

SAMPLE SIZE

GENERAL SIZE GUIDELINES- Mechanical / Chemical

TYPE OF TESTING	SHEET (Note 1)	PLATE (Note 1)	SHAPES (Note 2)	ROUND BAR	PIPE	TUBING	WIRE
Chemical	$\geq 3\text{mmT} \times 1'' \times 1''$	$\geq 3\text{mmT} \times 1'' \times 1''$	$\geq 3\text{mmT} \times 1'' \times 1''$	$\geq 10\text{mm D} \times 2'' \text{ L}$	2" L	$\geq 2\text{mm Wall Thk.} \times 2'' \text{ L}$	-----
Metallography (Note 3)	2" x 2"	2" x 2"	2" x 2"	2" L	2" L	2" L	2" L
Tensile	Note 4	Note 4	Note 4	Note 5	$\leq 1'' \text{ NPS} = 14'' \text{ L}$ $> 1'' \text{ NPS} = 10'' \text{ L}$ (Note 6)	$\leq 1/2'' \text{ OD} = 12'' \text{ L}$ $> 1/2'' \text{ OD} \leq 1'' \text{ OD} = 16'' \text{ L}$ $> 1'' \leq 1-3/4'' \text{ OD} = 18'' \text{ L}$ $> 1-3/4'' \text{ OD} = 12'' \text{ L}$	24" L
Hardness	2" x 2"	2" x 2"	2" x 2"	2" L	2" L	2" L	-----
Charpy	-----	4" W x 6" L	9" L	$< 3'' \text{ D} = 9'' \text{ L}$ $\geq 3'' \text{ D} = 3'' \text{ L}$	9" L	-----	-----
Bend	2" W x 12" L	$\leq 1'' \text{ T} = 2'' \text{ W} \times 12'' \text{ L}$ $> 1'' \text{ T} = 2'' \text{ W} \times 16'' \text{ L}$	-----	Note 7	$\leq 2'' \text{ NPS (CS/MS)} = 1000\text{mm L}$	$\leq 1-1/2'' \text{ OD} = 18'' \text{ L}$ $> 1-1/2'' \text{ OD} =$ (Note 7)	-----
Flattening	-----	-----	-----	-----	3" L Seamless 4" L Welded (Note 8)	7" L Seamless 4" L Welded (Note 8)	-----
Expansion / Flare	-----	-----	-----	-----	$\leq 1 \text{ NPS} = 4'' \text{ L}$ $> 1 \text{ NPS} = 3 \times \text{NPS}$	$\leq 1-1/2'' \text{ OD} = 4'' \text{ L}$ $> 1-1/2'' \text{ OD} = 3 \times \text{OD}$	-----

Notes: Sizes above are general guidelines and exceptions may apply

Sample sizes above are based on the material being saw cut; if gas cut, please call for sizes.
L- Length, W- Width, T- Thickness.

- (1) **Grain/rolling direction is required when submitting sheet or plate for testing. Always mark grain/rolling direction with an arrow.**
- (2) Shapes refer to beam, angle, channel, and T's.
- (3) Macrostructure requires a full cross section.
- (4) Plate / Sheet / Shapes $\leq 19\text{mm T}$ (for 200mm Gauge length = 75mm W x 450mm L OR 50mm Gauge length = 50mm W x 300mm L); Plate / Sheet / Shapes $> 19\text{mm T}$ = 50mm W x 250mm L
- (5) Round bar $< 19\text{mm D}$ (50mm Gauge length = 450mm L, 4D = 300mm L); Round bar $\geq 19\text{mm D}$ = 300mm L
- (6) Pipe $\geq 6\text{"} \text{ NPS} \times > 3/4\text{"} \text{ wall thickness} = 8\text{'}$
Length. Pipe $\geq 8\text{'}$ NPS = 3" Length for a transverse test (if the material spec allows transverse testing).
- (7) Requirement depends on size and specification; Call ATIS for the sample size and/or testing direction.
- (8) Sample size provided is per specimen - See specification for required test quantity.

Sample size for Corrosion Testing

CORROSION TESTING	SHEET	PLATE	ANGLE	BAR	PIPE	TUBING
A262 Practice A / B / C (SS Grade) A923 Method A (Duplex Grade) ISO 3651-1 (SS / Duplex Grade) G28 method A / B (Ni- alloy)	2" x 2"		2" x 2"	2" long	2" long	2" long
A262 PRACTICE E (SS Grade) ISO 3651-2 (SS / Duplex Grade)	2" x 6"		6" long	6" long	3" long	3" long
A923 Practice C (Duplex Grade)	1" x 2"		-----	-----	-----	-----
McQuaid EHN	1 1/2" x 1 1/2" (Saw cut)					