

STAINLESS STEEL DATA SHEET



"THE SOURCE" FOR SPECIALTY METAL FINISHES

Quilted

Product Description:

Quilted stainless steel features a repeated diamond or checkered pattern embossed into the metal surface, creating a three-dimensional texture. This pattern not only provides a striking visual appearance, but also improves structural rigidity and diffuses light reflection to reduce glare. Applications include automotive, architectural, and commercial kitchens.

Selecting the Grade

Quilted is widely obtainable in Type 304, which is sufficient to prevent corrosion. Type 316 should be used near the seacoast. Low carbon versions of these grades (304L / 316L) should be used when parts are to be welded. See Table I for highlights of chemical analyses and properties.

For extreme locations, e.g. near chemical plants or where steel may come into contact with salt water spray, different alloys will be required, subject to application review. However, it may be manufactured in other grades of stainless steel, such as 430, as well as in aluminum, brass, and copper. For highlights of Type 304's chemistry and common properties, see Table I.

Available Sizes

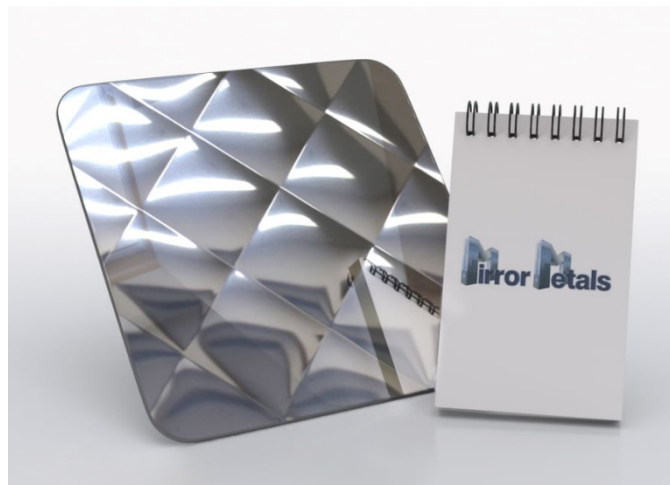
Dimensions: 36-48" x 96/120"
Gauge: 20-26ga (.036-.018")

Patterns

Standard Diamond Quilt: 2.75" side-to-side & 3.75" point-to-point
Specialty patterns available upon request

Finishes

#8/#10 Mirror & Bright Annealed (BA)
2B, #4 Satin, Hairline, Embossed
PVD/Color



Pounds Per Piece

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

Fire Resistance

Should a fire occur, Quilted stainless steel provides additional protection as stainless steel has a melting point of 2,750°

Flatness

Quilted stainless steel sheet is produced using base material that meets standard commercial tolerances per ASTM (American Society for Testing and Materials) specifications. Due to the nature of the embossing process, quilted sheets may exhibit cupping or curvature and are not guaranteed to lay flat after quilting. This is a normal characteristic of the product and should be considered during design and installation.

Fabrication

To avoid affecting the finish, particularly on highly reflective mirror surface, joinery should be mechanical. If welding or soldering must be employed, strive to limit it to hidden areas. Heat tint scales and soldering flux residue must be thoroughly removed. #8/#10 mirror is slightly directional. Therefore, it is advisable to orient panels in the same direction.

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Maintenance

Quilted is designed to be essentially maintenance free. It will last for decades without requiring attention. Yet, it may be appropriate at times to clean the surface in order to maintain its original appearance. Specific stainless steel agents are widely available. For general cleaning, any detergent or ammonia solution is effective. Also, for stains, a sodium carbonate paste with warm water rinse can be applied. For severe stains, you may use tri-sodium phosphate and caustic soda solutions. More difficult contaminants, like adhesive residue, will come off with pure acetone. Always avoid products containing chloride. Regularly clean out areas where occasional debris may collect, such as gutters.

Table I		304/304L	316/316L
CHEMICAL ANALYSIS			
Nickel		8%	10%
Chromium		18%	16%
Molybdenum			2%
TYPICAL MECHANICAL PROPERTIES			
Yield Strength (psi)		50,000	50,000
Tensile Strength (psi)		96,000	92,000
Elongation in 2 inches		50%	48%
Hardness (Rockwell B)		85	84
PHYSICAL PROPERTIES			
Density (lb./cu. in.)		0.292	0.292
Modulus of Elasticity in Tension (X 10 ⁶ lb./sq.in.)		28.0	28.0
Mean Coefficient	32 - 212°F	9.6	8.9
of Thermal Expansion	32 - 600°F	9.9	9.0
per °F (x 10 ⁻⁶)	32 - 1000°F	10.2	9.7
Melting Point Range °F		2550 - 2650	2500 - 2550

Limited Warranty

Mirror Metals (MM) 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 MM (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 misuses, neglect or accident. Use in 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 MM prior to purchase if there is any question regarding application.

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