

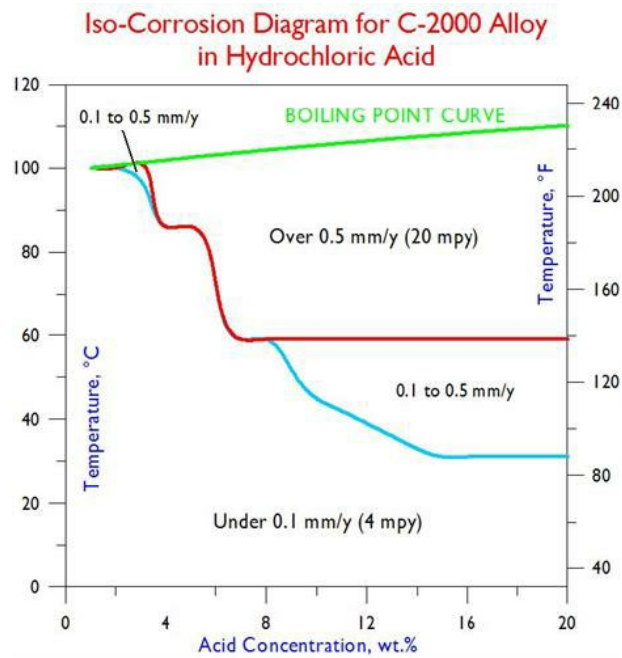


2	-	-	-	-	<0.01	<0.01	<0.01	-	0.09
2.5	-	-	-	-	-	<0.01	0.01	-	0.34
3	-	-	-	-	<0.01	<0.01	0.02	-	0.36
3.5	-	-	-	-	-	0.01	0.65	-	1.61
4	-	-	-	-	<0.01	0.01	1.24	-	2.15
4.5	-	-	-	-	<0.01	0.01	1.48	-	3.98
5	-	-	-	0.01	<0.01	<0.01	1.37	-	4.23
7.5	-	-	<0.01	<0.01	0.57	1.12	-	-	-
10	-	-	<0.01	0.28	0.65	1.54	-	-	-
15	-	-	0.18	0.38	0.70	1.69	-	-	-
20	-	-	0.16	0.36	0.69	1.46	-	-	-

All corrosion rates are in millimeters per year (mm/y); to convert to mils (thousandths of an inch) per year, divide by 0.0254.

Data are from Corrosion Laboratory Jobs 8-95, 11-95, 18-95, 36-95, 3-96, 9-96, 16-96, and 25-96.

All tests were performed in reagent grade acids under laboratory conditions; field tests are encouraged prior to industrial use.



**Hydrofluoric Acid**

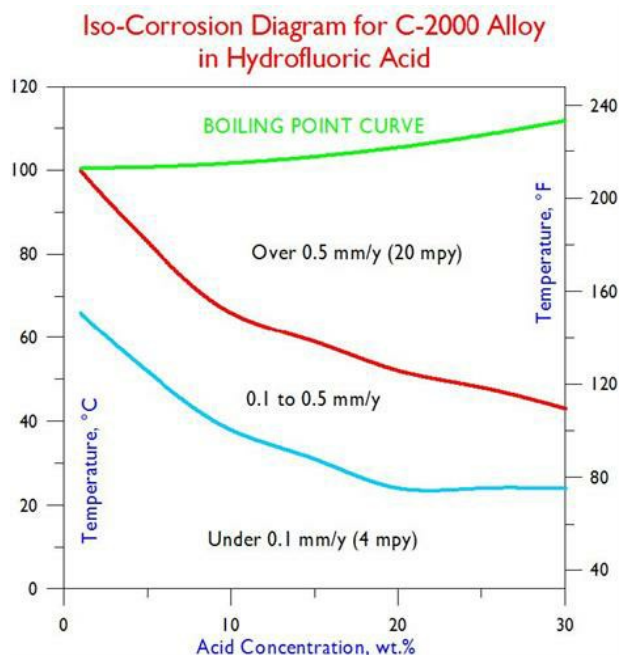
Conc. Wt.%	50°F	75°F	100°F	125°F	150°F	175°F	200°F	225°F	Boiling
	10°C	24°C	38°C	52°C	66°C	79°C	93°C	107°C	
1	-	-	0.01	0.03	0.08	0.18	-	-	-
5	-	-	0.02	0.09	0.33	0.57	-	-	-
10	-	-	0.06	0.22	0.56	0.99	2.27	-	-
20	-	-	0.21	0.48	0.68	0.67	0.74	-	-
30	-	-	0.25	0.62	1.61	1.34	1.46	-	-

All corrosion rates are in millimeters per year (mm/y); to convert to mils (thousandths of an inch) per year, divide by 0.0254.

Data are from Corrosion Laboratory Jobs 3-99, 24-99, and 46-99.

All tests were performed in reagent grade acids under laboratory conditions; field tests are encouraged prior to industrial use.

Hydrofluoric acid is known to cause internal, as well as external, attack of the nickel alloys; these values signify only the amount of external attack encountered during laboratory testing.



### Nitric Acid

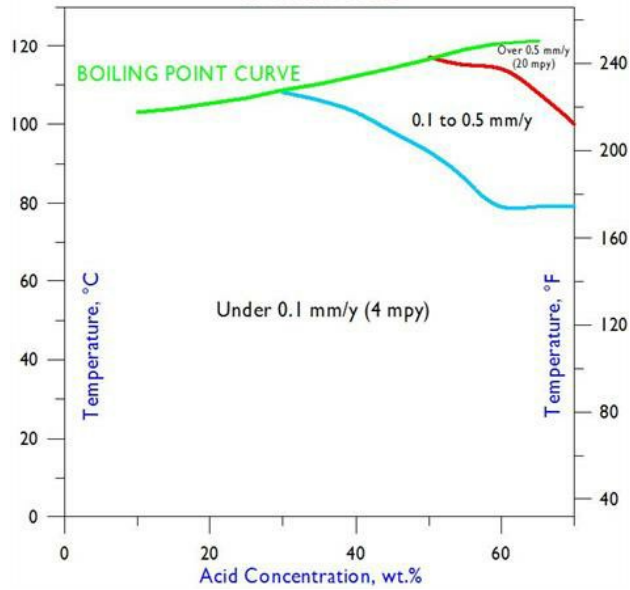
Conc. Wt.%	50°F	75°F	100°F	125°F	150°F	175°F	200°F	225°F	Boiling
	10°C	24°C	38°C	52°C	66°C	79°C	93°C	107°C	
10	-	-	-	-	-	-	-	-	-
20	-	-	-	-	-	-	-	-	0.02
30	-	-	-	-	-	-	-	-	-
40	-	-	-	-	-	0.02	0.06	-	0.24
50	-	-	-	-	-	0.05	0.12	-	0.51
60	-	-	-	-	-	0.08	0.19	0.43	0.94
65	-	-	-	-	-	-	-	-	1.00
70	-	-	-	-	-	0.10	0.29	0.59	1.66

All corrosion rates are in millimeters per year (mm/y); to convert to mils (thousandths of an inch) per year, divide by 0.0254.

Data are from Corrosion Laboratory Jobs 8-95 and 11-97.

All tests were performed in reagent grade acids under laboratory conditions; field tests are encouraged prior to industrial use.

### Iso-Corrosion Diagram for C-2000 Alloy in Nitric Acid



### Phosphoric Acid

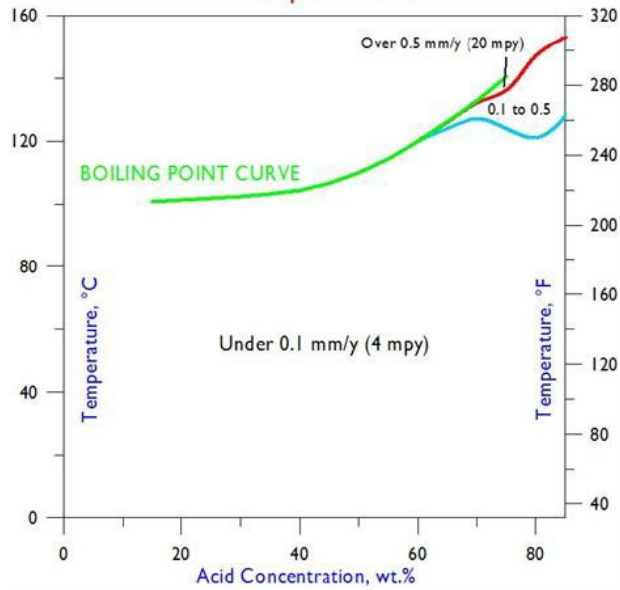
Conc. Wt.%	125°F	150°F	175°F	200°F	225°F	250°F	275°F	300°F	Boiling
	52°C	66°C	79°C	93°C	107°C	121°C	135°C	149°C	
50	-	-	<0.01	0.01	-	-	-	-	0.03
60	-	-	<0.01	0.01	0.02	-	-	-	0.08
70	-	-	<0.01	0.01	0.02	0.07	-	-	0.15
75	-	-	-	-	-	-	-	-	0.84
80	-	-	<0.01	0.01	-	0.08	0.14	-	0.40
85	-	-	-	-	-	0.05	0.17	0.33	7.90

All corrosion rates are in millimeters per year (mm/y); to convert to mils (thousandths of an inch) per year, divide by 0.0254.

Data are from Corrosion Laboratory Jobs 19-95 and 64-96.

All tests were performed in reagent grade acids under laboratory conditions; field tests are encouraged prior to industrial use.

**Iso-Corrosion Diagram for C-2000 Alloy  
in Phosphoric Acid**



**Sulfuric Acid**

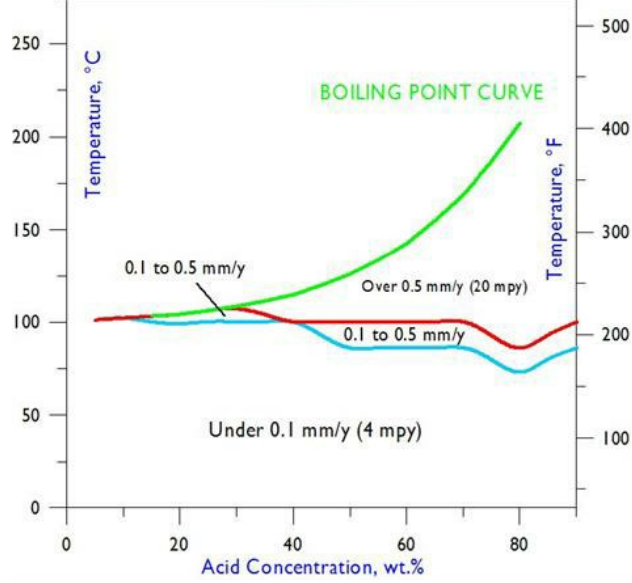
Conc. Wt.%	75°F	100°F	125°F	150°F	175°F	200°F	225°F	250°F	275°F	300°F	350°F	Boiling
	24°C	38°C	52°C	66°C	79°C	93°C	107°C	121°C	135°C	149°C	177°C	
1	-	-	-	-	-	-	-	-	-	-	-	-
2	-	-	-	-	-	-	-	-	-	-	-	-
3	-	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-
10	-	-	-	-	<0.01	0.02	-	-	-	-	-	0.09
20	-	-	-	-	0.01	0.03	-	-	-	-	-	0.18
30	-	-	-	-	0.01	0.04	-	-	-	-	-	0.42
40	-	-	-	-	0.01	0.05	0.72	-	-	-	-	1.13
50	-	-	-	<0.01	0.02	0.16	0.68	1.71	-	-	-	3.35
60	-	-	-	<0.01	0.02	0.37	0.84	2.81	-	-	-	9.27
70	-	-	-	0.01	0.07	0.42	1.40	4.32	-	-	-	-
80	-	-	-	0.06	0.28	0.99	1.62	2.37	-	-	-	-
90	-	-	-	0.02	0.07	0.37	1.17	2.24	-	-	-	-
96	-	-	-	-	0.05	0.19	0.63	-	-	-	-	-

All corrosion rates are in millimeters per year (mm/y); to convert to mils (thousandths of an inch) per year, divide by 0.0254.

Data are from Corrosion Laboratory Jobs 8-95, 11-95, 18-95, 43-95, 9-96, 15-96, and 20-96.

All tests were performed in reagent grade acids under laboratory conditions; field tests are encouraged prior to industrial use.

**Iso-Corrosion Diagram for C-2000 Alloy  
in Sulfuric Acid**



**Reagent Grade Solutions, mm/y**

Chemical	Conc.	100°F	125°F	150°F	175°F	200°F	Boiling
		38°C	52°C	66°C	79°C	93°C	
Acetic Acid	99	-	-	-	-	-	<0.01
Chromic Acid	10	-	-	0.10	-	-	-
	20	-	-	0.61	-	-	-
Formic Acid	88	-	-	-	-	-	0.01
Hydrobromic Acid	2.5	-	-	<0.01	-	0.01	0.01
	5	-	-	<0.01	-	0.01	0.15
	7.5	-	-	-	<0.01	<0.01	0.58
	10	-	-	<0.01	<0.01	0.34	1.71
	15	-	-	-	0.10	0.94	-
	20	-	-	<0.01	0.61	0.86	-
	25	<0.01	0.15	0.30	0.53	0.91	-