

STAINLESS STEEL DATA SHEET



'THE SOURCE' FOR SPECIALTY METAL FINISHES

PRODUCT DESCRIPTION:

Bead Blast is a non-directional finish that is uniformly textured with a low gloss and is designed for architectural uses. Its lower reflectivity makes it suitable for roofing applications. But it can also be used for wall panels, coping, and trim. The consistency of the finish makes it excellent for panel-to-panel matching. Can be coated with anti-fingerprint coating for interior use.



SELECTING THE GRADE

For the best results over time, selection of the proper grade of Bead Blast is important. Type 304, for most environments, 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.

POUNDS PER PIECE

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

AVAILABLE SIZES

See Table II. Coil widths. Inquire for length.

TYPICAL SURFACE CHARACTERISTICS

Spectral Gloss @85°	<20
Ra	100
Peak count per sq. in.	270

FIRE RESISTANCE

Should a fire occur, Bead Blast provides additional protection as stainless steel has a melting point of 2750° F.

FLATNESS

Bead Blast is supplied within five I units of flatness, which is well below standard commercial allowances.

FABRICATION

Bead Blast can be welded or soldered. Preferably, use a grade of welding wire more noble than the work piece. Through use of shield gasses, formation of a heat tint scale may be avoided in lighter gauges. When scale

does form, care must be taken to remove it through mechanical or chemical means. Because Bead Blast is non-directional, there is no need to orient panels in relation to the rolling direction. Still, to avoid the possible result of slight directional differences, we suggest panels be fabricated to maintain the alignment of the original sheet. After soldering, flux residue must be removed.

INSTALLATION

Bead Blast comes with a protective PVC covering that is high grade UV resistant and is designed to withstand the elements for several weeks. Yet it is recommended that this PVC covering be removed immediately after installation to prevent adhesive residue from adhering to the stainless steel finish. Bead Blast's appearance is very uniform, but any metal surface, including a painted one, is sensitive to misalignment of panels on differing planes. Please take extra care to install within reasonable tolerances to ensure full benefit of Bead Blast's unvarying appearance. After installation, remove any rust stains from tools/construction debris.

MAINTENANCE

Bead Blast 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. For stains, a sodium carbonate paste with a 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.

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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 of Thermal Expansion per °F (x 10 ⁻⁶)	32 - 212°F	9.6	8.9
	32 - 600°F	9.9	9.0
	32 - 1000°F	10.2	9.7
Melting Point Range °F		2550 - 2650	2500 - 2550

Table II	Size Range (inches)				
	WIDTH				
THICKNESS	.75 - 18	>18 <24	24 - 36	>36 - 48	>48 - 60
.1251 - .1874	•	•	•	•	
.075 - .1250	•	•	•	•	
.0291 - .075	•	•	•	•	
.0178 - .029	•	•	•	•	
.015 - .0177					

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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Mirror Metals • 350 Hearst Drive • Oxnard, California 93030

Phone: (805) 981-2177 • FAX (805) 981-2178 • Email: Sales@MirrorMetals.com • www.MirrorMetals.com