

HASTELLOY[®] G-30[®] alloy

Selected Corrosion Data

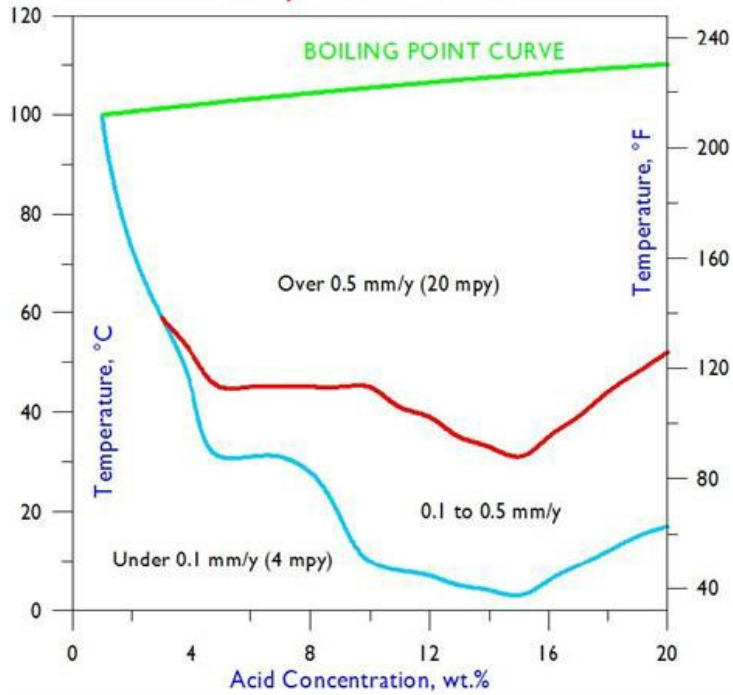
Hydrochloric Acid

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	<0.01	<0.01	-	0.01
1.5	-	-	-	-	-	-	-	-	-
2	-	-	-	<0.01	<0.01	-	-	-	9.47
2.5	-	-	-	<0.01	1.04	2.06	4.23	-	12.67
3	-	-	<0.01	<0.01	-	-	-	-	-
3.5	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-
4.5	-	-	-	-	-	-	-	-	-
5	-	<0.01	0.33	0.71	1.33	2.65	9.06	-	-
7.5	<0.01	0.05	-	-	-	-	-	-	-
10	0.08	0.19	0.44	0.64	1.48	3.96	15.21	-	-
15	0.13	0.31	0.66	1.87	1.47	-	11.98	-	-
20	-	0.13	0.30	0.55	1.24	-	10.90	-	-

Data are from Corrosion Laboratory Jobs 446-82, 168-89, and 66-96.

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

Iso-Corrosion Diagram for G-30 Alloy in Hydrochloric Acid



Sulfuric Acid

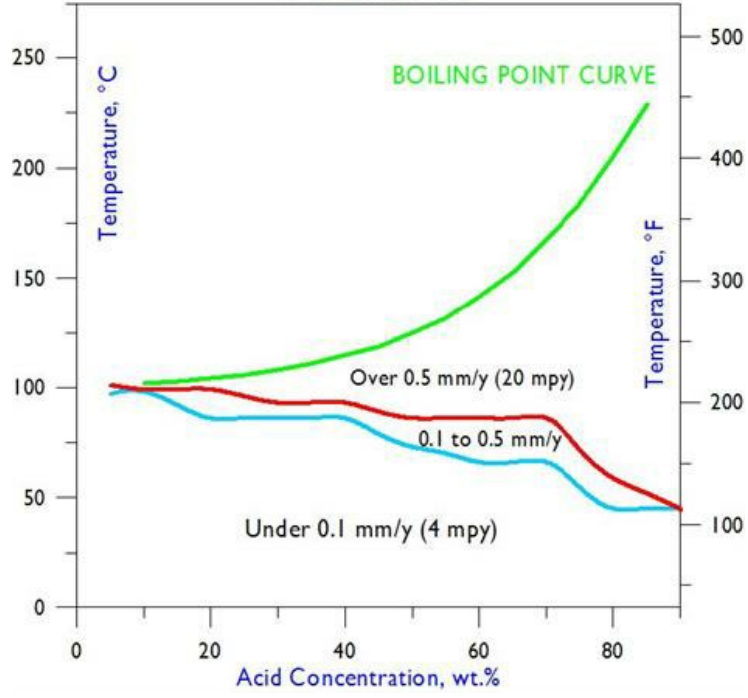
Conc. Wt.%	75°F	100°F	125°F	150°F	175°F	200°F	225°F	250°F	275°F	300°F	350°F	Boiling
	24°C	38°C	52°C	66°C	79°C	93°C	107°C	121°C	135°C	149°C	177°C	
1	-	-	-	-	-	-	-	-	-	-	-	-
2	-	-	-	-	-	-	-	-	-	-	-	-
3	-	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	<0.01	<0.01	-	-	-	-	-	0.47
10	-	-	-	-	<0.01	<0.01	-	-	-	-	-	0.78
20	-	-	-	-	<0.01	0.36	-	-	-	-	-	1.35
30	-	-	-	-	0.01	0.55	-	-	-	-	-	1.53
40	-	-	-	0.02	0.05	0.54	-	-	-	-	-	1.95
50	-	<0.01	<0.01	0.01	0.26	0.56	0.93	-	-	-	-	3.68
60	-	-	<0.01	0.09	0.27	0.73	1.07	-	-	-	-	8.46
70	-	<0.01	0.01	0.11	0.36	0.98	1.38	-	-	-	-	-
80	-	-	0.31	1.13	2.62	4.52	4.70	-	-	-	-	-
90	-	<0.01	0.67	2.01	3.25	6.55	6.25	-	-	-	-	-
96	-	-	0.45	1.86	2.04	1.86	1.52	-	-	-	-	-

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 449-82.

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

Iso-Corrosion Diagram for G-30 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	-	-	-	-	-	0.03
Chromic Acid	5	-	-	0.02	-	-	0.40
	10	-	-	0.14	-	-	1.23
Formic Acid	88	-	-	-	-	-	0.05
Hydrochloric Acid	1	-	-	<0.01	<0.01	<0.01	0.01
	2	-	<0.01	<0.01	-	-	9.47
	2.5	-	<0.01	1.04	2.06	4.23	-
	3	<0.01	<0.01	-	-	-	-
	5	0.33	0.71	1.33	2.65	-	-
	10	0.44	0.64	1.48	3.96	-	-
	15	0.66	1.87	1.47	-	-	-
	20	0.30	0.55	1.24	-	-	-
Nitric Acid	50	-	-	-	-	-	0.08
	60	-	-	-	-	-	0.14
	65	-	-	-	-	-	0.16
Phosphoric Acid (Reagent Grade)	50	-	-	-	-	<0.01	0.01
	60	-	-	-	-	-	0.14
	70	-	-	-	-	0.01	0.35
	80	-	-	-	-	-	0.61
	85	-	-	-	-	-	0.84
Sulfuric Acid	10	-	-	-	<0.01	<0.01	0.78
	20	-	-	-	<0.01	0.36	1.35
	30	-	-	-	0.01	0.55	1.53
	40	-	-	0.02	0.05	0.54	1.95
	50	<0.01	<0.01	0.01	0.26	0.56	-
	60	-	<0.01	0.09	0.27	0.73	-
	70	<0.01	0.01	0.11	0.36	0.98	-
	80	-	0.31	1.13	2.62	4.52	-
	90	<0.01	0.67	2.01	3.25	6.55	-
	96	-	0.45	1.86	2.04	1.86	-