ALGRIP® Slip-Resistant Metal Stair Treads, Tread Repair Covers and Nosings provide maximum protection against slips and falls on stairways. Unique laser-welded deposits deliver unparalleled durability and traction, making this technology a smart choice for high-traffic applications in workplace or public settings. ALGRIP Stair Tread Products are designed for easy cleaning and are particularly effective in environments where the accumulation of liquids, dust, grease or other substances creates slippery conditions.
Metal Bar Grating Stair Treads

Designed for the construction of new stairways where open walking surfaces are preferred to allow air, light or fluids to pass through freely. Metal Bar Grating Stair Treads are constructed with Type W, Type PS or Type PD grating and are available in carbon steel, stainless steel or aluminum.

Metal Plate Stair Treads

Fabricated with a one-piece profile consisting of a nosing, tread and riser for applications where a solid walking surface is desired. Metal Plate Stair Treads are intended for the construction of new stairways and are available in carbon steel, stainless steel or aluminum.

Metal Tread Repair Covers

Manufactured to fit over top of stair treads for a quick and cost effective method of upgrading existing stairways. Metal Tread Repair Covers consist of a one-piece metal nosing and tread and are available in carbon steel, stainless steel or aluminum.

Metal Stair Nosings

Formed to a 90 degree angle and 0.50" radius to cover the leading edge of stair treads. Metal Stair Nosings are appropriate for both new and retrofit construction and are available in carbon steel, stainless steel or aluminum.
Available in a wide range of materials, sizes and finishes, ALGRIP Slip-Resistant Stair Tread Products are exceptionally versatile and can be implemented in both new construction and retrofit applications. Stair Treads are intended for use in the production of new stairways and are available in plate or bar grate configurations. Tread Repair Covers are formed to fit over top of existing treads for a quick and cost effective method of upgrading stairways already in service. Nosings are appropriate for both new and retrofit construction.

Ross’ patented CNC laser deposition process applies more than 1,000 rugged, custom-alloy deposits per square foot in a highly precise and uniform pattern. The superior bond strength of these deposits not only increases the useful product life, but also allows nearly any type of onsite fabrication without compromising the traction-providing surface. And the smooth area between raised deposits helps deter the pooling of liquids and trapping of solids, which results in a product that exhibits exceptional self-cleaning characteristics.

ALGRIP is an ideal choice for a variety of applications requiring slip-resistant walking surfaces, such as:

- New construction (treads)
- Retrofit/repair over concrete or carpet (covers)
- Spiral stairs
- Mezzanines
- Platforms
- OEM equipment

Industries

- Institutional
- Food Processing
- Public Works
- Industrial
- Mass Transportation
- Utilities
- Oil and Gas
- Pharmaceuticals
- Marine
- Metals and Mining
- Government
- OSHA, FDA or USDA compliance
• Standard deposit height of 0.035” nominal
• Minimum 1,000 deposits per square foot of surface area
• Material: Carbon steel, stainless steel or aluminum per optional features below
• Bar grate configurations per optional features below:

Material Options
• Grating Construction:

**Type “W” Welded Steel Grating:**
Manufactured by welding the cross bar/bearing bar intersection, typically by automated forge welding machines. Provides a secure welded connection that is ideal for most industrial applications. Available in carbon steel or stainless steel.

**Type “PS” Swaged Pressure Locked Grating:** Cross bars are inserted into pre-punched holes in the bearing bars and hydraulically swaged to lock the bars in place. Swaging is the preferred method of assembly for the manufacture of close mesh carbon steel, stainless steel and aluminum gratings.

**Type “PD” Dovetail Pressure Locked Grating:** Assembled by inserting pre-punched bearing and cross bars into an “egg-crate” configuration and deforming the cross bars under intense hydraulic pressure. Allows for the manufacture of gratings with custom spacings.
Standard Features cont.

- **Bar Substrates:**
  - Carbon steel; ASTM A36 (structural plate) or ASTM A1011 (hot rolled sheet)
  - Stainless steel; ASTM A276 or A479, alloy 304 and 316
  - Aluminum; ASTM B209, alloy 6063 or 6061

- **Bar Spacing:** Select from Standard or ADA spacings
  - Standard spacings; Type 19-4, 19-2, 15-4 or 15-2
  - ADA conformant spacings; Type 11-4, 11-2, 7-4 or 7-2

- **Bearing Bar Size:**
  - Thickness: 1/4" or 3/8"
  - Depth: 3/4" to 5"

**Finish Options**

- **Carbon Steel:**
  - Mill
  - Manufacturer’s standard black paint
  - Hot-dip galvanized per ASTM A123 after fabrication

- **Stainless Steel:**
  - Mill
  - Abrasive blast matte finish
  - Passivated (for cleanliness, uniform smooth appearance, improved corrosion resistance)

- **Aluminum:**
  - Mill
METAL PLATE
STAIR TREADS

Standard Features

• Standard deposit height of 0.025" nominal
• Minimum 1,000 deposits per square foot of surface area
• Thickness: 11 gauge
• Size: 36.00" wide x 12.00" deep x 2.00" tall nosing with 90 degree bend angle and 0.50" radius x 2.00" tall riser with 90 degree bend angle and 0.50" radius
• Material: Carbon steel, stainless steel or aluminum per optional features below

Material Options

• Heavy deposit height of 0.035" nominal
• Plate Substrates:
  o Carbon steel
    • ASTM A36 (structural plate) or A1011 (hot rolled sheet)
  o Stainless steel
    • ASTM A240; alloy 304 and 316
  o Aluminum
• ASTM B209; alloy 3003, 5052 or 6061
• Width: up to 16'
• Material thickness per customer requirements
• Tread depth, riser height / bend angle / bend radius, and nosing height / bend angle / bend radius per customer requirements
• Tread carriers per customer design

Finish Options

• Carbon Steel:
  o Mill
  o Hot-dip galvanized per ASTM A123 after fabrication
• Stainless Steel:
  o 2B (sheet)
  o Mill (plate)
  o Abrasive blast matte finish
• Aluminum:
  o Mill
METAL TREAD REPAIR COVERS

Standard Features

• Standard deposit height of 0.025” nominal
• Minimum 1,000 deposits per square foot of surface area
• Thickness: 11 gauge
• Size: 35.75” wide x 11.75” deep x 1.25” tall nosing with 90 degree bend angle and 0.50” radius
• Material: Carbon steel, stainless steel or aluminum per optional features below

Material Options

• Heavy deposit height of 0.035” nominal
• Plate Substrates:
  o Carbon steel
    • ASTM A36 (structural plate) or A1011 (hot rolled sheet)
  o Stainless steel
    • ASTM A240; alloy 304 and 316
  o Aluminum
    • ASTM B209; alloy 3003, 5052 or 6061
• Width: up to 16’
• Material thickness per customer requirements
• Tread depth and nosing height / bend angle / bend radius per customer requirements

Finish Options

• Carbon Steel:
  o Mill
  o Hot-dip galvanized per ASTM A123 after fabrication
• Stainless Steel:
  o 2B (sheet)
  o Mill (plate)
  o Abrasive blast matte finish
• Aluminum:
  o Mill
Standard Features

- Standard deposit height of 0.025” nominal
- Minimum 1,000 deposits per square foot of surface area
- Thickness: 11 gauge
- Size: 72.00” wide x 1.25” deep x 1.25” high with 90 degree bend angle and 0.50” radius
- Material: Carbon steel, stainless steel or aluminum per optional features below

Material Options

- Heavy deposit height of 0.035” nominal
- Substrates:
  - Carbon steel
    - ASTM A36 (structural plate) or A1011 (hot rolled sheet)
  - Stainless steel
    - ASTM A240; alloy 304 and 316
  - Aluminum
    - ASTM B209; alloy 3003, 5052 or 6061

Finish Options

- Carbon Steel:
  - Mill
  - Hot-dip galvanized per ASTM A123 after fabrication
- Stainless Steel:
  - 2B (sheet)
  - Mill (plate)
  - Abrasive blast matte finish
- Aluminum:
  - Mill
Technical Information

- Tested in accordance with ASTM C1028-89, “Standard Test Method for Determining the Static Coefficient of Friction of Ceramic Tile and Other Like Surfaces by the Horizontal Dynamometer Pull-Meter Method”

- Tested in accordance with ASTM F1679, “Standard Test Method for Using a Variable Incidence Tribometer (VIT)”
  - Carbon Steel: Dry surfaces: >0.99 COF, Wet surfaces: >0.93 Slip-Resistance Index
  - Stainless Steel: Dry surfaces: >0.98 COF, Wet surfaces: 0.80 Slip-Resistance Index
  - Aluminum: Dry surfaces: >0.96 COF, Wet surfaces: 0.89 Slip-Resistance Index

### Applicable Standards & Certifications

- 2010 ADA Standards for Accessible Design (incorporates Title II regulations at 28 CFR 35.151; Title III regulations at 28 CFR part 36, subpart D; and the 2004 ADAAG at 36 CFR part 1191, appendices B and D; effective on March 15, 2012)
- 2012 International Building Code (IBC), Section 1003.4 Floor surface
- ANSI/NAAMM MBG531-09, “Metal Bar Grating Manual”
- ANSI/NAAMM MBG532-09, “Heavy Duty Metal Bar Grating Manual”
Quality Control
ISO 9001:2015

Risk Reward Analysis
The risk-reward calculation for safety flooring products generally starts with common diamond/checker floor plate. It provides low COFs and little or no safety when wet, oily or dusty. The initial low cost is tempting, but the risk, and true cost, is high.
Surfaces that have been treated with textured liquid coatings or adhesive-adhered products offer a fair level of safety when initially installed, but they often require continuous and costly maintenance. When subjected to wear, they can quickly deteriorate.
Flame-sprayed coatings provide only a surface treatment. While they provide good slip-resistance, fabrication can be problematic. They also present major cleaning problems because of the many cavities on the surface.

When you invest in ALGRIP Slip-Resistant Products, you have selected a safety-system surface that is superior in all aspects and wins the risk/reward competition hands down. Employees and employers are provided the highest level of protection from slips and falls.

Installation Considerations
Products can be fabricated, formed, cut and welded without affecting the traction-providing surface, therefore allowing for a wide range of installation methods. Due to the high hardness of the surface, tooling used in fabricating ALGRIP Treads, Tread Repair Covers and Nosings may experience wear rates higher than normal. Use of tooling designed for high hardness materials is recommended.
Availability & Cost
Ross offers both standard and custom-sized ALGRIP Stair Treads, Tread Repair Covers and Nosings in a wide range of materials and thicknesses. Standard sized products offer the best value and shortest lead times.

Warranty
Ross warrants that all of its manufactured products shall remain free of defects in material and workmanship under normal use for a period of one year from the date of delivery.

Maintenance
ALGRIP Metal Stair Treads, Tread Repair Covers and Nosings are virtually maintenance free, requiring little more than proper cleaning of dirt and debris from the flat, smooth area between deposits.

Technical Services
Custom stair treads, covers and nosings designed to end user’s specifications.
Ross offers a complete line of ALGRIP Slip-Resistant Products

- ALGRIP® Metal Floor Plate
- ALGRIP® Bar Gratings
- ALGRIP® Stair Treads, Tread Repair Covers & Nosings
- ALGRIP® Ladder Rungs & Covers
- ALGRIP® Trench & Expansion Joint Covers