Corrosion resistance table

Stainless steels can be susceptible to certain localised corrosion mechanisms,
namely crevice corrosion, pitting, intercrystalline corrosion, stress corrosion cracking and bimetallic (galvanic) corrosion.
Localised corrosion is often associated with chloride ions in aqueous environments.
Corrosion resistance relies on a good supply of oxygen. Higher levels of chromium, nickel, molybdenum and nitrogen increase resistance to localised corrosion.

The corrosion table is not a exact reproduction of reality, it is a first determination.
The criterion for corrosion in the case of general corrosion is expressed as weight loss
by unit of time and surface area, for example grammes by square meter and per hour, or loss of thickness per unit of time, for example mm per year.
The loss of weight by unit of time and surface area is commonly used for laboratory tests, the loss of thickness per unit of time is commonly used in practice.
The general accepted practical limit within a material is considered corrosion resistant, is 0.1mm per year.

Note! Remember that corrosion is a complicated issue, depending on the combinations of materials and the fluids, the fluid temperatures, the surrounding environment and the galvanic currents in the constructions.
The corrosion table must be used with care.

Conversion Factors

Composed entity	Conversion factors		
	g/m² h	mm / year	mm / year
g/m²/h	1.0	8,64: s.g.	340: s.g.
g/m²/24h	0.042	0,360: s.g.	14,2: s.g.
g/dm²/24h	4.17	36,0: s.g.	1420: s.g.
mg/dm²/24h	0.004	0,036: s.g.	1,42: s.g.
mg/cm²/24h	0.417	3,60: s.g.	142: s.g.
lbs/ft²/24h	203	1760: s.g.	69200: s.g.
lbs/ft²/year	0.564	4,88: s.g.	192: s.g.

Corrosion resistance table

Corrosion criteria

Composed unit	Conversion factors		
	g/m² h	mm / year	mills/year
mm/year	0,116 x s.g.	1.0	39.4
mm/month	1,39 x s.g.	12	479
mm/48h	20,80 x s.g.	180	7185
tum/year (ipy)	2,95 x s.g.	25.4	100.00
tum/month (imp)	35,3 x s.g.	305	12000
mills/year (mpy)	0,003 x s.g.	0.025	1.0
mills/month (mpm)	0,035 x s.g.	0.305	12

s.g. = Specific gravity
mills (thousandth of an inch) per year penetration

Corrosion criteria based on laboratory tests are commonly expressed in grams per square meter per hour. For all metals this entity correspondents with approximately mm/per year (1 g/m²h = 1,1 mm/year) beacause the specific gravity (7.7 to 8.1) for all metal is similar.
Titanium has a specific gravity of 4.5 the entity is 1g/m²h =1,9 mm year.

Specific gravity stainless steels and other metals

Composed unit	W.N.	Specific gravity
13 Cr	1.4000	7.7
17 Cr	1.4016	7.7
18 Cr - 2 Mo	1.4521	7.7
25 - 5 - 1,5 Mo	1.4460	7.7
18 - 9	1.4301, 1.4306, 1.4311, 1.4541	7.9
17 - 12 - 2,5 Mo	1.4401, 1.4404, 1.4571, 1.4436,	8.0
	1.4435, 1.4429, 1.4438	
18 - 14 - 3,5 Mo	1.4438	8.0
17 - 15 - 4,5 Mo	-	8.0
20 - 25 4,5 Mo - 1,5 Cu	1.4539	8.1
Carbon steel		7.8
Titanium	4.5	

Corrosion resistance table

In the table on the next pages the following symbols are used meaning:

0 Corrosion rate less than 0.1 mm/year.
The material is corrosion proof.

1 Corrosion rate 0.1 - 1.0 mm/year.
The material is not corrosion proof, but useful in certain cases.

2 Corrosion rate over 1.0 mm/year.
Serious corrosion. The material is not usable.
P **Risk (Severe risk)** of pitting and crevice corrosion.
S **Risk (Severe risk)** of stress corrosion cracking.
K Boiling solution.

All concentrations are in the percentage weight loss, the solvent is water unless differently indicated.
The information applies for annealed materials with a normal structure and a surface that is clean.

Corrosion resistance table

Medium	Chemical formular	Concentration	Temp. °C	304 cr 18 ni 9	316 cr 17 ni 12 mo 2,5
Acetone	$(CH_3)_2CO$	1	20-K	0	0
Acetylchloride	CH_3COCl	100% dry wet	K K	1 P1S	0 P0S
Alum	$KAL(SO_4)_2$	2.5%	90	0	0
		2.5%	K	1	0
		5.5%	20-90	0	0
		5.5%	K	1	1
		10%	20	0	0
		10%	50	0	0
		10%	80	1	0
		10%	K	1	1
		15%	50	0	0
		15%	K	2	2
		saturated	K	2	2
Aluminium melted	AL	-	700	2	2
Aluminium acetate	$Al(OOCCH_3)_3$	saturated	K	0	0
Aluminiumchloride	$ALCL_3$	5%	50	P0S	P0S
		5%	100	P2S	P2S
		10%	100	2	2
		10%	150	2	2
		20%	100	2	2
		20%	150	2	2
		25%	20	2	2
		25%	60	2	2
		27.5%	110	2	2
Aluminium nitrate	$AL(NO_3)_3$	all conc.	20	0	0
Aluminium sulphate	$AL_2(SO_4)_3$	0.50%	50	0	0
		1%	20	0	0
		2.30%	101=K	2	0
		5%	101=K	2	0
		10%	20	0	0
		10%	50	0	0
		10%	102=K	2	1
		23%	20	2	0
		23%	100	2	1
		27%	20	2	0
		27%	102=K	2	1
		saturated by 20°C	105=K	2	2
Ammonium	NH_4OH	all conc.	20-K	0	0
Ammonium bifluoride	NH_4HF_2	10%	25	2	1
Ammonium bicarbonate	$(NH_4)HCO_3$	all conc.	20	0	0

Corrosion resistance table

Medium	Chemical formular	Concentration	Temp. °C	304 cr 18 ni 9	316 cr 17 ni 12 mo 2,5
Ammonium chloride	NH_4CL	1%	20	P_0	P_0
		1%	100	P_0S	P_0S
		5%	K	P_0S	P_0S
		10%	20-50	P_0	P_0
		10%	90-100	P_0S	P_0S
		10%	K	P_1S	P_0S
		10%	135	P_1S	P_0S
		20%	20-50	P_0	P_0
		20%	90	P_1S	P_0S
		20%	K	P_1S	P_1S
			115	P_2S	P_1S
Ammonium carbonate	$(NH_4)_2CO_3 \cdot H_2O$	all conc.	20	0	0
			100	0	0
Ammonium nitrate	$NH_4NO_3 + (NH_4)_2SO_4$ in elke verhouding	100	60	0	0
		100	120	1	0
Ammonium oxalate	$(NH_4)_2C_2O_4$	1-8%	20	0	0
		5-20%	100	1	0
Ammoniumperchlorate	NH_4ClO_4	10%	20	0	0
		10%	K	0	0
		20%	30	0	0
		10%	K	P_0S	P_0S
			30	P_0	P_0
Ammonium sulfphate	$(NH4)_2SO_4$	all conc.	20-K	0	0
Ammonium sulphite	$(NH4)_2SO_3$	saturated	20-K	0	0
Aniline unrefined	$C_6H_5NH_2$	100%	20	0	0
Aniline hydrochloride	$C_6H_5NH_2HCl$	all conc.	20	P_2	P_2
		5%	100	P_2S	P_2S
Anitimonium, melted	Sb	-	650	2	2
Acetic acid	CH_3COOH	1%	90	0	0
		1%	100K	0	0
		5%	20	0	0
		5%	50	0	0
		5%	75	0	0
		5%	100=K	0	0
		10%	20	0	0
		10%	75	0	0
		10%	100=K	1	0
		20%	20	0	0
		20%	80	0	0
		20%	90	1	0

Corrosion resistance table

Medium	Chemical formular	Concentration	Temp. °C	304 cr 18 ni 9	316 cr 17 ni 12 mo 2,5
Acetic acid	CH_3COOH	20%	100=K	2	0
		50%	20	0	0
		50%	80	0	0
		50%	90	1	0
		50%	100	2	0
		80%	20	0	0
		80%	40	0	0
		80%	85	1	0
		99.5%	200	2	1
		100%	20	0	0
		100%	80	0	0
		100%	100	1	0
Bariumchloride	$BaCl_2 2H20$	6%	100	P_0S	P_0S
		23%	100	P_0S	P_0S
			melted	2	2
Petrol		-	20-K	0	0
Beer yeast		-	20-K	0	0
Borax: in solution	$Na_2B_4O710H_2O$	all conc.	20-K	0	0
melted		melted		2	2
Blood		-	20 37	0	0 P_0
Boric acid	$B(OH)_3$	all conc.	K	0	0
			K	0	0
Bromine moist	Br_2	100%	20	2	2
Aqueous solution of bromine		0.03%	20	P_0	P_0
		0.30%	20	P_1	P_0
Butryic acid	C_3H_7COOH	100%	20	0	1
		100%	K	1	0
Calciumbisulphite	$Ca(HSO_3)_2$	10%	20	0	0
		10%	K	1	0
Calciumchloride	$CaCl_2 \cdot {}_6H_2O$	cold saturated			
Calciumhypochloride	$Ca(ClO)_2$	1%	20	P_1	P_0
		2%	100	P_1S	P_1S
		6%	20	P_1	P_1
		6%	100	P_2S	P_1S
Calcium sulphate	$CaSO_4$	all conc.	100	0	0
Chloride	CL_2	dry gas 100% moist gas	70 20-60 60-100	0 P_2 P_2S	0 P_2 P_2S

Corrosion resistance table

Medium	Chemical formular	Concentration	Temp. °C	304 cr 18 ni 9	316 cr 17 ni 12 mo 2,5
Chlorobezene	C_6H_5Cl	100%	20%	0	0
		100%	132-K	0	0
		with moisture		P_0S	P_0S
Chloroacetic Acid (mono)	$CH_2ClCOOH$	30%	80	2	2
		50%	20	2	2
		100%	100	2	2
		100%	100	2	2
Chloride of lime ,dry	$CaOCl_2$	0.8%	20	P_1	P_0
moist		1%	K		P_0S
		20%	35		P_0
		30%	20	1	1
Chloroform	$CHCl_3$	all conc.	20	P_0	P_0
		-	K	P_0S	P_0S
		dry 100%	62=K	0	0
Sulpher chloride	S_2Cl_2	dry 100%	20	0	0
		dry 100%	136=K	0	0
		nat	20	P_1	P_1
Chloric acid	$HClO_3$	10%	20	-	-
		100%	20	P_2	P_2
Hydrogen chloride, gas	HCl	dry	20-40	0	0
dry			100	1	1
			250	1	
			400-500	2	2
Chromic acid	CrO_3	2%	75	0	0
pure, H_2SO_4 free		2%	100=K	2	2
		5%	80	0	0
		5%	100=K	1	2
		10%	40	0	0
		10%	K	2	2
		20%	20	0	0
		20%	50	1	1
		20%	K	2	2
		40%	20	1	1
		40%	40	2	2
		50%	20	2	2

Corrosion resistance table

Medium	Chemical formular	Concentration	Temp. °C	304 cr 18 ni 9	316 cr 17 ni 12 mo 2,5
Citric acid	$C_3H_4(OH)(COOH)_3$	1%	20	0	0
		1%	K	0	0
		5%	20-50	0	0
		5%	85-K	0	0
		5%	140	1	0
		10%	20-40	0	0
		10%	85-K	0	0
		25%	20	0	0
		25%	40	0	0
		25%	85	1	0
		25%	100	2	0
		25%	K	2	0
		50%	20	0	0
		50%	40	0	1
		50%	100	2	0
		50%	K	2	0
		70%	K	2	0
Hydrocyanic acid	HCN	100%	20	0	0
Dichloroethylene	$C_2H_2Cl_2$	100% wet	20-K	0 P_0S	0 P_0S
Ethyl chloride	C_2H_5Cl	wet	20-K	0 P_0S	0 P_0S
Ethyl alcohol	C_2H_5OH	all conc.	20-K	0	0
Ethyl ether	$(C_2H_5)_2O$	-	20-K	0	0
Ethyl chloride	$C_2H_4Cl_2$	100%	20-K	0	0
Hyposulphite	$Na_2S_2O_3+K_2S_2O_4$	40%, 2,5%	20	P_0	0
Hyposulphite + Sulphuric acid	$Na_2S_2O_3+Na_2SO_3$ $+H_2SO_4$	19%, 4,7% -0.50%	20	P_0	0
Hydrogen fluoride	HF	1%	20	1	0
		10%	20	2	2
		75%	20	2	2
		100%	20	1	1
Formaldehyde	HCHO	all conc.	20-K	0	0
Galic acid	$C_6H_2(OH)_3COOH$	conc. 25% saturated op 100°C	K	0	0
Glycerine	$C_3H_5(OH)_3$	all conc.	20	0	0

Corrosion resistance table

Medium	Chemical formular	Concentration	Temp. °C	304 cr 18 ni 9	316 cr 17 ni 12 mo 2,5
Iodine, dry	I_2	dry	20	0	0
moist		moist	20	P_2	
		P2 water solution 1%	20	P_0	P_0
		water solution 2% + 1% KI	20	P_0	P_0
Idioform, liquefied vaporous	CHI_3	crystal	20	P_0	P_0
damp		50	P_0	P_0	
Potassium dichromate	$K_2Cr_2O_7$	20%	90	0	0
		25%	20	0	0
		25%	K	0	0
Potassium bifluoride	KHF_2	cold saturated			
Potassium bitartrate	$KH(OOC(OH)CH)_2$	saturated bij 100°C	K	1	0
Potassium bromide	KBr	all conc.	20	P_0	P_0
Potassium chlorate	$KClO_3$	7-10%	50	0	0
		10%	100	0	0
		36%	K	1	0
	met Cl			PS	PS
Potassium chlorate	$KClO_3$	all conc.		P	P
Potassium cyanide	KCNO				
Potassium cyanide	KCN	all conc.	20	0	0
			K		0
Potassium ferricyanide	$K_3(Fe(CN)_6)$	all conc.	20	0	0
			K	0	0
Potassium hydroxide	KOH	10%	K	0	0
		20%	20	0	0
		25%	K	0	0
		50%	20	0	0
		50%	K	$_1S$	$_1S$
		70%	120	$_1S$	$_1S$
		melted	300-365	$_2S$	$_2S$
Potassium hypochlorite	KClO	<2%	20	P_1	P_0
until 20 g as cl/liter	>20%	20	P_2	P_1	
Kaliumjodide	KI	all conc.	K	P_0	P_0
Potassium carbonate	K_2CO_3	all conc.	K	0	0
			900-1000	2	2
Potassium nitrate	KNO_3	all conc.	20-K	0	0
		550	0	0	
		780	1	1	

Corrosion resistance table

Medium	Chemical formular	Concentration	Temp. °C	304 cr 18 ni 9	316 cr 17 ni 12 mo 2,5
Potassium oxalate	$(C\ OOK)_2 \times H_2O$		20	0	0
			K	0	0
Potassium permanganate	$KMnO_4$	5-10%	20	0	0
		10%	K	0	0
Potassium sulphate	K_2SO_4	all conc.	K	0	0
Silicic acid	HF	1%	20	1	0
		10%	20	2	2
		75%	30	2	2
		100%	20	1	1
Nitrohydrochloric acid	$HCl+HNO_3$			2	2
Copper acetate	$Cu(CH_3COO)_2$	all conc.	K	0	0
Copper chloride	$CuCl_2$	0.05%	100=K	P_0	P_0
Copper cyanide	$Cu(CN)_2$	saturated at 100°C			
Copper nitrate	$Cu(NO3)_2$	all conc.	20-K	0	0
Copper sulphate	$CuSO_4$	all conc.	20-K	0	0
Kwik	Hg	-	20-400	0	0
Mercuric chloride	$HgCl_2$	0.1%	20	P_1	P_0
		0.1%	K	P_1S	P_0S
		0.7%	20	P_1	P_0
		0.7%	K	P_2S	P_2S
		1-10%	100		
		1-10%	135		
Mercuric cyanide	$Hg(CN)_2$	5%	20	0	0
Mercuric nitrate	$Hg(NO3)_2$	5%	20	0	0
Lead, melted	Pb	melted	400	1	0
			900	2	2
Lead acetate	$(CH3COO)_2Pb\bullet_3H_2O$	all concentrations	20-90	0	0
			K	0	0
Lead acetate, basic	$Pb(CH_3COO)_2\ Pb(OH)_2$				
Lead nitrate	$Pb(NO3)_2$	all conc.	K	0	0
Lysol		2%	20	0	0
		conc.	20-K	0	0
Manganese chloride	$MgCl_2$	2.50%	20	P_0	P_0
		5%	K	P_0S	P_0S

Corrosion resistance table

Medium	Chemical formular	Concentration	Temp. °C	304 cr 18 ni 9	316 cr 17 ni 12 mo 2,5
Manganese sulphate	$MgSO_4$	5%	20	0	0
		5%	60	0	0
		10%	20	0	0
		10%	60	0	0
		20%	2	0	0
		20%	K	0	0
		26%	K	0	0
Mangaan chloruur	$MnCl_2$	5%	100	P_0S	
		P_0S 10%	K	P_0S	P_0S
		10%	135	P_0S	P_0S
		20%	100	P_1S	P_0S
		50%	K	P_1S	P_0S
Manganese sulphate	$MnSO_4$	alle conc.	20	0	0
		23%	K	0	0
Methyl alcohol	CH_3OH	100%	65-K	0	0
Methyl chloride	CH_3Cl	droog 100%	20	0	0
Milk		Fresh	20	0	0
			K	0	0
		sour	20	0	0
Lactic acid + sulphuric acid	$(C_2H_4COH)COOH$ + H_2SO_4	10-50% 25%	K	2	2
Mustard			20	P_0	P_0
Sodium carbonate	$NaHCO_3$	all conc.	20-100	0	0
Sodium bisulphate	$NaHSO_4$	1%	85	1	0
		2%	20	0	0
		2%	85	1	0
		4%	20	1	0
		4%	K	2	0
		5%	20	1	0
		5%	85	2	0
		10%	20	1	0
		10%	50	2	0
		10%	K	2	1
		15%	85	2	2
Sodium bisulphate	$NaHSO_3$	10%	20	0	0
		10%	K	1	0
Natriumchloraat	$NaClO_3$	10%	20	0	0
		10%	K	1	0
Sodium fluoride	NaF	5-10%	20-100	0	0

Corrosion resistance table

Medium	Chemical formular	Concentration	Temp. °C	304 cr 18 ni 9	316 cr 17 ni 12 mo 2,5
Sodium hydorxyde	NaOH	10%	20	0	0
		10%	90	0	0
		10%	103=K	0	0
		20%	20	0	0
		20%	90	0	0
		25%	20	0	0
		25%	112=K	0	0
		30%	20	0	0
Sodium hydorxyde	NaOH	30%	100	0	0
		30%	116=K	$_1$S	$_0$S
		40%	80	0	0
		40%	90	0	0
		40%	100	1	1
		40%	128=K	$_1$S	$_1$S
		50%	60	0	0
		50%	90	1	1
		50%	100	1	1
		50%	120	1	1
		50%	140=K	$_1$S	$_1$S
		60%	90	1	1
		60%	120	1	1
		60%	160=K	$_2$S	$_2$S
		70%	90	1	1
		70%	130	1	1
		70%	180=K	$_2$S	$_2$S
		90%	300	$_2$S	$_1$S
		melted	320	$_2$S	$_2$S
Sodium hypochlorite	NaClO	5%	20	P_1	P_1
		5%	K	P_1S	P_1S
Sodium carbonate	$Na2CO_3$	all conc.	20-K	0	0
		melted	900	2	2
Sodium nitrate	$NaNO_3$	all conc.	20-K	0	0
		melted	360	0	0
Sodium nitrite	$NaNO_2$	alle conc.	K	0	0
Sodium perchlotae	$NaClO_4$	10%	K	0	0
Sodium phosphate	Na_3PO_4	all conc.	K	0	0
Sodium sulphate	$NaSO_4$	all conc.	20	0	0

Corrosion resistance table

Medium	Chemical formular	Concentration	Temp. °C	304 cr 18 ni 9	316 cr 17 ni 12 mo 2,5
Sodium sulphade	NaSS	5%	K 20	0	0
		10%	K	0	0
		10-50%	20	0	0
Sodium sulphite	Na_2SO_3	50%	K	0	0
		50%	20	0	0
Sdodium thiosulphate	Na_2S2O_3	50%	K	0	0
		50%	20	0	0
Nickel chloride	$NiCl_2$	10%	100	P_0	P_0
		10%	K	P_0 S	P_0 S
Nickel nitrate	$Ni(NO_3)_2$	5-10%	K	0	0
Nickel sulphate	$NiSO_4$	all conc.	K	0	0
Mineral oil				0	0
Oil (spice oil)			K	0	0
Oxalic acid		10%	25	0	0
		10%	50	0	0
		10%	60	1	0
		10%	80	2	1
		10%	101=K	2	1
		25%	60	2	0
		25%	75	2	1
		25%	103=K	2	2
		40%	75	2	1
Paraffin, melted		-	20-100	0	0
Petrol		-	20-K	0	0
Phenol	C_6H_5OH	all conc.	20-50	0	0
		70-100%	K	1	0

Corrosion resistance table

Medium	Chemical formular	Concentration	Temp. °C	304 cr 18 ni 9	316 cr 17 ni 12 mo 2,5
Phosphoric acid	H_3PO_4	1%	20	0	0
		1%	100=K	0	0
		1%	140	0	0
		3%	100=K	0	0
		5%	20-60	0	0
		5%	85	0	0
		5%	100=K	0	0
		10%	40	0	0
		10%	60	0	0
		10%	80	0	0
		10%	101=K	0	0
		20%	35	0	0
		20%	60	0	0
		20%	102=K	0	0
		30%	20-35	0	0
		30%	60	0	0
		30%	100	1	0
		40%	35	0	0
		40%	50	0	0
		40%	100	1	0
		40%	106=K	2	1
		50%	20	0	0
		50%	35	0	0
		50%	50	0	0
		50%	85	0	0
		50%	100	1	1
		50%	110=K	2	2
		60%	20	0	0
		60%	35	0	0
		60%	100	2	1
		60%	116=K	2	2
		70%	35	0	0
		70%	90	2	1
		70%	126=K	2	2
		80%	20	0	0
		80%	35	0	0
		80%	80	1	0
		80%	100	2	1

Corrosion resistance table

Medium	Chemical formular	Concentration	Temp. °C	304 cr 18 ni 9	316 cr 17 ni 12 mo 2,5
Phosphoric acid	H_3PO_4	80%	146=K	2	2
		85%	20	0	0
		85%	50	0	0
		85%	95	2	1
		85%	156=K	2	2
Phosphorus pentoxide dry and moist	P_2O_5	droog	20	0	0
		vochtig	20	1	0
		alle conc.	20	0	0
Nitric acid	HNO_3	0.5%	250	0	0
		1%	20	0	0
		1%	50	0	0
		1%	100=K	0	0
		5%	20	0	0
		5%	50	0	0
		5%	100=K	0	0
		5%	150	1	1
		5%	290	2	2
		10%	20	0	0
		10%	50	0	0
		10%	101=K	0	0
		10%	145	2	2
		20%	20	0	0
		20%	50	0	0
		20%	103=K	0	0
		20%	120	1	1
		30%	20	0	0
		30%	70	0	0
		30%	106=K	0	0

Corrosion resistance table

Medium	Chemical formular	Concentration	Temp. °C	304 cr 18 ni 9	316 cr 17 ni 12 mo 2,5
Nitric acid	HNO_3	30%	120	1	1
		50%	20	0	0
		50%	70	0	0
		50%	90	0	0
		50%	110	1	1
		50%	117=K	1	1
		60%	20	0	0
		60%	60	0	0
		60%	100	1	1
		60%	121=K	1	1
		65%	20	0	0
		65%	60	0	0
		65%	70	0	0
		65%	90	1	1
		65%	121=K	1	1
		65%	175		
		80%	20	0	0
		80%	50	0	0
		80%	80	1	1
		80%	106=K	2	1
		90%	20	0	0
		90%	80	2	2
		90%	94=K	2	2
		94%	30	0	0
		97%	25	0	0
		99%	25	1	1
		99%	40	2	2
		99%	84=K	2	2
Nitrous acid	HNO_2	all conc.	20	0	0
Tin, melted	Sn	melted	300	0	0
			350		
			400	1	1
			500-700	2	2
Stannous (II) chloride	$SnCl_2$	5-24%	20	P_2	P_1
		18-24%	K	P_2	P_2
Toluene	$C_6H_5CH_3$	100%	K	0	0
Trichloroethylene (technical grade)	C_2HCl_3				
Urine		-	0-60	P0	P0
Urea	$CO(NH_2)_2$	-	180	0	0

Corrosion resistance table

Medium	Chemical formular	Concentration	Temp. °C	304 cr 18 ni 9	316 cr 17 ni 12 mo 2,5
Fatty acid, oil acid		100%	20	0	0
Stearic acid		100%	80-130	0	0
		100%	150	0	0
		100%	180	1	0
		100%	235	1	0
		100%	300	2	0
Hydrogen peroxide	H_2O_2	1-2%	50	0	0
		5%	20	0	0
		5%	40-50	0	0
		10%	23	0	0
		10%	40	0	0
		10%	60-80	0	0
		15%	22	0	0
		15%	30-40	0	0
		15%	50-80	0	0
		30%	27	0	0
		30%	40-80	0	0
		50%	40	0	0
Fruit juices, Wines			-	0	0
Wine vinagar		4-5%	20	0	0
Tataric acid	$H_2(OH)_2(COOH)_2$	1%	90	0	0
		1%	100=K	0	0
		20%	70	0	0
		20%	100	1	0
		30%	60	0	0
		30%	90	1	0
		30%	102=K	1	0
		50%	50	0	0
		50%	70	0	0
		50%	90	1	0
		50%	106=K	2	1
		60%	80	1	0
		60%	100	2	1
		70%	114=K	2	1
		75%	100	2	1
		75%	118=K	2	1
Iron (III) chloride (ferric chloride)	$FeCl_3$	0,5-50%	20-100	P_2	P_2

Corrosion resistance table

Medium	Chemical formular	Concentration	Temp. °C	304 cr 18 ni 9	316 cr 17 ni 12 mo 2,5
Iron (III) nitrate (ferric nitrate)	$Fe(NO_3)_3$	all conc.	20	0	0
Iron (III) sulphate (ferric sulphate)	$Fe_2(SO4)_4$	10%	20-K	0	0
Xylene	$C_6H_4(CH_3)_2$	all conc.	K	0	0
Silver nitrate	$AgNO_3$	all conc. melted	20-K 250	0 0	0 0
Hydrochloric acid	HCl	0.1%	20-50	P_1	P_0
		0.1%	100=K	P_1S	P_0S
		0.2%	20	P_1	P_0
		0.2%	50	P_1	P_0
		0.2%	130		
		0.5%	20	P_1	P_0
		0.5%	50	P_1	P_0
		0.5%	100=K	2	2
		1%	20	P_1	P_0
		1%	50	2	P_1
		1%	60	2	2
		1%	80	2	2
		1%	100=K	2	2
		2%	20	2	P_1
		2%	60	2	2
		2%	100=K	2	2
		3%	20	2	P_1
		3%	60	2	2
		3%	70	2	2
		3%	80	2	2
		3%	100	2	2
		3%	101=K	2	2
		5%	20-70	2	2
		5%	102=K	2	2
		8%	60	2	2
		10%	20-35	2	2
		10%	60	2	2
		20%	20-35	2	2
		30-37%	20	2	2
Sulpher	S	melted	240	0	0
		melted	445=K	2	1
		boiling	570	2	2

Corrosion resistance table

Medium	Chemical formular	Concentration	Temp. °C	304 cr 18 ni 9	316 cr 17 ni 12 mo 2,5
Sulpher chloride	S_2Cl_2	dry 100%	20	0	0
		dry 100%	136=k	0	0
		moist	20	P_1	P_1
Sulphuric acid	H_2SO_4	0.1%	100	2	1
		0.5%	20	0	0
		0.5%	50	1	0
		0.5%	100	2	1
		1%	20	0	0
		1%	50	1	0
		1%	70	1	0
		1%	85	2	1
		1%	100	2	1
		2%	20	0	0
		2%	50	1	0
		2%	60	1	0
		3%	20	0	0
		3%	35	1	0
		3%	50	1	0
		3%	85	2	1
		3%	100	2	2
		5%	20	1	0
		5%	35	1	0
		5%	60	2	1
		5%	75	2	1
		5%	85	2	2
		5%	101=K	2	2
		10%	0	2	0
		10%	50	2	1
		10%	60	2	1
		10%	80	2	2
		10%	102=K	2	2
		20%	20	2	0
		20%	40	2	1
		20%	50	2	1
		20%	60	2	2
		20%	100	2	2
		30%	20	2	1
		30%	40	2	2
		30%	60	2	2

Corrosion resistance table

Medium	Chemical formular	Concentration	Temp. °C	304 cr 18 ni 9	316 cr 17 ni 12 mo 2,5
Sulphuric acid	H_2SO_4	40%	20	2	2
		40%	40	2	2
		40%	60	2	2
		40%	90	2	2
		50%	20	2	2
		50%	40	2	2
		50%	70	2	2
		60%	20	2	2
		60%	40	2	2
		60%	70	2	2
		70%	20	2	2
		70%	40	2	2
		70%	70	2	2
		80%	20	2	1
		80%	40	2	2
		80%	60	2	2
		85%	20	1	1
		85%	30	1	1
		85%	40	1	1
		85%	50	2	2
		90%	20	0	0
		90%	30	0	0
		90%	40	2	1
		90%	70	2	2
		94%	20	0	0
		94%	30	0	0
		94%	40	1	0
		94%	50	1	1
		96%	20	0	0
		96%	30	0	0
		96%	40	0	0
		96%	50	1	1
		98%	30	0	0
		98%	40	0	0
		98%	50	2	0
		98%	80	2	2
		100%	70	0	0

Corrosion resistance table

Medium	Chemical formular	Concentration	Temp. °C	304 cr 18 ni 9	316 cr 17 ni 12 mo 2,5
Hydrogensulphide	H_2S	dry gas	100	0	0
		4%	200	0	0
		moist gas	20	P_1S	0
Sulphurous acid (SO2 dissolved in water)	H_2SO_3	2% SO_2	50	0	0
		5% SO_2	20		0
		10% SO_2	160	1	0
		20% SO_2	20	1	0
		saturated with SO_2	20	1	0
		saturated with SO_2	135	1	0
		saturated with SO_2	200	2	1
Sulpher dioxide	SO_2	dry gas 100%	100	0	0
		dry gas liquid 100%	25	0	0
		moist gas	20	1	0
		oxigen free	100	1	0