



Surface Finishes

Welded and Seamless
Stainless Steel Tube, Pipe, and Fittings

Sanitary and BPE

Mechanically Polished Inside Diameter (ID) and Outside Diameter (OD)

Inside Diameter		Outside Diameter		Surface Finish Code						
R _a (max)	Surface Treatment	R _a (max)	Surface Treatment	Dixon	ASME BPE	Alfa-Laval	S&O	TopLine	VNE	SPX
---	Mill	---	Mill		SF0		PU or #1		PX	#0 (PU)
---	Mill	32	Mechanical Polish				#5			
20	Mechanical Polish	---	Mill		SF1		PC	No. 3	PC	#3 (PC)
20	Mechanical Polish	32	Mechanical Polish	PL	SF1	PL	PL	No. 7	PL	#7 (PL)
25	Mechanical Polish	32	Mechanical Polish		SF2					
30	Mechanical Polish	32	Mechanical Polish		SF3					
32	Mechanical Polish	---	Mill				#3			
32	Mechanical Polish	32	Mechanical Polish				#7			

Sanitary and BPE

Electro Polished ID and Mechanically Polished OD

Inside Diameter		Outside Diameter		Surface Finish Code						
R _a (max)	Surface Treatment	R _a (max)	Surface Treatment	Dixon	ASME BPE	Alfa-Laval	S&O	TopLine	VNE	SPX
15	Electro Polish	---	Mill		SF4		PD	No. 3 EP	PD	#3E (PD)
15	Electro Polish	32	Mechanical Polish	PM	SF4	PM	PM	No. 7 EP	PM	#7E (PM)
10	Electro Polish	---	Mill							#3E (PJ)
10	Electro Polish	32	Mechanical Polish						PR	#7E (PR)
20	Electro Polish	32	Mechanical Polish		SF5					
25	Electro Polish	32	Mechanical Polish		SF6					

Finish Designations

Finish Number		Description
Dixon	Others	
U	1	Mill Finish (bright annealed, pickled, sand blasted, or tumbled)
	3	
	5	
P	7	Polished 32 R _a ID & OD
	3A	

Surface Finish - Sheet

Finish Number	Description
#1	Rough, dull, non-uniform appearance
#2B	Slightly reflective, like a cloudy mirror
#2D	Uniform, dull silver-gray appearance
BA or 2BA	Bright annealed - mirror-like with some cloudiness
#3	Also known as grinding, roughing or rough grinding, coarse finish usually applied before manufacturing
#4 Architectural	AKA brushed, directional, or satin finish, fine uniform polishing lines
#4 Sanitary	Much finer than #4 architectural finish, enhancing physical appearance
#6	AKA fine satin finish, less reflective than #4 architectural finish
#7	Semi-bright finish with some very dull polishing lines
#8	AKA mirror finish

Grit vs R_a

Grit	R _a
36	142
60	87
80	70
120	52
150	42
180	32
180 + EP	25
240	20
240 + EP	15
320	10
320 + EP	5-10
400	9
Mirror	4±

Common Names

Common Name	R _a (μ-In)	Grit Number	USA Finish	Rmax (μ-In)	ISO Number	ASTM STD R _a (μ-In)	Japanese STD
	2000	---	---	7875	N12	---	---
	1000	---	---	3940	N11	---	---
	500	---	---	1968	N10	140 max	---
Mill Plate	250	60	#1	985	N9	---	---
	125	---	---	492	N8	---	---
Satin Sheet	70 max, 40-60	80	#2	---	---	---	---
	63	---	---	---	N7	---	---
	52	100 to 120	#3	---	---	---	---
Commercial #3	40-60	120	#4	---	---	45 max	---
Sanitary/Dairy Finish	42 max, 30-35	150	#4	---	---	---	---
ANSI #4	32	---	---	126	N6	---	---
3A Sanitary Finish	32 max, 20-32	180	#4	---	---	25 max	Buff #100
Biotech Finish	25 max, 20-25	200 to 220	#4	---	---	---	---
Fine Satin Finish	15-20	240	#6	---	---	8-20	---
	16	---	---	63	N5	6-15	---
Semi-Bright Finish	12 max, 8-12	320	#7	---	---	---	---
	12	---	---	59	---	---	Buff #200
	8	---	---	31	N4	---	Buff #300
Mirror Finish	4-8	400	#8	---	---	---	---
Super-Mirror Finish	<4, 3-8	500	#8	---	---	---	---
Super-Mirror Finish	4	500	#8	16	N3	---	Buff #400 (approx)
	2	---	---	8	N2	---	---
	1	---	---	4	N1	---	---

Dixon Sanitary

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