HASTELLOY® G-35® alloy

Selected Corrosion Data

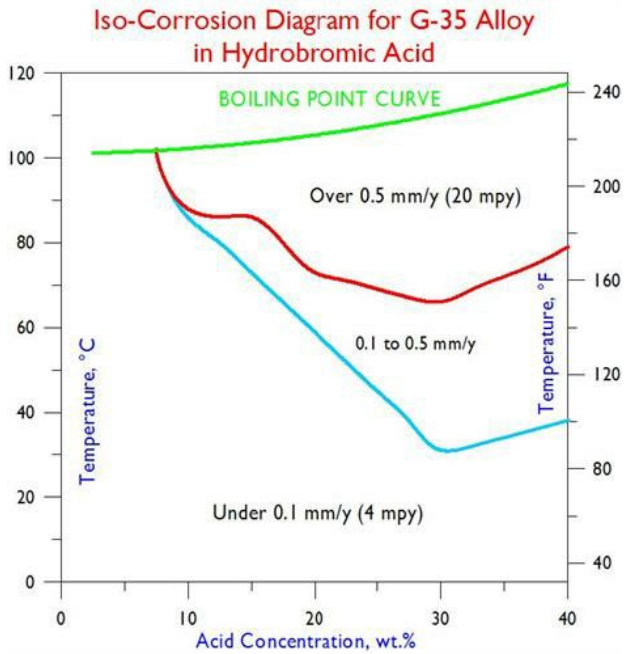
Hydrobromic Acid

Conc. Wt.%	50°F 10°C	75°F 24°C	100°F 38°C	125°F 52°C	150°F 66°C	175°F 79°C	200°F 93°C	225°F 107°C	Boiling
2.5	-	-	-	-	<0.01	-	<0.01	-	<0.01
5	-	-	-	-	<0.01	-	<0.01	-	<0.01
7.5	-	-	-	-	<0.01	-	<0.01	-	0.02
10	-	-	-	-	<0.01	<0.01	1.12	-	-
15	-	-	-	-	<0.01	0.41	1.89	-	-
20	-	-	-	<0.01	0.44	1.12	-	-	-
25	-	-	-	-	-	-	-	-	-
30	-	0.01	0.14	0.26	0.46	0.84	-	-	-
40	-	-	0.10	0.17	0.31	0.48	-	-	-

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 Job 17-04.

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



Hydrochloric Acid

Conc. Wt.%	50°F 10°C	75°F 24°C	100°F 38°C	125°F 52°C	150°F 66°C	175°F 79°C	200°F 93°C	225°F 107°C	Boiling
1	-	-	-	-	-	-	-	-	0.05
1.5	-	-	-	-	-	-	-	-	-

2	-	-	-	-	-	-	<0.01	-	0.05
2.5	-	-	-	<0.01	<0.01	<0.01	17.83	-	-
3	-	-	-	-	<0.01	<0.01	-	-	-
3.5	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-
4.5	-	-	-	-	-	-	-	-	-
5	-	-	<0.01	-	<0.01	1.23	17.08	-	-
7.5	-	-	<0.01	0.47	0.97	-	-	-	-
10	-	<0.01	0.17	1.49	-	-	-	-	-
15	0.09	0.19	0.52	-	-	-	-	-	-
20	0.08	0.15	0.42	-	-	-	-	-	-

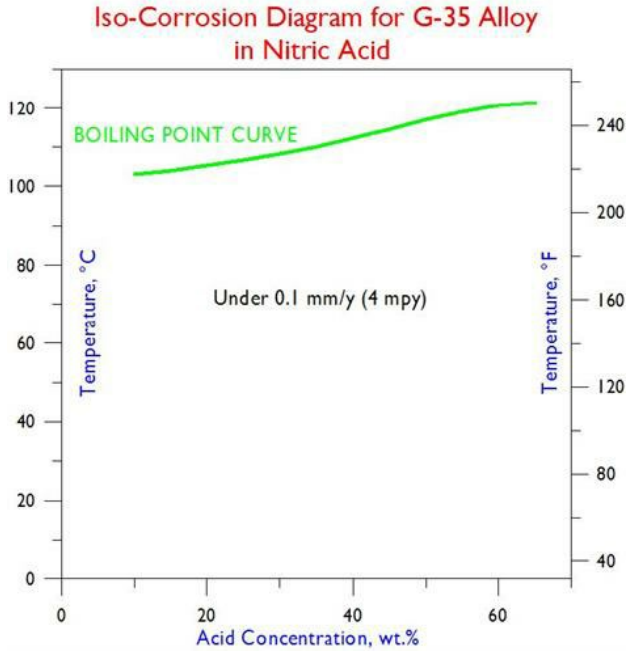
All corrosion rates are in millimeters per year (mm/y); to convert to mils (thousandths of an inch) per year, divide by 0.0254.
Data are from Corrosion Laboratory Job 44-02.
All tests were performed in reagent grade acids under laboratory conditions; field tests are encouraged prior to industrial use.

Hydrochloric G-35

Nitric Acid

Conc. Wt.%	50°F 10°C	75°F 24°C	100°F 38°C	125°F 52°C	150°F 66°C	175°F 79°C	200°F 93°C	225°F 107°C	Boiling
10	-	-	-	-	-	-	-	-	-
20	-	-	-	-	-	-	-	-	<0.01
30	-	-	-	-	-	-	-	-	-
40	-	-	-	-	-	-	-	-	0.01
50	-	-	-	-	-	-	-	-	0.03
60	-	-	-	-	-	-	-	-	0.06
65	-	-	-	-	-	-	-	-	0.07
70	-	-	-	-	-	-	-	-	0.10

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 Job 6-03.
All tests were performed in reagent grade acids under laboratory conditions; field tests are encouraged prior to industrial use.



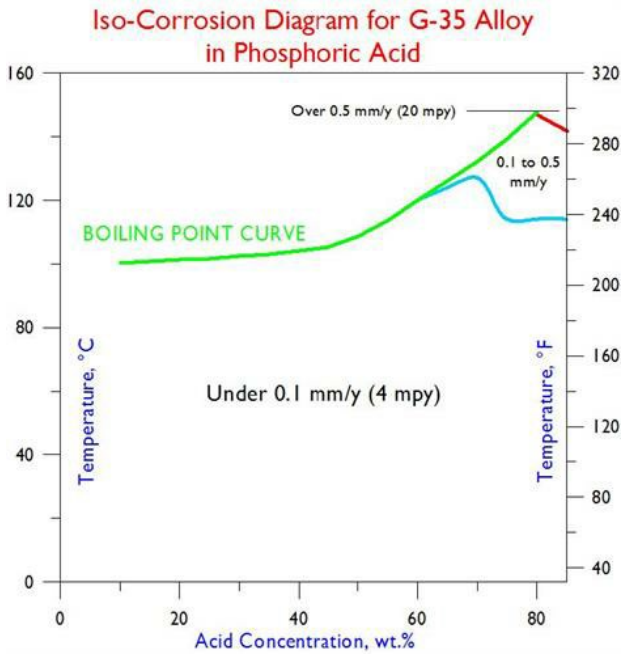
Phosphoric Acid

Conc. Wt.%	125°F 52°C	150°F 66°C	175°F 79°C	200°F 93°C	225°F 107°C	250°F 121°C	275°F 135°C	300°F 149°C	Boiling
50	-	-	-	-	-	-	-	-	0.01
60	-	-	-	-	-	-	-	-	0.01
65	-	-	-	-	-	-	-	-	0.17
70	-	-	-	-	0.01	0.09	-	-	0.11
75	-	-	-	-	-	0.12	-	-	0.30
80	-	-	-	-	0.07	0.12	0.37	-	0.42
85	-	-	-	-	0.07	0.14	0.31	0.71	0.99

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 5-03 and 30-04.

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



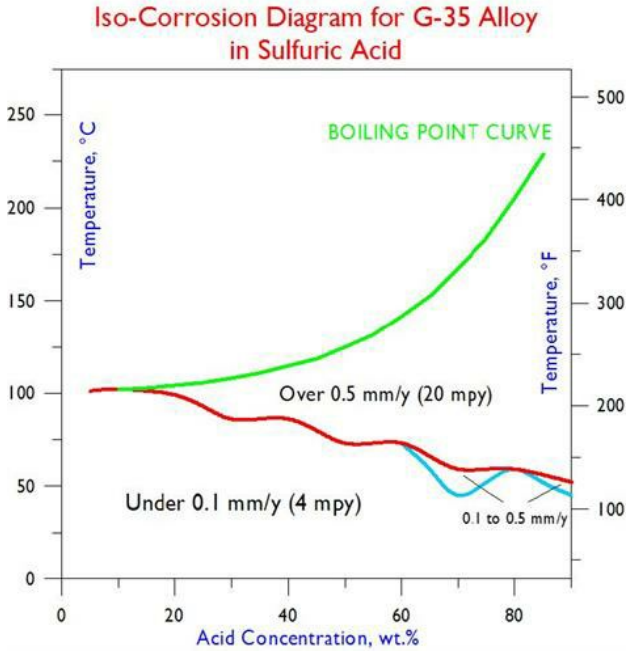
Sulfuric Acid

Conc. Wt.%	75°F 24°C	100°F 38°C	125°F 52°C	150°F 66°C	175°F 79°C	200°F 93°C	225°F 107°C	250°F 121°C	275°F 135°C	300°F 149°C	350°F 177°C	Boiling
1	-	-	-	-	-	-	-	-	-	-	-	-
2	-	-	-	-	-	-	-	-	-	-	-	-
3	-	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	0.07
10	-	-	-	-	-	<0.01	-	-	-	-	-	0.11
20	-	-	-	-	-	0.01	-	-	-	-	-	0.59
30	-	-	-	-	<0.01	2.62	-	-	-	-	-	-
40	-	-	-	<0.01	<0.01	5.41	-	-	-	-	-	-
50	-	-	-	<0.01	2.30	-	-	-	-	-	-	-
60	-	-	-	<0.01	2.45	-	-	-	-	-	-	-
70	-	<0.01	0.32	1.62	-	-	-	-	-	-	-	-
80	-	<0.01	<0.01	2.54	-	-	-	-	-	-	-	-
90	-	<0.01	0.54	3.12	-	-	-	-	-	-	-	-
96	-	<0.01	0.50	2.84	-	-	-	-	-	-	-	-

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 Job 45-02.

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



Reagent Grade Solutions, mm/y

Chemical	Conc. wt.%	100°F 38°C	125°F 52°C	150°F 66°C	175°F 79°C	200°F 93°C	Boiling
Acetic Acid	99	-	-	-	-	-	<0.01
Chromic Acid	10	-	-	0.15	-	-	-
	20	-	-	0.85	-	-	-
Formic Acid	88	-	-	-	-	-	0.07
Hydrobromic Acid	2.5	-	-	<0.01	-	<0.01	<0.01
	5	-	-	<0.01	-	<0.01	<0.01
	7.5	-	-	<0.01	-	<0.01	0.02
	10	-	-	<0.01	<0.01	1.12	-
	15	-	-	<0.01	0.42	1.89	-
	20	-	<0.01	0.44	1.12	-	-
	30	0.14	0.26	0.46	0.84	-	-
	40	0.10	0.17	0.31	0.48	-	-
Hydrochloric Acid	1	-	-	-	-	-	0.05
	2	-	-	-	-	<0.01	0.05
	2.5	-	<0.01	<0.01	<0.01	17.83	-
	3	-	-	<0.01	<0.01	-	-
	5	<0.01	-	<0.01	1.23	-	-
	7.5	<0.01	0.47	0.97	-	-	-
	10	0.17	1.49	-	-	-	-
	15	0.52	-	-	-	-	-
	20	0.42	-	-	-	-	-
	20	-	-	-	-	-	<0.01
	40	-	-	-	-	-	0.01

Nitric Acid	50	-	-	-	-	-	0.03
	60	-	-	-	-	-	0.06
	65	-	-	-	-	-	0.07
	70	-	-	-	-	-	0.10
Phosphoric Acid	50	-	-	-	-	-	0.01
	60	-	-	-	-	-	0.01
	70	-	-	-	-	-	0.11
	75	-	-	-	-	-	0.30
	80	-	-	-	-	-	0.42
Sulfuric Acid	10	-	-	-	-	<0.01	0.11
	20	-	-	-	-	0.01	0.59
	30	-	-	-	<0.01	2.62	-
	40	-	-	<0.01	<0.01	-	-
	50	-	-	<0.01	2.30	-	-
	60	-	-	<0.01	2.45	-	-
	70	<0.01	0.32	1.62	-	-	-
	80	<0.01	<0.01	2.54	-	-	-
	90	<0.01	0.54	3.12	-	-	-
	96	<0.01	0.50	2.84	-	-	-

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