in exterior applications.

Armstrong treats some of these mineral fiber acoustical ceiling products (as designated in the catalog) with a mold inhibiting or retarding agent. However, if the product is installed in, or subsequent to installation is exposed to, abnormal conditions as referred above, continued mold-inhibiting performance cannot be assured. The growth of mold is not covered by this warranty nor is it the responsibility of Armstrong.

CIRRUS standard ceilings that are not treated with a mold-inhibiting coating and installed in, or subsequent to installation are exposed to, abnormal conditions (as referred to above) may support the growth of mold. The growth of mold is not covered by this warranty nor is it the responsibility of Armstrong.

If subject to Abnormal Conditions, the products should be removed immediately and replaced once the conditions of the installation are normal.

The ceiling product 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.

Prior to installation, the ceiling product must be kept clean and dry in an environment that is between 32° F (0°C) and 86° F (30°C) and not subject to any of the Abnormal Conditions set out above.

You must notify Armstrong of any product failure covered by this warranty within 30 days of first observation of failure by writing to the following address: Armstrong World Industries, Inc., Post Office Box 3001, Lancaster, Pennsylvania 17604, or call us at 1 877 ARMSTRONG. 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 ceiling panels, of the same or similar type and grade, in an amount equal to that which is determined to be defective.

Mineral Fiber Ceilings One (1) Year

CORTEGA, CORTEGA Second Look, DESIGNER, DESIGNER Second Look, *FINE FISSURED, *FINE FISSURED Open Plan, FISSURED, *GEORGIAN, GRAPHIS, LATITUDES, LEDGES, NATURAL FISSURED, SANSERRA, TERRAIN, TRACES, SOFT LOOK, STRATUS, TINCRAFT, *As designated in the Product Catalog.

Armstrong Commercial Mineral Fiber Acoustical Ceiling products with “standard” sag resistance are warranted to be free from defects in materials or factory workmanship, or sagging and warping as a result thereof, for one (1) year from the date of installation (except for obvious defects in materials or factory workmanship, of which Armstrong must be notified within 30 days of the date of installation). This limited warranty is subject to further conditions outlined below.

All ceiling products shall be installed in accordance with Armstrong specifications in effect at the time of installation.

Installation of the products shall be carried out where the temperature is between 32° F (0°C) and 86° F (30°C). These temperature conditions must be met throughout the lifetime of the warranty. It is necessary for the area to be enclosed and for the HVAC systems to be functioning and in continuous operation. All wet work (plastering, concrete, etc.) must be complete and dry. Such installations shall not be exposed to Abnormal Conditions, namely: chemical fumes, vibrations, presence of standing water, or moisture coming into direct contact with the ceiling, such as could result from building leaks or condensation. These products cannot be used in exterior applications.

Armstrong treats some of these mineral fiber products (as designated in the catalog) with a mold inhibiting or retarding agent. However, if the product is installed in, or subsequent to installation is exposed to, abnormal conditions as referred above, continued mold-inhibiting performance cannot be assured. The growth of mold is not covered by this warranty nor is it the responsibility of Armstrong.

Mineral fiber acoustical products that are not treated with a mold-inhibiting coating and installed in, or subsequent to installation are exposed to, abnormal conditions (as referred to above) may support the growth of mold and mildew. The growth of mold is not covered by this warranty nor is it the responsibility of Armstrong.

If subject to Abnormal Conditions, the products should be removed immediately and replaced once the conditions of the installation are normal.

The warranty is void if the regular or square lay-in ceiling product is installed by stapling or if any adhesive is used in the installation process. This warranty does not extend to any component of the suspension system such as, but not limited to, the metal grid or any other accessory used in the installation of the ceiling product.

The ceiling product 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.

Prior to installation, the ceiling product must be kept clean and dry in an environment that is between 32° F (0°C) and 86° F (30°C) and not subject to any of the Abnormal Conditions set out above.

You must notify Armstrong of any product failure covered by this warranty within 30 days of first observation of failure by writing to the following address: Armstrong World Industries, Inc., Post Office Box 3001, Lancaster, Pennsylvania 17604, or call us at

1 877 ARMSTRONG. 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 ceiling panels, of the same or similar type and grade, in an amount equal to that which is determined to be defective.

i-ceilings Antenna Panels Five (5) Years

Armstrong's i-ceilings Antenna Panels are warranted to be free from defects in materials or factory workmanship for a period of five (5) years from the date of shipment to the customer (except for obvious defects in materials or factory workmanship, of which Armstrong must be notified within 30 days of the date of shipment to the customer). This limited warranty is subject to further conditions outlined below.

All i-ceiling Antenna Panels shall be installed and used in accordance with Armstrong specifications in effect at the time of installation.

Installation of the i-ceilings Antenna Panels shall be carried out where the temperature is between 32° F (0°C) and 86° F (30°C). These temperature conditions must be met throughout the lifetime of the warranty. It is necessary for the area to be enclosed and for the HVAC systems to be functioning and in continuous operation. All wet work (plastering, concrete, etc.) must be complete and dry. Such installations shall not be exposed to Abnormal Conditions, namely: chemical fumes, vibrations, presence of standing water, or moisture coming into direct contact with the ceiling, such as could result from building leaks or condensation. i-ceilings Antenna Panels cannot be used in exterior applications.

Armstrong will not be responsible for defects caused by improper or unreasonable use, misuse of the antenna module and/or the mounting assembly, water intrusions, lightning, or malfunctions when panels have been modified or operated in excess of their rated capacities, altered, serviced, or installed in an other than workman-like manner.

If an i-ceilings Antenna Panel is installed in, or subsequent to installation is exposed to, Abnormal Conditions (as referred to above), then it may support the growth of mold. The growth of mold is not covered by this warranty nor is it the responsibility of Armstrong.

Exposure to Abnormal Conditions leads to degradation failure modes, caused by corrosion of the element or the solder joint rendering the antenna non-functional.

If subject to Abnormal Conditions, the i-ceilings Antenna Panel should be removed immediately and replaced once the conditions of the installation are normal.

The Antenna Panel 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.

The warranty also excludes damage to connectors, caused by abnormal use such as subjecting the cables to a high number of mate/unmate cycles, or incorrectly attaching the cables.

You must notify Armstrong of any i-ceilings Antenna Panel failure covered by this warranty within 30 days of first observation of failure by writing to the following address: Armstrong World Industries, Inc., Post Office Box 3001, Lancaster, Pennsylvania 17604, or call us at 1 877 ARMSTRONG. After an inspection has been conducted by Armstrong, a written authorization to return must be issued by Armstrong prior to any return.

Warranty, Installation and Maintenance Information

i-ceilings Antenna Panels returned and found to be defective, in Armstrong's sole judgment, will either be replaced (replacement products may be remanufactured or reconditioned devices) or repaired without charge. The replaced or repaired i-ceilings Antenna Panel is warranted for the remainder of the original warranty period.

i-ceilings Speaker Panels Three (3) Years

Armstrong i-ceilings Speaker Panels are warranted to be free from defects in materials or factory workmanship for a period of three (3) years from the date of shipment to the customer (except for obvious defects in materials or factory workmanship, of which Armstrong must be notified within 30 days of the date of shipment to the customer). This limited warranty is subject to further conditions outlined below.

All i-ceiling Speaker Panels shall be installed and used in accordance with Armstrong specifications in effect at the time of installation.

Installation of the i-ceilings Speaker Panels shall be carried out where the temperature does not exceed 120° F (49°C). It is not necessary for the area to be enclosed or for HVAC systems to be functioning. However, all wet work (plastering, concrete, etc.) must be complete and dry. Such installations shall not be exposed to Abnormal Conditions, namely: chemical fumes, vibrations, presence of standing water, or moisture coming into direct contact with the ceiling, such as could result from building leaks or condensation. i-ceilings Speaker Panels cannot be used in exterior applications.

Armstrong will not be responsible for defects caused by improper or unreasonable use, water intrusions, lightning, or malfunctions when panels have been modified or operated in excess of their rated capacities, altered, serviced, or installed in an other than workman-like manner.

If an i-ceilings Speaker Panel is installed in, or subsequent to installation is exposed to, Abnormal Conditions (as referred to above), then it may support the growth of mold. The growth of mold is not covered by this warranty nor is it the responsibility of Armstrong.

If subject to Abnormal Conditions, the i-ceilings Speaker Panel should be removed immediately and replaced once the conditions of the installation are normal.

The Speaker Panel must not be used to support any other material except for a TRI-PAK TS-110 electronics unit installed in the manner according to Armstrong specifications or for mineral fiber installed for fire resistive assembly purposes in the thickness, density and manner according to Armstrong specifications.

This warranty is void if the label bearing the Speaker Panel's date of manufacture is removed or defaced.

You must notify Armstrong of any i-ceilings Speaker Panel failure covered by this warranty within 30 days of first observation of failure by writing to the following address: Armstrong World Industries, Inc., Post Office Box 3001, Lancaster, Pennsylvania 17604, or call us at 1 877 ARMSTRONG. After an inspection has been conducted by Armstrong, a written authorization to return must be issued by Armstrong prior to any return.

i-ceilings Speaker Panels returned and found to be defective, in Armstrong's sole judgment, will either be replaced (replacement products may be remanufactured or reconditioned devices) or repaired without charge. The replaced or repaired i-ceilings Speaker Panel is warranted for the remainder of the original warranty period.

INFUSIONS Accent Canopies

Armstrong Infusions Canopies are warranted to be free from defects in materials or factory workmanship for one year from the date of installation (except for obvious defects in materials or workmanship, of which Armstrong must be notified within 30 days of the date of installation). This limited warranty is subject to further conditions outlined below.

The plastic panels, translucents and polygal can be damaged by exposure to high temperatures. Panel temperature should not exceed 100° F after the tensioning cables have been installed. Infusions panels are not approved for exterior application. Installation must be completed in accordance with the Installation instructions provided by Armstrong. (Contact 1-877-276-7876 for an additional copy or visit the commercial ceilings website at armstrong.com) The Infusions canopy cable hanging system is not permitted to hang from any commercial suspension system.

The canopy product must not be used to support any other material.

Armstrong MetalWorks Ceiling Panel and Suspension System Fifteen (15) Years

Armstrong Metalworks Ceiling Panels and suspension system when installed together as a system are warranted to be free from defects in materials or workmanship and against the occurrence of rust for fifteen (15) years from the date of installation. If rust shall occur under the conditions outlined in this warranty, Armstrong will replace the affected ceiling panels/grid and provide that material to the installation site.

All materials shall be installed in accordance with Armstrong Metalworks Installation Instructions and/or Approved Shop Drawings in effect at the time of installation for Metalworks Ceiling Panels and suspension system.

Installation of the products shall be carried out where the temperature is between 32° F (0° C) and 120° F (49° C). Prior to installation, the ceiling product must be kept clean and dry and between 32° F (0° C) and 120° F (49° C). It is not necessary for the area to be enclosed or for HVAC systems to be functioning. Such installations shall not be exposed to Abnormal Conditions, namely: chemical fumes, vibrations, presence of standing water, or moisture coming into direct contact with the ceiling, such as could result from building leaks or condensation. These products cannot be used in exterior applications. The growth of mold is not covered by this warranty, nor is it the responsibility of Armstrong.

This warranty is voided if: 1) The designated suspension system is not used 2) The ceiling system is installed in a non-recommended application 3) The ceiling panels are used to support any other material (unless designed as such) 4) The ceiling system is installed over areas such as swimming pools which provide direct contact with corrosive agents (ie. Chlorine).

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. Except as specifically stated above, Armstrong shall in no event be liable for any installation or replacement cost or for consequential or incidental damages, loss or expense other than to provide the replacement ceiling panels/grid materials.

Notice to Armstrong of Warranty claim: If a manufacturing defect within the terms and conditions of this warranty occurs, we must receive written notice at the address indicated below, within thirty (30) days after first observation. Subject to confirmation, Armstrong shall furnish F.O.B. place of installation, new material of the same or similar design and quality in an amount equal to that which is determined to be defective.

**References to our company, Armstrong, in the United States means Armstrong World Industries, Inc., Armstrong Building Products, P. O. Box 3001, Lancaster, PA 17604. In Canada, we mean Armstrong World Industries Canada Ltd., Armstrong Building Products, Decarie Blvd., Montreal, Quebec H3W 3E5.

MetalWorks Vector Exterior Ceiling Panels and Suspension System Fifteen (15) Years

Armstrong's MetalWorks Vector Exterior Ceiling Panels and PRELUDE XL For Exterior Applications (including BAC clips) are warranted to be free from defects in materials or factory workmanship and are also warranted against the occurrence of 50% red rust as designated by ASTM B117 test procedures for a period of fifteen (15) years from the date of installation (except for obvious defects in materials or factory workmanship, of which Armstrong must be notified within 30 days of the date of shipment to the customer). This limited warranty is subject to further conditions listed below.

All Armstrong MetalWorks Vector Exterior Ceiling Panels, PRELUDE XL For Exterior Applications and BAC clip materials shall be installed in accordance with Armstrong specifications in effect at the time of installation.

Such installations shall not be exposed to Abnormal Conditions, namely: chemical fumes, vibrations, or highly acidic environments as determined by the Kesternich Test. The growth of mold is not covered by this warranty, nor is it the responsibility of Armstrong.

If the panels and/or suspension system are installed in, or subsequent to installation are exposed to, Abnormal Conditions (as referred to above), then the panels and/or suspension system may be damaged. Such damage is not covered by this warranty nor is it the responsibility of Armstrong.

This warranty is void if Armstrong MetalWorks Exterior Ceiling panels and Suspension Systems (including BAC clips) have not been installed together as a system, or if the ceiling system is installed in a non-recommended application.

The Ceiling Panels and Suspension System shall not be used to support any other material.

Prior to installation, the panels and/or suspension system must be kept clean and dry and not subject to any of the Abnormal Conditions set out above.

You must notify Armstrong of any product failure covered by this warranty within 30 days of first observation of failure by writing to the following address: Armstrong World Industries, Inc., Post Office Box 3001, Lancaster, Pennsylvania 17604, or call us at 1 877 ARMSTRONG. 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 ceiling panels, of the same or similar type and grade, in an amount equal to that which is determined to be defective.

Armstrong WoodWorks Acoustical Ceilings One (1) Year

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.

Woodworks Tegular, Vector and Custom ceiling panels are warranted to be free from sagging and warping as a result of defects in materials or factory workmanship for one year from the date of installation. This limited warranty is subject to further conditions outlined below:

Armstrong WoodWorks Tegular and Vector Ceiling Panels shall be installed in accordance with Armstrong specifications in effect at the time of the installation and in accordance with customary Ceilings and Interior Systems Contractors Association (CISCA) practices. Armstrong shall not have any responsibility for defective processing or alteration to the products by others after shipment. Any additional mounting parts such as lighting or ventilation facilities, shall be suspended separately, or supported securely by the substructure, in accordance with Armstrong Installation Instructions.

Installation of the products shall be carried out where the temperature is between 50°F (10°C) and 86°F (30°C), and relative humidity levels maintained between of 25% RH and 70% RH. These temperature and humidity conditions must be met throughout the lifetime of the warranty. It is necessary for the area to be enclosed and for the HVAC systems to be functioning and in continuous operation. All wet work (plastering, concrete, etc.) must be complete and dry. Such installations shall not be exposed to Abnormal Conditions, namely: chemical fumes, vibrations, presence of standing water, or moisture coming into direct contact with the ceiling, such as could result from building leaks or condensation. These products cannot be used in exterior applications.

If the product is installed in, or subsequent to installation is exposed to, Abnormal Conditions (as referred to above), then it may support the growth of mold and mildew. The growth of mold under these conditions is not covered by this warranty nor is it the responsibility of Armstrong.

If subject to Abnormal Conditions, the products should be removed immediately and replaced once the conditions of the installation are normal.

This warranty does not extend to variations in color or grain, which are either due to natural variation in characteristics of the wood or veneers; changes in color or fading, resulting from direct exposure to sunlight or partial exposure to a light source; any failure or defect caused by the material becoming either overly dry or moist, such as may result by placement of panels directly facing air vents or radiant heat source; or failure to seal full cut edges in accordance with Armstrong's installation instructions.

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

To ensure that the ceiling panels have stabilized to the current building conditions, prior to their installation, the ceiling panels must be placed in an environmentally stable building location for a minimum of 72 hours. Remove plastic wrap to allow panels to acclimatize.

Prior to installation, material must be kept clean and dry in an environment that is between 50°F (10°C) and 86°F (30°C), and having relative humidity levels maintained between of 25% RH

and 70% RH and not subject to any of the Abnormal Conditions set out above.

You must notify Armstrong of any product failure covered by this warranty within 30 days of first observation of failure by writing to the following address: Armstrong World Industries, Inc., Post Office Box 3001, Lancaster, Pennsylvania 17604, or call us at 1 877 ARMSTRONG. 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 ceiling panels, of the same or similar type and grade, in an amount equal to that which is determined to be defective.

The foregoing constitutes the entire obligation of Armstrong World Industries, Inc., 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 World Industries, Inc., shall in no event be liable for incidental or consequential damages.

Reference to Armstrong in this section shall mean, for the United States: Armstrong World Industries Inc., Armstrong Building Products, P.O. Box 3001, Lancaster, PA 17604; and shall mean, for Canada: Armstrong World Industries Canada Ltd., Armstrong Building Products, 6911 Decarie Blvd., Montreal, Quebec H3W 3E5.

Commercial Suspension Systems Ten (10) Years

Armstrong Commercial Suspension Systems (listed below) are warranted to be free from defects in materials or factory workmanship and are also warranted against the occurrence of 50% red rust as designated by ASTM B117 test procedures for a period of ten (10) years from the date of installation (except for obvious defects in materials or factory workmanship, of which Armstrong must be notified within 30 days of the date of shipment to the customer). This limited warranty is subject to further conditions listed below.

All material shall be installed in accordance with Armstrong specifications in effect at the time of installation for PRELUDE XL, PRELUDE ML, PRELUDE XL Fire Guard, SUPRAFINE XL, SUPRAFINE ML, SUPRAFINE XL Fire Guard, PRELUDE PLUS XL Fire Guard, PRELUDE XL For Exterior Applications, PRELUDE XL 360° Painted, SILHOUETTE XL 1/4" and 1/8" reveal, AXIOM™, AXIOM (all families), PRELUDE Concealed, CONCEALED Z-bar, Co-extruded Aluminum CLEAN ROOM, INTERLUDE™, SONATA™, SERPENTINA™, TRIMLOK®, and DRYWALL grid system components that are supplied with a hot-dipped galvanized coating or aluminum base material. This warranty also covers AL PRELUDE PLUS and SS PRELUDE PLUS suspension systems.

Damage which may occur from chemical fumes, freezing temperature, vibration and abuse is not covered by this warranty. The growth of mold is not covered by this warranty, nor is it the responsibility of Armstrong.

Installation may be carried out in temperature conditions up to 120° F (49° C) 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 indirect contact with the ceiling.)

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 AL PRELUDE PLUS, SS PRELUDE PLUS and PRELUDE XL for Exterior Applications.

Prior to installation the suspension system must be kept clean and dry and not subject to any of the Abnormal Conditions.

You must notify Armstrong of any product failure covered by this warranty within 30 days of first observation of failure by writing to the following address: Armstrong World Industries, Inc., Post Office Box 3001, Lancaster, Pennsylvania 17604, or call us at 1 877 ARMSTRONG. 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 suspension systems, of the same or similar type and grade, in an amount equal to that which is determined to be defective.

Ceiling Suspension System Accessories

Armstrong ceiling suspension system accessories are manufactured to the highest quality standards, and are warranted to be free from red rust as a direct result of defects in materials or factory workmanship for one (1) year from date of installation (except for obvious defects in materials or factory workmanship, of which Armstrong must be notified within 30 days of the date of installation). This limited warranty is subject to further conditions listed below.

If the suspension system accessories are installed in, or subsequent to installation is exposed to, Abnormal Conditions, then the suspension system accessories may be damaged. Such damage is not covered by this warranty nor is it the responsibility of Armstrong.

If subject to Abnormal Conditions, the suspension system accessories should be removed and replaced once the conditions of the installation are normal. The growth of mold is not covered by this warranty, nor is it the responsibility of Armstrong.

Prior to installation, the suspension system accessories must be kept clean and dry and not subject to any Abnormal Conditions.

You must notify Armstrong of any product failure covered by this warranty within 30 days of first observation of failure by writing to the following address: Armstrong World Industries, Inc., Post Office Box 3001, Lancaster, Pennsylvania 17604, or call us at 1 877 ARMSTRONG. 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 suspension system accessories, of the same or similar type and grade, in an amount equal to that which is determined to be defective.

Acoustical Walls One (1) Year

OPTIMA Acoustical Wall Panels, Painted Nubby Acoustical Wall Panels

Armstrong acoustical walls are warranted to be free from warping and delamination as a result of defects in material or factory workmanship for one (1) year from the date of installation (except for obvious defects in materials or factory workmanship, of which Armstrong must be notified within 30 days of the date of installation). This limited warranty is subject to further conditions outlined below.

All acoustical walls shall be installed in accordance with Armstrong specifications in effect at the time of installation.

Installation of the products shall be carried out where the temperature is between 40° F (4° C) and 120° F (49° C). All wet work (plastering, concrete, etc.) must be complete and dry. These temperature conditions must be met throughout the lifetime of the warranty. Such installations shall not be exposed to Abnormal Conditions, namely: chemical fumes, vibrations, or moisture coming into direct contact with the wall, such as could result from building leaks or condensation. These products cannot be used in exterior applications.

Warranty, Installation and Maintenance Information

If the product is installed in, or subsequent to installation is exposed to, Abnormal Conditions (as referred to above), then it may support the growth of mold. The growth of mold is not covered by this warranty nor is it the responsibility of Armstrong.

If subject to Abnormal Conditions, the products should be removed immediately and replaced once the conditions of the installation are normal.

The warranty does not extend to any failure or defect of any adhesive or other component of any attachment system or accessory used in the installation of the product.

Prior to installation, the wall product must be kept clean and dry in an environment that is between 32° F (0°C) and 86° F (30°C) and not subject to any of the Abnormal Conditions set out above.

You must notify Armstrong of any product failure covered by this warranty within 30 days of first observation of failure by writing to the following address: Armstrong World Industries, Inc., Post Office Box 3001, Lancaster, Pennsylvania 17604, or call us at 1 877 ARMSTRONG. 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 wall panels, of the same or similar type and grade, in an amount equal to that which is determined to be defective.

INSTALLATION

Acoustical ceilings that are unsatisfactory in appearance are often the result of poor application or disregard of the manufacturer's instructions. An additional source for proper installation is the CISCA Handbook. 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: ceilings with HumiGuard Plus or HumiGuard Max performance). 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.

Instead, the use of impact-resistant products such as Armstrong ARMATUFF® should be considered. (See Ceilings Systems Selector, pages 48 & 49.) Dirty air can soil any ceiling, although ULTIMA™ and OPTIMA have superior resistance to soiling. Special care must also be taken to avoid excess moisture in the building envelope during construction. High moisture leads to the possibility of mold growth. Proper design for both supply and return air, and maintenance of the HVAC filters and building interior space is 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 in temperature conditions between 40° F and 86° F. Expanded temperature ranges are acceptable down to 32° F and up to 120° F depending upon the performance characteristics of selected product families. Consult the HumiGuard Plus and HumiGuard max temperature limits detailed in the warranty sections.

For "standard" sag resistant ceilings, proper ventilation of the plenum must occur, especially

in high moisture areas. The heating, ventilation and air conditioning systems should be installed and operable, where necessary, to maintain proper temperatures before, during and after installation of the acoustical material. All windows and doors should be installed and functioning.

For HumiGuard Plus and HumiGuard Max, it is not necessary for the space to be enclosed or for the HVAC system to be functioning.

Special care must be taken to prevent abnormal conditions from occurring before, during, and after installation. Abnormal conditions include exposing ceilings to: chemical fumes, vibrations, presence of standing water, or moisture coming in direct contact with the ceiling, such as could result from building leaks or condensation. All plastering, concrete, terrazzo or any other wet work must be complete and dry prior to installation.

Concealed Tile For Glue-Up (Adhesive) Installation

The temperature of the tile adhesive and the surface to which the ceiling tile is adhered may cause failure. Armstrong recommends using an acoustical ceiling adhesive and to follow the manufacturer's instructions.

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 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 nonfaced batts maximum R-19). 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

RANDOM FISSURED, STONEBROOKE®, and SHASTA® fiberglass ceiling panels may not be backloaded with additive insulation. Please contact TechLine for specific fiberglass back-loading 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. (See High Light Reflectance Solutions on pages 28-29 for further information.) It is also always advisable to consider the effect it will have on the appearance of an acoustical ceiling. Typically, grazing light and indirect lighting should be avoided with 12" x 12" concealed grid tile installations. 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 ensure 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. FINE FISSURED Ceramaguard ceilings, VINYL-FACED FIBERGLASS 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. Repainting will render ineffective any mold-inhibiting or retarding treatment. 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 vinyl-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.

Section 09510 Acoustical Ceilings

Part 1 - General

1.1 Related Documents

Drawings and general conditions of Contract, including General and Supplementary Conditions and Divisions – one Specification section applies to work of this section.

1.2 Summary

A. Section Includes:

1. Acoustical ceiling panels.
2. Exposed grid suspension system.
3. Wire hangers, fasteners, main runners, cross tees and wall angle moldings.

B. Related Sections:

1. Section 09250 - Gypsum Board
2. Section 09120 - Suspension System Framing and Furring for Plaster and Gypsum Board Assemblies
3. Division 15 Sections - Mechanical Work
4. Division 16 Sections - Electrical Work

C. Alternates

1. Prior Approval: Unless otherwise provided for in the Contract documents, proposed product substitutions may be submitted no later than TEN (10) working days prior to the date established for receipt of bids. Acceptability of a proposed substitution is contingent upon the Architect's review of the proposal for acceptability, and approved products will be set forth by the Addenda. If included in a Bid are substitute products which have not been approved by Addenda, the specified products shall be provided without additional compensation.
2. Submittals which do not provide adequate data for the product evaluation will not be considered. The proposed substitution must meet all requirements of this section, including, but not necessarily limited to, the following: Single source materials suppliers (if specified in Section 1.5); Underwriters' Laboratories Classified Acoustical performance; Panel design, size, composition, color and finish; Suspension system component profiles and sizes; Compliance with the referenced standards.

1.3 References

A. American Society for Testing and Materials (ASTM):

1. ASTM A 1008 Standard Specification for Steel, Sheet, Cold-Rolled, Carbon, Structural, High-Strength Low-Alloy and High-Strength Low-Alloy with Improved Formability.
2. ASTM A 641 Standard Specification for Zinc-Coated (Galvanized) Carbon Steel Wire.
3. ASTM A 653 Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) by the Hot Dip Process.
4. ASTM C 423 Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method.
5. ASTM C 635 Standard Specification for Metal Suspension Systems for Acoustical Tile and Lay-in Panel Ceilings.

6. ASTM C 636 Recommended Practice for Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-in Panels.
7. ASTM E 84 Standard Test Method for Surface Burning Characteristics of Building Materials.
8. ASTM E 1414 Standard Test Method for Airborne Sound Attenuation Between Rooms Sharing a Common Ceiling Plenum.
9. ASTM E 1111 Standard Test Method for Measuring the Interzone Attenuation of Ceilings Systems.
10. ASTM E 1264 Classification for Acoustical Ceiling Products.
11. ASTM E 1477 Standard Test Method for Luminous Reflectance Factor of Acoustical Materials by Use of Integrating Sphere Reflectometers.
12. ASTM D 3273 Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber.

1.4 Submittals

- A. Product Data: Submit manufacturer's technical data for each type of acoustical ceiling unit and suspension system required.
- B. Samples: Minimum 6 inch x 6 inch samples of specified acoustical panel; 8 inch long samples of exposed wall molding and suspension system, including main runner and 4-foot cross tees.
- C. Shop Drawings: Layout and details of acoustical ceilings. Show locations of items which are to be coordinated with, or supported by, the ceilings.
- D. Certifications: Manufacturer's certifications that products comply with specified requirements, including laboratory reports showing compliance with specified tests and standards. For acoustical performance, each carton of material must carry an approved independent laboratory classification of NRC, CAC and AC.
- E. If the material supplied by the acoustical subcontractor does not have an Underwriters' Laboratory classification of acoustical performance on every carton, subcontractor shall be required to send material from every production run appearing on the job to an independent or NVLAP approved laboratory for testing, at the architect's or owner's discretion. All products not conforming to manufacturer's current published values must be removed, disposed of and replaced with complying product at the expense of the Contractor performing the work.

1.5 Quality Assurance

- A. Single-Source Responsibility: Provide acoustical panel units and grid components by a single manufacturer.
 - B. Fire Performance Characteristics: Identify acoustical ceiling components with appropriate markings of applicable testing and inspecting organization.
 1. Surface Burning Characteristics: As follows, tested per ASTM E 84 and complying with ASTM E 1264 for Class A products.
 - a. Flame Spread: 25 or less
 - b. Smoke Developed: 50 or less
- (DROP IN if "Fire Class" = Fire Guard)

2. Fire Resistance Ratings: As indicated by reference to design designations in UL Fire Resistance Directory, for types of assemblies in which acoustical ceilings function as a fire protective membrane and tested per ASTM E 119.
 - a. Protect lighting fixtures and air ducts to comply with requirements indicated for rated assembly.

- C. Coordination of Work: Coordinate acoustical ceiling work with installers of related work including, but not limited to, building insulation, gypsum board, light fixtures, mechanical systems, electrical systems and sprinklers.

1.6 Delivery, Storage and Handling

- A. Deliver acoustical ceiling units to project site in original, unopened packages and store them in a fully enclosed space where they will be protected against damage from moisture, direct sunlight, surface contamination and other causes.
- B. Before installing acoustical ceiling units, permit them to reach room temperature and a stabilized moisture content.
- C. Handle acoustical ceiling units carefully to avoid chipping edges or damaging units in any way.

1.7 Project Conditions

- A. Space Enclosure: (DROP IN based on "Sag Resistance")
Standard Ceilings: Do not install interior ceilings until space is enclosed and weatherproofed; wet work in place is completed and nominally dry; work above ceilings is complete; and ambient conditions of temperature and humidity are continuously maintained at values near those intended for final occupancy. Building areas to receive ceilings shall be free of construction dust and debris.
HumiGuard Plus Ceilings: Building areas to receive ceilings shall be free of construction dust and debris. Products with HumiGuard Plus performance and hot dipped galvanized steel, aluminum or stainless steel suspension systems can be installed with temperatures up to 120°F (49°C) and in spaces before the building is enclosed, where HVAC systems are cycled or not operating. Cannot be used in exterior applications where standing water is present or where moisture will come in direct contact with the ceiling.
HumiGuard Max Ceilings: Building areas to receive ceilings shall be free of construction dust and debris. Ceilings with HumiGuard Max performance can be installed in conditions up to 120°F (49°C) and maximum humidity exposure including outdoor applications, and other standing water applications, so long as they are installed with either SS PRELUDE PLUS XL, AL PRELUDE PLUS XL, PRELUDE PLUS XL Fire Guard and PRELUDE XL for Exterior Applications suspension systems. Products with HumiGuard Max performance can be installed in exterior applications where standing water is present or where moisture will come in direct contact with the ceiling. Only FINE FISSURED Ceramaguard with AL PRELUDE PLUS suspension system can be installed over swimming pools.

1.8 Warranty

- A. Acoustical Panel:** Submit a written warranty executed by the manufacturer, agreeing to repair or replace acoustical panels that fail within the warranty period. Failures include:
1. Acoustical Panels: Sagging and warping
 2. Grid System: Rusting and manufacturer's defects
- B. Warranty Period:**
(DROP IN BASED ON SAG RESISTANCE = Standard)
1. Acoustical panels: One (1) year from date of installation.
 2. CIRRUS Acoustical panels: Ten (10) years from date of substantial completion. Note Space Enclosure Requirements.
 3. Grid: Ten (10) years from date of installation.
(DROP IN BASED ON SAG RESISTANCE = HumiGuard Plus or HumiGuard Max)
Warranty Period:
1. Acoustical panels: Ten (10) years from date of installation.
 2. Grid: Ten (10) years from date of installation.
 3. Acoustical panels and grid systems with HumiGuard Plus or HumiGuard Max performance supplied by one source manufacturer is fifteen (15) years from date of installation.
- C. The Warranty shall not deprive the Owner of other rights the Owner may have under other provisions of the Contract Documents and will be in addition to and run concurrent with other warranties made by the Contractor under the requirements of the Contract Documents.**

1.9 Maintenance

- A. Extra Materials:** Deliver extra materials to Owner. Furnish extra materials described below that match products installed. Packaged with protective covering for storage and identified with appropriate labels.
1. Acoustical Ceiling Units: Furnish quantity of full-size units equal to 5.0 percent of amount installed.
 2. Exposed Suspension System Components: Furnish quantity of each exposed suspension component equal to 2.0 percent of amount installed.

Part 2 - Products**2.1 Manufacturers**

- A. Ceiling Panels:**
1. Armstrong World Industries, Inc.
- B. Suspension Systems:**
1. Armstrong World Industries, Inc.

2.2 Acoustical Ceiling Units

- A. Acoustical Panels Type AP-1:**
1. Surface Texture: (Visual Category)
 2. Composition: (Substrate)
 3. Color: (Ceiling Color Selection on form)
 4. Size: (Size)
 5. Edge Profile: (Edge Detail) for interface with (Suspension System) grid.
 6. Noise Reduction Coefficient (NRC): ASTM C 423; Classified with UL label on product carton (NRC).
 7. Ceiling Attenuation Class (CAC): ASTM E 1414; Classified with UL label on product carton (CAC).
 8. Articulation Class (AC): ASTM E 1111; Classified with UL label on product carton (AC).

9. Flame Spread: ASTM E 1264; (Fire Class).
10. Light Reflectance (LR) White Panel: ASTM E 1477; (Light Reflectance).
11. Dimensional Stability: DROP IN (based on "Sag Resistance").
12. Mold/mildew Inhibitor: The surface and back of the product have been treated with BioBlock, a paint that contains a special biocide that inhibits or retards the growth of mold and mildew, ASTM D3273. (Exceptions: fiberglass products, Ceramaguard; film faced products – back only.)
13. Acceptable Product: (Product Family), (Item Number) as manufactured by Armstrong World Industries, Inc.

2.3 Suspension Systems

- A. Components:** Main beams and cross tees, base metal and end detail, fabricated from commercial quality hot dipped galvanized steel complying with ASTM A 653. Main beams and cross tees are double-web steel construction with Flange type exposed flange design. Exposed surfaces chemically cleansed, capping prefinished galvanized steel in baked polyester paint. Main beams and cross tees shall have rotary stitching.
1. Structural Classification: ASTM C 635 (Duty Class) duty.
 2. Color: (Grid Color) and match the actual color of the selected ceiling tile, unless noted otherwise.
 3. Acceptable Product: (Product Family) as manufactured by Armstrong World Industries, Inc. (Drop in only if using Environmental Grid)
- B. High Humidity Finish:** Comply with ASTM C 635 requirements for Coating Classification for Severe Environmental Performance where high humidity finishes are indicated.
1. SS PRELUDE PLUS XL by Armstrong World Industries - 100% Type 304 STAINLESS Steel.
 2. AL PRELUDE PLUS XL by Armstrong World Industries - all ALUMINUM.
 3. PRELUDE PLUS XL Fire Guard by Armstrong World Industries, G-60 hot dipped galvanized/aluminum capping.
 4. PRELUDE XL for Exterior Applications by Armstrong World Industries, G-90 hot dipped galvanized/aluminum capping.
 5. Structural Classification: ASTM C 635 duty class.
 6. Color: [polished stainless for SS only] [white aluminum] [clear anodized aluminum]
- C. Attachment Devices:** Size for five times design load indicated in ASTM C 635, Table 1, Direct Hung unless otherwise indicated.
- D. Wire for Hangers and Ties:** ASTM A 641, Class 1 zinc coating, soft temper, prestretched, with a yield stress load of at least three times design load, but not less than 12 gauge.
- E. Edge Moldings and Trim:** Metal or extruded aluminum of types and profiles indicated or, if not indicated, manufacturer's standard moldings for edges and penetrations, including light fixtures, that fit type of edge detail and suspension system indicated. Provide moldings with exposed flange of the same width as exposed runner.
- F. Accessories**

Part 3 - Execution**3.1 Examination**

- A. Do not proceed with installation until all wet work such as concrete, terrazzo, plastering and painting has been completed and thoroughly dried out, unless expressly permitted by manufacturer's printed recommendations. (Exception: HumiGuard Max Ceilings)**

3.2 Preparation

- A. Measure each ceiling area and establish layout of acoustical units to balance border widths at opposite edges of each ceiling. Avoid use of less than half width units at borders, and comply with reflected ceiling plans. Coordinate panel layout with mechanical and electrical fixtures.
(DROP IN if "New Construction" is checked)**
- B. Coordination:** Furnish layouts for preset inserts, clips and other ceiling anchors whose installation is specified in other sections.
1. Furnish concrete inserts and similar devices to other trades for installation well in advance of time needed for coordination of other work.

3.3 Installation

- A. Install suspension system and panels in accordance with the manufacturer's instructions, and in compliance with ASTM C 636 and with the authorities having jurisdiction.**
- B. Suspend main beams from overhead construction with hanger wires spaced 4-0 on center along the length of the main runner. Install hanger wires plumb and straight.**
- C. Install wall moldings at intersection of suspended ceiling and vertical surfaces. Miter corners where wall moldings intersect or install corner caps.**
- D. For reveal edge panels: Cut and reveal or rabbet edges of ceiling panels at border areas and vertical surfaces.**
- E. Install acoustical panels in coordination with suspension system, with edges resting on flanges of main runner and cross tees. Cut and fit panels neatly against abutting surfaces. Support edges by wall moldings.**

3.4 Adjusting and Cleaning

- A. Replace damaged and broken panels.**
- B. Clean exposed surfaces of acoustical ceilings, including trim, edge moldings and suspension members. Comply with manufacturer's instructions for cleaning and touch-up of minor finish damage. Remove and replace work that cannot be successfully cleaned and repaired to permanently eliminate evidence of damage.**

i ceilings

For guide specifications related to *i-ceilings Sound and Wireless Systems*, please refer to www.armstrong.com or call 1 877 ARMSTRONG.

Please understand that you are responsible for the accuracy of all project specifications, including any Armstrong guide specifications that you use. **ARMSTRONG SHALL NOT BE LIABLE FOR ANY DAMAGES ARISING OUT OF THE USE OF ANY OF ITS GUIDE SPECIFICATIONS.**