

STAINLESS STEEL DATA SHEET

Vapor Deposition Colorized Finishes

Grade Selection

The long-term performance of Vapor Deposition Colorized Finishes is dependent on proper grade selection. In most environments, Type 304 will be sufficient to prevent corrosion. (Please refer to our Product Data Sheets for highlights of chemical analyses and properties for specific substrates and finishes.)

Pounds Per Piece

Thickness (in.) x Width (in.) x Length (in.) x .292

Available Sizes

.018 - .120" thick in widths up to 48" are available in lengths up to 157". Please contact a Contrarian Metal Resources Product Consultant for details.

Fire Resistance

Since stainless steel is dimensionally stable up to 2000°F, Vapor Deposition Colorized Finishes provide an added measure of protection in the event of a fire.

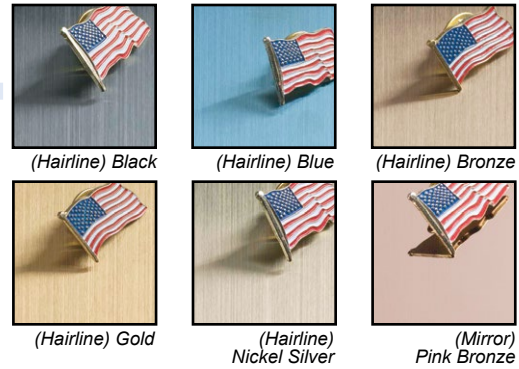
Flatness

Vapor Deposition Colorized Stainless Steel Finishes are supplied to ASTM (American Society for the Testing of Materials) commercial tolerances.

Fabrication

Vapor Deposition Colorized Finishes can be welded or soldered. However, exposure to high temperatures will destroy the colorized film layer. Once destroyed, the film cannot be repaired. In the case of welding, a grade of welding wire more noble than the work piece should be used. While formation of a heat tint scale can be avoided in lighter gauges through use of shield gasses, care must be taken to remove this scale through chemical means, preferably a phosphoric acid pickling paste (avoid hydrochloric).

Since welding will destroy the black oxide film in the heat-affected zone of the weld, the design should provide for concealed welds and joints that are either open or sealed by means of soldering. In the case of soldering, it is necessary to remove the coating in the area of the solder joint. It is also advisable to use low temperature tin/lead soldering practices and avoid chloride-containing fluxes. Flux residue must be thoroughly removed after soldering.



Product Description

Vapor Deposition Colorized Finishes are stainless steel substrates finished with a thin ceramic film designed for use in architectural applications. Visually, the film serves to tint the stainless steel with a given color which allows the surface characteristics of the substrate finish to remain visible. Vapor Deposition Colorized Stainless Steel Finishes can be used in a variety of applications, including elevators, wall panels, coping and trim.

The film is produced by the deposition of ceramics, such as titanium carbonitrides in a vacuum furnace. Unlike paints coatings, the finish is not reactive to ultraviolet light. The Vapor Deposition Colorized layer retains the corrosion resistance of the underlying T304 alloy. For more exterior applications in marine or other more corrosive environments, a higher alloy substrate should be used. Vapor Deposition Colorized Finishes are suitable for applications subjected to pedestrian traffic, like elevators and entryways. As always, if there is any doubt as to the suitability of our products to a given application or environment, please contact a Contrarian Metal Resources Product Consultant.

Table I SUBSTRATE FINISHES & COLOR COMBINATIONS						
SUBSTRATE	COLOR					
	Black	Blue	Bronze	Gold	Nickel Silver	Pink Bronze
InvariWeave™	•	•	•	•	•	•
InvariWisp™	•	•	•	•	•	•
InvariBlend®	•	•	•	•	•	•
InvariClass™	•	•	•	•	•	•
Starlight	•	•	•	•	•	•
Seeds	•	•	•	•	•	•
Raindrop	•	•	•	•	•	•
Etched & Other Finishes	Please contact a Contrarian Metal Resources Product Consultant for other substrate finishes and color combinations.					

Available Substrate Finish & Color Combinations

Please refer to Table I. More information relating to substrate finishes can be found in the data sheets specific to those finishes.

Installation

Since there is a degree of variability in the appearance of the finish from batch to batch, we recommend establishing an installation technique, similar to the way shingle roofs are installed, whereby the installer works from a few different crates of panels on the job site, so as to distribute panels with certain finish attributes over a wide area, co-mingled with panels made from other sheets.

Vapor Deposition Colorized Stainless Steel Finishes are shipped with a high-grade UV resistant protective plastic covering designed to withstand the elements for several weeks. However, it is advisable to remove this material promptly after installation to prevent adhesive residue from remaining on the colorized stainless steel finish. After installation is completed, any rust stains from tools or construction debris must be removed.

Maintenance

Designed to require very little maintenance, Vapor Deposition Colorized Finishes require only periodic attention. It may, however, be appropriate to clean the surface to maintain its original appearance. Any detergent/ammonia solution can be effective for general cleaning. More tenacious contaminants, like adhesive residue will respond to pure acetone. Chloride-containing products must be avoided. Areas where incidental debris can collect, such as gutters, must be cleaned on a regular basis. For more information, please refer to "Cleaning Stainless Steel Finishes" in the Resources section of our website at www.metalresources.net.



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Limited Warranty

Contrarian Metal Resources (CMR) warrants its ASTM Grades 304, 304L, 316, 316L products against corrosion for a period of thirty (30) years from the date of purchase, subject to the limitations described in this warranty and provided the material is utilized solely for architectural applications and in normal atmospheric conditions. For purposes of this warranty, corrosion is defined as through wall penetration of the stainless steel. No warranty is made regarding mechanical damage, physical damage or damage as a result of substandard workmanship after receipt of the product from CMR (including but not limited to welding, shaping, or forming using methods that are not best practices for stainless steel of the grade in question) or using inappropriate cleaning solutions. This warranty does not cover any product that has been subject to misuse, neglect or accident. Use on chemical or manufacturing facilities, which produce or use chemicals known to have a deleterious effect on stainless steel, is excluded from this warranty. Please contact CMR prior to purchase if there is any question regarding application.

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