



The process to produce nitric acid begins by passing anhydrous ammonia over a Pt-Rh catalyst at 925°C (1700°F). Alloys used for the catalyst grid have included RA333®, RA 602 CA® and Alloy 230®.

Alloy	Notes	Concentration, %	Temperature		Time	Corrosion Rate		Ref
			C	F		mm/yr	mils/yr	
17-4PH	condition H 1075	25	boiling		5x48hr	0.18	7	13
17-4PH	condition H 1075	50	boiling		5x48hr	1.2	47	13
17-4PH	condition H 1075	65	boiling		5x48hr	2.72	107	13
17-4PH	H 1075 + 1% HF	10	35	95	5x48hr	38	1500	13
2250	—	65	boiling		240hr	0.20	7.9	8
2205	—	65.3	boiling		—	0.13	5.3	9
304	—	65	116	241	—	0.23	9	1
304L	plus 3% HF	10	70	158	4fr	157	6410	1
316	plus 3% HF	5	68	155	—	4.18	165	1
316	—	10	90	194	—	0.22	9	1
316	plus 2% HCl	60	50	122	—	0.28	11	1
316	A 262 C	65	boiling		24hr	0.872	34	1
316L	—	65.3	boiling		—	0.25	9.8	9
316L	plus 3% HF	10	70	158	4hr	64.6	2450	1
317L	—	65.3	boiling		—	0.21	8.3	9
310S	plus 3% HF	10	70	158	4hr	9.36	369	1
AL-6XN	plus 3% HF	5	68	155	—	1.55	61	1
AL-6XN	plus 3% HF	10	70	158	4hr	2.56	101	1
AL-6XN	A 262 C	65	boiling		24hr	0.738	29	1
800	plus 3% HF	10	70	158	4hr	18.6	732	1
20Cb-3	plus 3% HF	10	70	158	4hr	7.65	301	1
825	plus 3% HF	10	70	158	4hr	3.02	119	1
825	plus 1% HF	53	80	176	336hr	5.1	200	12
RA333	mill annealed	65	boiling		5x48hr	1.07	42	3
RA333	anneal + 1250 1hr	65	boiling		5x48hr	3.96	156	3
RA333	anneal + 1700F 1hr	65	boiling		5x48hr	0.292	11.5	3
RA333	anneal + 1700F 1hr +1250 1hr	65	boiling		5x48hr	0.292	11.5	3
G-30	plus 1% HF	20	80	176	—	0.85	34	6

G-30	plus 6% HF	20	80	176	—	3.6	140	6
G-30	plus 1% HF	50	80	176	—	4.9	192	6
G-30	plus 3% HF	10	70	158	4hr	1.04	41	1
G-30	plus 3% HF	5	68	155	—	0.741	29	1
G-30	—	10	boiling		—	0.02	0.7	6
G-30	—	60	boiling		—	0.13	5.3	6
C-276	—	10	90	194	—	<0.01	0.2	2

Alloy	Notes	Concentration, %	Temperature		Time	Corrosion Rate		Ref
C-276	plus 3% HF	10	70	158	4hr	6.71	264	1
C-276	—	65	116	241	—	0.74	29	2
C-276	plus 2% HCl	60	50	122	—	0.21	8.2	2
C-22	plus 3% HF	10	70	158	4hr	1.71	67	1
625	plus 3% HF	10	70	158	4hr	3.96	156	1
625	—	65	boiling		—	0.76	30	16

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