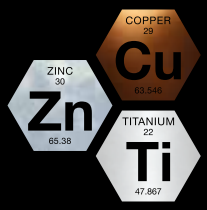

elemental beauty

AGWAY METALS INC. MASTER DISTRIBUTOR FOR RHEINZINK®

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RHEINZINK®

more distinctive with age

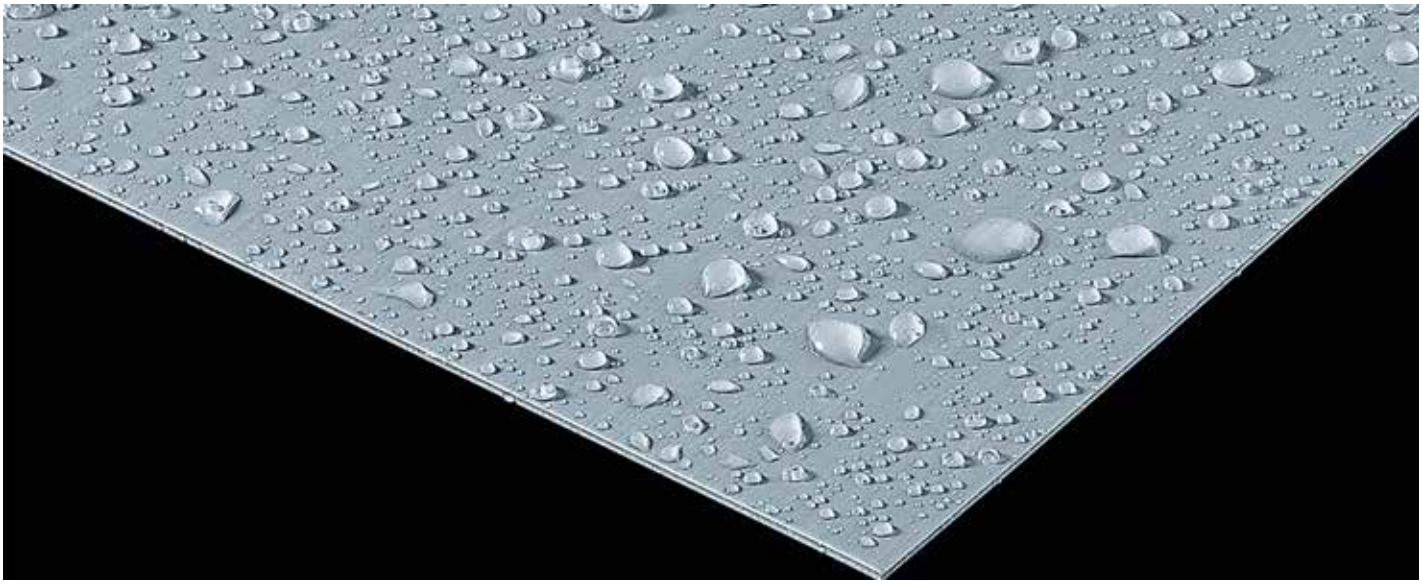
RHEINZINK® is the world's leading brand of architectural-zinc for building applications. Generally known as "titanium-zinc", RHEINZINK is a natural-weathering metal that forms a blue gray patina after repeated exposure to moisture and air.

Combining 99% super high-grade zinc with approximately 1% titanium and copper, the RHEINZINK alloy can help provide long-term solutions for roofs, wall cladding and gutters.

The engineered zinc-alloy also helps designers provide a natural gray colour compliment or contrast to brick, concrete/CMU slate, stone or wood while achieving a long service life.

RHEINZINK is a monolithic metal that is low-maintenance, malleable, and has no colour coating. For almost 300 years, zinc has been used by European designers and sheet-metal craftsman to create structures that endure.

Since 1993, RHEINZINK has been used in North America on college and corporate campuses, libraries, cultural centers, and residential projects. RHEINZINK is recognized as a low environmental impact metal of choice that is both beautiful and cost-effective.



longevity

Due to the excellent corrosion resistance of zinc, covering systems with RHEINZINK® - Titanium Zinc have an extremely long life span. Used as roofing in urban environments it is estimated to last 80 to 100 years. As a facade covering, due to lesser erosion exposure, this lifespan increases to 200 to 300 years.

composition of RHEINZINK®

Zinc 99.835%
Titanium 0.07 - 0.12%
Copper 0.1 - 0.18% (PWBG)
Copper 0.08 - 1.0% (PWGG)

Copper

- Forms a solid solution with zinc
- Improves malleability
- Is responsible for the natural Blue-Gray and Graphite-Gray colors

Titanium

- Improves the tensile strength and hardness of the material and increases creep resistance
- Increases the re-crystallization temperature by about 68° F (20° C) to about 572° F (300° C).

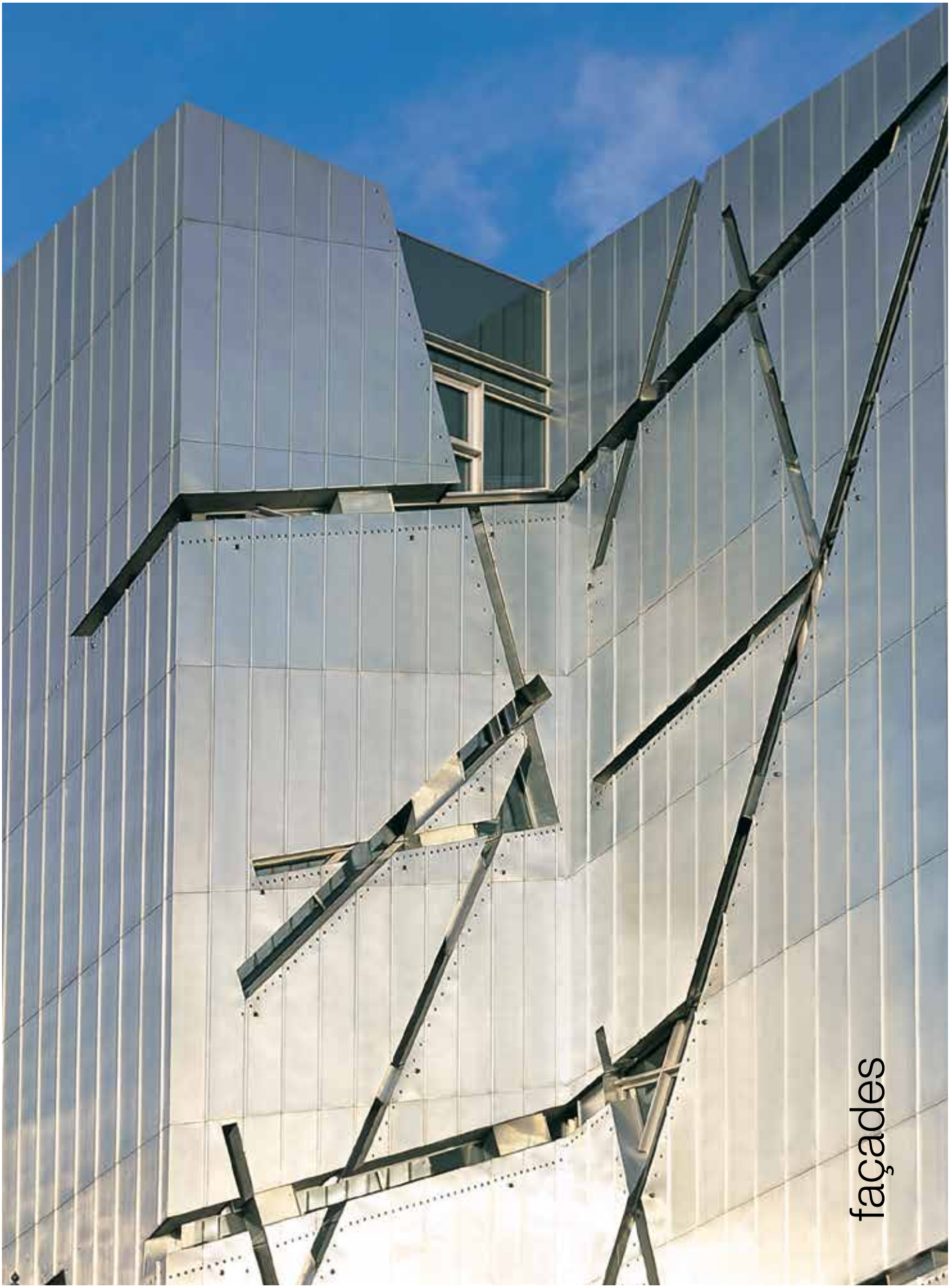
certification & associations

recyclability

- RHEINZINK® is 100% recyclable.
- RHEINZINK® recycles 100% of its scrap.
- The post consumer recycled zinc content of RHEINZINK® is 10%.
- The recycling rate of building construction zinc (European data) is estimated at 94%. Recycling RHEINZINK requires an energy expenditure of approximately 5% of the primary energy content.

green manufacturing process

- Deep Mined vs. Strip Mined
- Less gross energy required to produced alloy; 1/4 to 1/3 that of other metals such as Stainless, Copper and Aluminum
- Emissions during smelting and processing are kept to a minimum through state-of-the-art production equipment



façades

flat lock tiles

The overlapping seams of the Flat Lock Tile System provide a subtle gridded look to simple, complex rectilinear or curvilinear facades. Using various sized tiles, and changing the layout of the seam lines fasciltates many design options.

- Individual tile sizes
- Perfect for curvilinear surfaces
- Can be installed horizontally, vertically or diagonally

pointed tiles

Diamond and square-shaped tiles make up the RHEINZINK pointed tile group. These tiles have hems in place to form simple, lock joints. The natural flexibility and format of these tiles permit aesthetically pleasing solutions that accommodate virtually all corners and curves.

- Perfect for complex curves
- Available in various sizes
- Flexible adaptation to building shapes

standing seam panels

The RHEINZINK-Angled Standing Seam System, commonly used on facades, exhibits strong linear shadows produced by its angled seam configuration. The widespread availability of standing seam fabrication machines ensures consistent forming of panel edges as well as closing of the seams. Differing panel lengths and widths make it possible to achieve even the most complicated geometries. The angled standing seam system can be oriented horizontally, vertically and diagonally.

- Suitable for most building types
- Accommodates complicated geometries
- Can be installed horizontally, vertically or diagonally

corrugated sinusoidal profiles

The sinusoidal profile is a “wavy“ corrugated and is available with either exposed or concealed fasteners. From a design point of view, the sinusoidal panels are characterized by the slight exchange of light and shadow, which will vary depending on the corrugation height. This system may be installed horizontally, vertically or diagonally.

- Can be installed horizontally, vertically and diagonally
- Available with exposed or concealed fasteners
- Clad large areas with ease

roll cap system

The Roll Cap System is the oldest of roof application available today. A strip of wood is used to hold the cap, which fits between the panels. The trays and caps are machine formed, guaranteeing maximum precision.

corrugated trapezoidal profiles

Commonly known as the “box“ corrugated, this system offers ease of installation and may be arranged horizontally, vertically or diagonally. When compared to the sinusoidal corrugated, trapezoidal profiles are characterized by having a more robust exchange of light and shadow.

- Can be installed horizontally, vertically and diagonally
- Available with exposed or concealed fasteners
- Clad large areas with ease

shiplap panel

Due to its layered characteristics, the shiplap panel is unique cladding, reminiscent of wooden façades. When exposed to light and shade, sharp contours appear because of its profile geometry. Contrary to the horizontal and vertical reveal panels, this system does not have any reveals.

- Layered panel look
- Horizontal installation
- Scalloped design

vertical reveal panels

The vertical reveal panels have a choice of face width of up to 16” and a variable reveal width ranging from 0 -1”. With the flexibility of vertical and horizontal installation, the reveal panel offers the designer an exceptional amount of freedom in implementing their ideas. Solutions may be executed quickly when it comes to renovations or retrofitting installations.

- Variable joint widths from 0-1”
- Face widths up to 16”
- Vertical facade segmentation

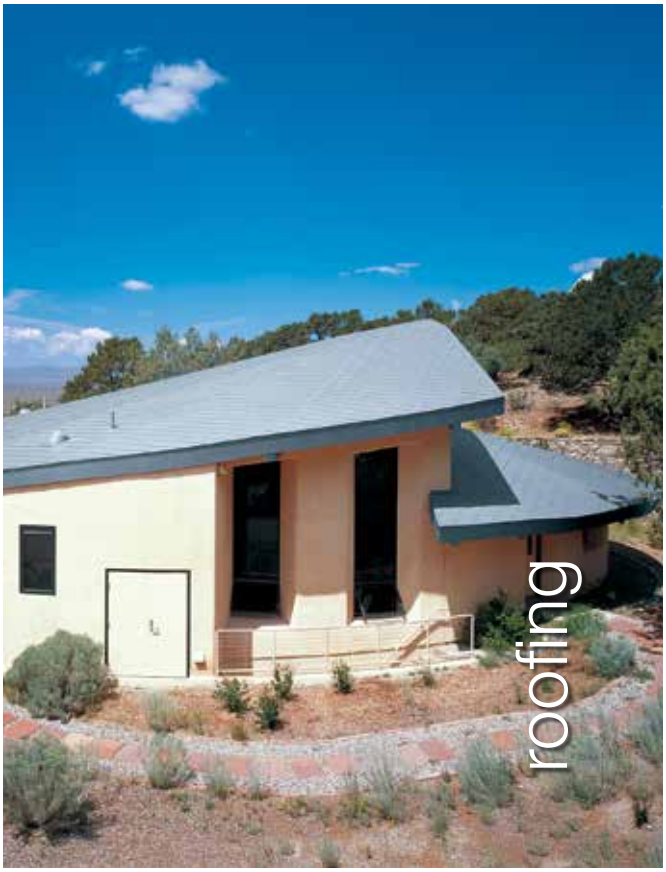
horizontal panel system

One benefit of a reveal panel system is the choice of face heights of up to 10” and variable joint widths from 0 -1”. Panel end joints can be configured to create vertical joints or can be staggered with backer plates, allowing the horizontal joints to be emphasized. Combining horizontal and vertical panels create a striking design. The possibilities are endless. Installation of this system is done from top to bottom.

- Variable joint widths from 0-1”
- Face heights up to 10”
- Horizontal facade segmentation

special solutions

The term special solutions is used by RHEINZINK® to describe the combinations of and/or variations of systems. Very large surfaces in particular, which could appear monotonous can be enhanced by various facade coverings. Z-profiles, thin sheet louvers and other profiles that are able to form an edge can be custom manufactured – after consultation with RHEINZINK’s Technical Department.



roofing

double lock standing seam

The double lock standing seam is a further development of the original hollow, folded joint or angle standing seam. This reliable system has been referenced in technical literature since 1899 and is a great choice for roof pitches greater than 5/8 : 12. The double lock standing seam, manufactured with pre-profiled panels, has gained international recognition. Seams are folded and closed manually or with a seaming machine. Custom shapes such as convex and concave curves and conical panels can be produced with ease. Thanks to a multitude of detail variations, the double standing seam complements both traditional and modern architectural design.

- Time-proven system
- High degree of design freedom
- Roof-integrated solar solutions and snow retention systems possible

angle lock standing seam

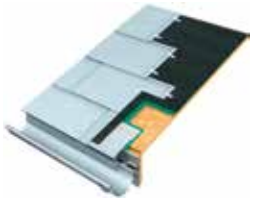
Within conventional sheet metal techniques, the angled standing seam is a relatively new development; it has only been referenced in technical literature since the beginning of the 20th Century. The angled standing seam is completed simply by folding in one leg. This system is particularly suitable for areas on metal roofs where the pitch is greater than 6 :12 roof pitch, as well as for rounded parapets or mansard roofs – in a conventional vertical, diagonal or horizontal application. This profiles seam is wider than that of the Double Lock and can cast a distinct shadow line.

- Design with distinct lines
- Low-to-no maintenance
- Roof-integrated solar solutions and snow retention systems possible

tiles

Tiles have gained popularity for roofing. Unlike sheets or shingles of similar appearance, these have forward bent edges along the lower surface to form simple interlocking joints. Diamond, Rectangular and Square-shaped tiles provide aesthetically pleasing solutions, especially for geometrically complicated building designs with roof pitches greater than 3:12.

- Individual tile sizes
- Perfect for curvilinear surfaces
- Diamond, Rectangular and Square



click roll cap

The roll cap system with battens is one of the more traditional of today's prevailing sheet metal work techniques. The term roll cap or batten seam characterizes a type of lengthwise connection in which a wooden batten or a RHEINZINK clip made of galvanized steel is used to form a box-like joint. The roof panels are connected to the substrate by clips on the wooden batten (or directly by the clip), which is then covered by a cap. A wealth of design possibilities exist when the roll cap is combined with standing seam panels.

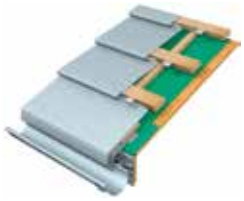
- Traditional wide-seamed application
- Panel lengths of up to 60' possible
- Alternative to Double Lock Standing Seam

quick step

Contemporary architects are always seeking out new and advanced construction technology. With this in mind, RHEINZINK® has developed an industrial roofing system, which combines new design possibilities and simple installation in the best possible way: QUICK STEP – The RHEINZINK® Stepped Roof.

This patented, innovative technology, is a new type of metal roof covering. It represents a high quality alternative to traditional roof coverings. QUICK STEP is suitable for a large variety of roof shapes, with slopes between 2 in 12 and 33 in 12. In combination with the appropriate attachment system, the snap-in, prefabricated components made of 22 gauge (0.8 mm) thick "preweathered pro" RHEINZINK, most of which are prefabricated, guarantee that the assembly can be completed quickly and with ease. QUICK STEP also opens up a wide range of possibilities from a design point of view.

The stepshaped system creates a strong but elegant format for the roof surface. Innovative accessories such as the new connection frame, developed especially for roof penetrations, complete the QUICK STEP.



air-z structured mat

RHEINZINK offers its own structured mat for RHEINZINK-standing seam roof systems, copings and inlay gutters. AIR-Z is a three-dimensional mat made of nylon filament installed over underlayment with substrates of plywood or Oriented Strand Board (OSB). AIR-Z was engineered for sloped roof applications starting from 5/8:12 pitch. AIR-Z compensates for structural tolerances up to 2 mm.

Benefits of AIR-Z

RHEINZINK AIR-Z provides a number of benefits for metal roofing. The main purpose is to provide an open air space to allow moisture to flow away or evaporate. Another advantage is the thermal break created between the metal roofing and sheathing resulting in a reduction of energy use. AIR-Z also assists in the reduction of noise from driving rain and sleet.

Working with AIR-Z

AIR-Z is UV resistant for up to 6 months and retains its strength and rigidity in temperatures ranging from -100 degrees F to +250 degrees F. AIR-Z needs to be installed in temperatures 23 degrees F and greater. Due to its flexibility, AIR-Z is easy to cut and install – simply roll out over approved underlayment. AIR-Z can be placed horizontally or vertically.

TECHNICAL INFORMATION AND SYSTEM DETAILS AVAILABLE UPON REQUEST. TO LEARN MORE ABOUT AIR-Z AND OTHER RHEINZINK PRODUCTS, PLEASE VISIT WWW.RHEINZINK.US

RHEINZINK® Classic and prePatina

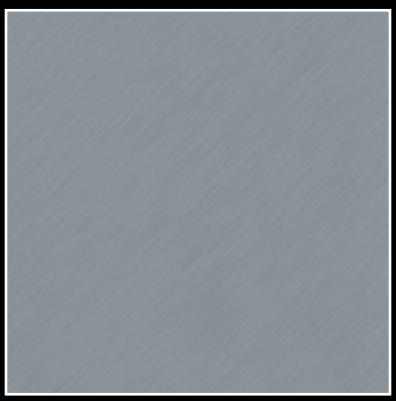
RHEINZINK-Classic®
Bright Rolled

RHEINZINK-prePatina®
Blue-Grey

RHEINZINK-prePatina®
Graphite-Grey

RHEINZINK® is available in three finishes: RHEINZINK-Classic® - Bright Rolled – mill finish. Through the course of natural weathering, the bright rolled material turns into a classic blue-grey. The patina provides protection; the material always looks great, without needing additional maintenance or cleaning. RHEINZINK-prePatina® Blue-Grey and Graphite-Grey – an elegant variation. These materials leave the factory – with the look of a finished zinc patina. RHEINZINK has patented this process, which is unique world-wide. The surface appearance changes marginally (influenced by the environment) – the properties of the natural surface remain fully intact. Special maintenance or cleaning is not required; the self-healing properties of the material allow each and every scratch to disappear over time. RHEINZINK products provide an opportunity for LEED projects. Following comprehensive evaluation of its complete life cycle, it has been certified as an environmentally friendly building product by Cradle to Cradle at the Silver level and by ISO as a 14025, Type III product. RHEINZINK is ASTM B69 compliant for Types 1 and 2.

RHEINZINK® artColour



RHEINZINK-artColour®
Sky-Grey

RHEINZINK-artColour®
Basalte

artCOLOR Sky-Grey and Basalte two new shades of RHEINZINK, two matte surfaces from RHEINZINK for low-to-no-maintenance Roofing and Facade Cladding.

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