In the design and construction community, ALGRIP® Slip-Resistant Metal Bar Gratings are viewed as the preferred flooring of choice for applications requiring an open or permeable walking surface. Unique laser-welded deposits deliver unparalleled durability and traction making this technology an intelligent choice for demanding environments, especially where exposure to outdoor elements is a factor. ALGRIP™ grating is designed for easy cleaning and used extensively throughout many different industries.
Available in a wide range of styles, spacings and finishes, ALGRIP® Slip-Resistant Metal Bar Grating is an open metal flooring designed to provide maximum protection against slips and falls in conditions where the penetration of light, water or air is considered beneficial.

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:

- Work/Pedestrian Platforms
- Mezzanines/Catwalks
- Inclined Ramps
- Bridge Decking/Walkways
- Utility Vault Covers
- Sidewalk/Culvert Covers
- Steps and Stairs
- Trench Covers

ALGRIP gratings are available in carbon steel, stainless steel and aluminum, in bar sizes and spacings to meet diverse industrial and commercial applications. Industrial applications

- OSHA, FDA or USDA compliance
- Institutional
- Food Processing
- Public Works
- Industrial Manufacturing
- Mass Transit
- Utilities
- Oil and Gas
- Pharmaceuticals
- Marine
- Pulp and Paper
- Metals and Mining
- Government
ALGRIP Slip-Resistant Metal Bar Grating is manufactured using technologically advanced machinery developed by Ross to ensure the highest level of quality and consistency. We start with the base material that best suits your application. Choose from various grades of lightweight aluminum, corrosion-resistant stainless or durable carbon steel in bar stock form. Then select the method of assembly that best suits your application - Type “W” Welded Steel, Type “PS” Pressure-locked Swaged, Type “PD” Pressure-locked Dovetail - along with the desired size, spacing and finish.

Next, we laser-weld a minimum of 1,000 anti-slip deposits per square foot to the traffic side of the selected material. These welded deposits penetrate the metal substrate to produce a permanent, sub-surface bond tested to a maximum hardness of 60 on the Rockwell C Scale and a maximum static coefficient of friction of 0.97 (COF) in accordance with ASTM C1028-89. Finally, the grating is custom fabricated to meet the size and finish requirements of your project’s specifications. The result is a solid metal grating with durability and slip resistance properties like no other.

Additional features include:
- Standard deposit height: 0.035” nominal
- A variety of materials, bar spacings, bar sizes and finishes; see Material Options

ALGRIP Slip-Resistant Metal Bar Gratings are available in three distinct types of grating identified by their method of assembly. All of these gratings provide superior slip resistance when subjected to the most demanding applications.

**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.
Material Options

- **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 the desired spacing from the “Table of 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** – Select the appropriate bearing bar size for the desired span and load. Contact Ross for load tables.
  - Thickness: 1/8”, 3/16”, 1/4” or 3/8
  - Depth: 3/4” to 5”

Tables of Bar Spacings

<table>
<thead>
<tr>
<th>Standard mesh grating</th>
<th>Bearing Bars at 1-3/16”O.C.</th>
<th>Cross Bars at 4”O.C.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADA conforming spacings</td>
<td>Bearing Bars at 11/16”O.C.</td>
<td>Cross Bars at 4”O.C.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Other spacings available</th>
<th>Bearing Bars at 1-3/16”O.C.</th>
<th>Cross Bars at 2”O.C.</th>
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<tr>
<th>Other spacings available</th>
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<th>Cross Bars at 4”O.C.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADA conforming spacings</td>
<td>Bearing Bars at 7/16”O.C.</td>
<td>Cross Bars at 4”O.C.</td>
</tr>
</tbody>
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<td>Bearing Bars at 7/16”O.C.</td>
<td>Cross Bars at 2”O.C.</td>
</tr>
</tbody>
</table>
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

**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.
Technical Information

Test Results

- 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”

<table>
<thead>
<tr>
<th></th>
<th>Dry Leather</th>
<th>Dry Rubber</th>
<th>Dry Neolite</th>
</tr>
</thead>
<tbody>
<tr>
<td>COF</td>
<td>0.88</td>
<td>0.94</td>
<td>0.97</td>
</tr>
<tr>
<td>Wet</td>
<td>0.91</td>
<td>0.92</td>
<td>0.96</td>
</tr>
</tbody>
</table>

- 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

Installation Considerations
Product 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 bar grating may experience wear rates higher than normal. Use of tooling designed for high hardness materials is recommended.

Availability & Cost
Ross custom fabricates metal bar grating in a wide variety of materials and configurations according to customer provided specifications. Metal bar stock with ALGRIP slip-resistant deposits is also available for purchase by grating manufacturers looking to incorporate this technology into their products.

Warranty
Ross warrants that all if 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 Bar Grating is virtually maintenance free, requiring little more than proper cleaning of dirt and debris from the flat, smooth area between deposits.

Technical Services
Custom bar grating 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