

It is important to note that corrosion is a complicated issue. It depends 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/m <sup>2</sup> h	mm / year	mills / year
g/m <sup>2</sup> /h	1,0	8,64: s.g.	340: s.g.
g/m <sup>2</sup> /24h	0,042	0,360: s.g.	14,2: s.g.
g/dm <sup>2</sup> /24h	4,17	36,0: s.g.	1420: s.g.
mg/dm <sup>2</sup> /24h	0,004	0,036: s.g.	1,42: s.g.
mg/cm <sup>2</sup> /24h	0,417	3,60: s.g.	142: s.g.
lbs/ft <sup>2</sup> /24h	203	1760: s.g.	69200: s.g.
lbs/ft <sup>2</sup> /year	0,564	4,88: s.g.	192: s.g.

### Conversion criteria

Combined unit	Conversion		
	g/m <sup>2</sup> 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 corresponds with approximately mm/per year (1 g/m<sup>2</sup>h = 1,1 mm/year) because 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/m<sup>2</sup>h = 1,9 mm year.

### Specific gravity stainless steels and other metals

Combined 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, 1.4435, 1.4429, 1.4438	8.0
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

# Technical Data

## 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.

Medium	Chemical formula	Concentration	Temp. °C	304 cr 18 ni 9	316	cr 17 ni 12 mo 2,5
Acetone	(CH <sub>3</sub> ) <sub>2</sub> CO	1	20-K	0	0	
Acetylchloride	CH <sub>3</sub> COCl	100% dry	K	1	0	
		wet	K	P1S	POS	
Alum	KAL(SO <sub>4</sub> ) <sub>2</sub>	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 <sub>3</sub> ) <sub>3</sub>	saturated	K	0	0	
Aluminiumchloride	ALCL <sub>3</sub>	5%	50	P0S	POS	
		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 <sub>3</sub> ) <sub>3</sub>	all conc.	20	0	0	
Aluminium sulphate	AL <sub>2</sub> (SO <sub>4</sub> ) <sub>3</sub>	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	
		sat. by 20°C	105=K	2	2	
Ammonium	NH <sub>4</sub> OH	all conc.	20-K	0	0	
Ammonium bifluoride	NH <sub>4</sub> HF <sub>2</sub>	10%	25	2	1	
Ammonium bicarbonate	(NH <sub>4</sub> )HCO <sub>3</sub>	all conc.	20	0	0	
Ammonium chloride	NH <sub>4</sub> CL	1%	20	P0	P0	
		1%	100	P0S	P0S	
		5%	K	P0S	P0S	
		10%	20-50	P0	P0	
		10%	90-100	P0S	P0S	

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## Corrosion resistance table

Medium	Chemical formula	Concentration	Temp. °C	304 cr 18 ni 9	316	cr 17 ni 12 mo 2,5
Ammonium chloride (continued)	NH <sub>4</sub> CL	10%	K	P1S	POS	
		10%	135	P1S	POS	
		20%	20-50	P0	P0	
		20%	90	P1S	POS	
		20%	K	P1S	P1S	
		50%	115	P2S	P1S	
Ammonium carbonate	(NH <sub>4</sub> ) <sub>2</sub> CO <sub>3</sub> ·H <sub>2</sub> O	all conc.	20	0	0	
			100	0	0	
Ammonium nitrate	NH <sub>4</sub> NO <sub>3</sub> + (NH <sub>4</sub> ) <sub>2</sub> SO <sub>4</sub> In every relation	100	60	0	0	
		100	120	1	0	
Ammonium oxalate	(NH <sub>4</sub> ) <sub>2</sub> C <sub>2</sub> O <sub>4</sub>	1-8%	20	0	0	
		5-20%	100	1	0	
Ammoniumperchlorate	NH <sub>4</sub> ClO <sub>4</sub>	10%	20	0	0	
		10%	K	0	0	
		20%	30	0	0	
		10%	K	POS	POS	
		20%	30	P0	P0	
Ammonium sulphate	(NH <sub>4</sub> ) <sub>2</sub> SO <sub>4</sub>	all conc.	20-K	0	0	
Ammonium sulphite	(NH <sub>4</sub> ) <sub>2</sub> SO <sub>3</sub>	saturated	20-K	0	0	
Aniline unrefined	C <sub>6</sub> H <sub>5</sub> NH <sub>2</sub>	100%	20	0	0	
Aniline hydrochloride	C <sub>6</sub> H <sub>5</sub> NH <sub>2</sub> HCl	all conc.	20	P2	P2	
		5%	100	P2S	P2S	
Anitimonium, melted	Sb	-	650	2	2	
Acetic acid	CH <sub>3</sub> COOH	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	
		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 <sub>2</sub> ·2H <sub>2</sub> O	6%	100	POS	POS	
		23%	100	POS	POS	
			melted	2	2	
Petrol		-	20-K	0	0	
Beer yeast		-	20-K	0	0	
Borax: in solution melted	Na <sub>2</sub> B <sub>4</sub> O <sub>7</sub> ·10H <sub>2</sub> O	All conc.	20-K	0	0	
		Melted		2 melted	2	
Blood		-	20	0	0	
			37			P0
Boric acid	B(OH) <sub>3</sub>	all conc.	K	0	0	
			K	0	0	
Bromine moist	Br <sub>2</sub>	100%	20	2	2	

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Medium	Chemical formula	Concentration	Temp. °C	304 cr 18 ni 9	316	cr 17 ni 12 mo 2,5	
Aqueous solution of bromine		0.03%	20	P0	P0		
		0.30%	20	P1	P0		
Butyric acid	C <sub>3</sub> H <sub>7</sub> COOH	100%	20	0	1		
		100%	K	1	0		
Calciumbisulphite	Ca(HSO <sub>3</sub> ) <sub>2</sub>	10%	20	0	0		
		10%	K	1	0		
Calciumhypochloride	Ca(ClO) <sub>2</sub>	1%	20	P1	P0		
		2%	100	P1S	P1S		
		6%	20	P1	P1		
		6%	100	P2S	P1S		
Calcium sulphate	CaSO <sub>4</sub>	all conc.	100	0	0		
		Chloride	CL <sub>2</sub>	dry gas	70	0	0
Chlorobezene	C <sub>6</sub> H <sub>5</sub> Cl	100%	20-60	P2	P2		
		100%	Moist gas	60-100	P2S	P2S	
		100%	20%	0	0		
Chloroacetic Acid (mono)	CH <sub>2</sub> ClCOOH	100%	132-K	0	0		
		With moisture		P0S	P0S		
		30%	80	2	2		
		50%	20	2	2		
Chloride of lime, dry moist	CaOCl <sub>2</sub>	100%	100	2	2		
		100%	100	2	2		
		0.8%	20	P1	P0		
		1%	K		P0S		
Chloroform	CHCl <sub>3</sub>	20%	35		P0		
		30%	20	1	1		
		all conc.	20	P0	P0		
Sulpher chloride	S <sub>2</sub> Cl <sub>2</sub>	-	K	P0S	P0S		
		dry 100%	62=K	0	0		
		dry 100%	20	0	0		
		dry 100%	136=K	0	0		
Chloric acid	HClO <sub>3</sub>	Wet	20	P1	P1		
		10%	20	-	-		
Hydrogen chloride, gas dry	HCl	100%	20	P2	P2		
		dry	20-40	0	0		
Chromic acid pure, H2SO4 free	CrO <sub>3</sub>	100	100	1	1		
		250	250	1	1		
		400-500	400-500	2	2		
		2%	75	0	0		
		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		
Citric acid	C <sub>3</sub> H <sub>4</sub> (OH)(COOH) <sub>3</sub>	20%	50	1	1		
		20%	K	2	2		
		40%	20	1	1		
		40%	40	2	2		
		50%	20	2	2		
		1%	20	0	0		
		1%	K	0	0		
		5%	20-50	0	0		
		5%	85-K	0	0		
		5%	140	1	0		
Citric acid	C <sub>3</sub> H <sub>4</sub> (OH)(COOH) <sub>3</sub>	10%	20-40	0	0		
		10%	85-K	0	0		
		25%	20	0	0		
		25%	40	0	0		
		25%	40	0	0		
		25%	85	1	0		

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## Corrosion resistance table

Medium	Chemical formula	Concentration	Temp. °C	304	cr 18 ni 9	316	cr 17 ni 12 mo 2,5
Citric acid (continued)	$C_3H_4(OH)(COOH)_3$	25%	100	2		0	
		25%	K	2		0	
		50%	20	0		0	
		50%	40	0		1	
		50%	100	2		0	
		50%	K	2		0	
Hydrocyanic acid	HCN	100%	20	0		0	
Dichloroethylene	$C_2H_2Cl_2$	100%	20-K	0		0	
		wet		POS		POS	
Ethyl chloride	$C_2H_5Cl$	wet	20-K	0		0	
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	P0		0	
Hyposulphite +	$Na_2S_2O_3+Na_2SO_3$	19%, 4,7%	20	P0		0	
Sulphuric acid	$+H_2SO_4$	-0.50%					
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 on 100°C	K	0		0	
Glycerine	$C_3H_5(OH)_3$	all conc.	20	0		0	
Iodine, dry moist	$I_2$	dry	20	0		0	
		moist	20	P2		P2	
		water solution 1%	20	P0		P0	
		water solution 2%					
Idioform, liquefied vaporous	$CHI_3$	+ 1% KI	20	P0		P0	
		crystal	20	P0		P0	
		damp	50	P0		P0	
Potassium dichromate	$K_2Cr_2O_7$	20%	90	0		0	
		25%	20	0		0	
		25%	K	0		0	
Potassium bitartrate	$KH(OOC(OH)CH)_2$	saturated at 100°C	K	1		0	
Potassium bromide	KBr	all conc.	20	P0		P0	
Potassium chlorate	$KClO_3$	7-10%	50	0		0	
		10%	100	0		0	
		36%	K	1		0	
		with Cl		PS		PS	
Potassium chlorate	$KClO_3$	all conc.		P		P	
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	
Potassium hypochlorite	KClO	until 20 g as cl/liter	300-365	2S		2S	
		>20%	20	P1		P0	
Kaliumjodide	KI	all conc.	K	P2		P1	
				P0		P0	

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## Corrosion resistance table

Medium	Chemical formula	Concentration	Temp. °C	304 cr 18 ni 9	316	cr 17 ni 12 mo 2,5
Potassium carbonate	K <sub>2</sub> CO <sub>3</sub>	all conc.	K	0	0	
			900-1000	2	2	
Potassium nitrate	KNO <sub>3</sub>	all conc.	20-K	0	0	
			550	0	0	
			780	1	1	
Potassium oxalate	(C OOK) <sub>2</sub> x H <sub>2</sub> O		20	0	0	
			K	0	0	
Potassium permanganate	KMnO <sub>4</sub>	5-10%	20	0	0	
		10%	K	0	0	
Potassium sulphate	K <sub>2</sub> SO <sub>4</sub>	all conc.	K	0	0	
Silicic acid	HF	1%	20	1	0	
		10%	20	2	2	
		75%	30	2	2	
		100%	20	1	1	
Copper acetate	Cu(CH <sub>3</sub> COO) <sub>2</sub>	all conc.	K	0	0	
Copper chloride	CuCl <sub>2</sub>	0.05%	100=K	P0	P0	
Copper cyanide	Cu(CN) <sub>2</sub>	saturated	K	0	0	
		at 100°C				
Copper nitrate	Cu(NO <sub>3</sub> ) <sub>2</sub>	all conc.	20-K	0	0	
Copper sulphate	CuSO <sub>4</sub>	all conc.	20-K	0	0	
Mercury	Hg	-	20-400	0	0	
Mercuric chloride	HgCl <sub>2</sub>	0.1%	20	P1	P0	
		0.1%	K	P1S	P0S	
		0.7%	20	P1	P0	
		0.7%	K	P2S	P2S	
Mercuric cyanide	Hg(CN) <sub>2</sub>	5%	20	0	0	
Mercuric nitrate	Hg(NO <sub>3</sub> ) <sub>2</sub>	5%	20	0	0	
Lead, melted	Pb	melted	400	1	0	
			900	2	2	
Lead acetate	(CH <sub>3</sub> COO) <sub>2</sub> Pb·3H <sub>2</sub> O	all concentrations	20-90	0	0	
			K	0	0	
Lead nitrate	Pb(NO <sub>3</sub> ) <sub>2</sub>	all conc.	K	0	0	
Lysol		2%	20	0	0	
		conc.	20-K	0	0	
Manganese chloride	MgCl <sub>2</sub>	2.5%	20	P0	P0	
		5%	K	P0S	P0S	
Manganese sulphate	MgSO <sub>4</sub>	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	
Manganese sulphate	MnSO <sub>4</sub>	all conc.	20	0	0	
		23%	K	0	0	
Methyl alcohol	CH <sub>3</sub> OH	100%	65-K	0	0	
Methyl chloride	CH <sub>3</sub> Cl	dry 100%	20	0	0	
Milk		Fresh	20	0	0	
			K	0	0	
		sour	20	0	0	
Lactic acid + sulphuric acid	(C <sub>2</sub> H <sub>4</sub> COH)COOH + H <sub>2</sub> SO <sub>4</sub>	10-50%	K	2	2	
		25%				
Mustard			20	P0	P0	
Sodium carbonate	NaHCO <sub>3</sub>	all conc.	20-100	0	0	
Sodium bisulphate	NaHSO <sub>4</sub>	1%	85	1	0	
		2%	20	0	0	
		2%	85	1	0	
		4%	20	1	0	
		4%	K	2	0	

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## Corrosion resistance table

Medium	Chemical formula	Concentration	Temp. °C	304 cr 18 ni 9	316	cr 17 ni 12 mo 2,5		
Sodium bisulphate (continued)	NaHSO <sub>4</sub>	5%	20	1	0			
		5%	85	2	0			
		10%	20	1	0			
		10%	50	2	0			
		10%	K	2	1			
Sodium bisulphate	NaHSO <sub>3</sub>	15%	85	2	2			
		10%	20	0	0			
		10%	K	1	0			
Natriumchloraat	NaClO <sub>3</sub>	10-20%	K	0	0			
		30%	20	0	0			
		30%	K	1	0			
Sodium fluoride	NaF	5-10%	20-100	0	0			
Sodium hydroxyde	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			
		30%	100	0	0			
		30%	116=K	1S	0S			
		40%	80	0	0			
		40%	90	0	0			
		40%	100	1	1			
		40%	128=K	1S	1S			
		50%	60	0	0			
		50%	90	1	1			
		50%	100	1	1			
		50%	120	1	1			
		50%	140=K	1S	1S			
		Sodium hypochlorite	NaClO	60%	90	1	1	
60%	120			1	1			
60%	160=K			2S	2S			
70%	90			1	1			
70%	130			1	1			
70%	180=K			2S	2S			
90%	300			2S	1S			
90%	320			2S	2S			
5%	20			P1	P1			
5%	K			P1S	P1S			
Sodium carbonate	Na <sub>2</sub> CO <sub>3</sub>			all conc.	20-K	0	0	
				melted	900	2	2	
sodium nitrate	NaNO <sub>3</sub>	all conc.	20-K	0	0			
		melted	360	0	0			
Sodium nitrite	NaNO <sub>2</sub>	alle conc.	K	0	0			
Sodium perchlorate	NaClO <sub>4</sub>	10%	K	0	0			
Sodium phosphate	Na <sub>3</sub> PO <sub>4</sub>	all conc.	K	0	0			
Sodium sulphate	NaSO <sub>4</sub>	all conc.	20	0	0			
Sodium sulphide	Na <sub>2</sub> S	5%	K	0	0			
		10%	20	0	0			
		10-50%	K	0	0			
Sodium sulphite	Na <sub>2</sub> SO <sub>3</sub>	50%	20	0	0			
		50%	K	0	0			
Sodium thiosulphate	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	50%	20	0	0			
		50%	K	0	0			
Nickel chloride	NiCl <sub>2</sub>	10%	20	P0	P0			
		10%	100	POS	POS			
Nickel nitrate	Ni(NO <sub>3</sub> ) <sub>2</sub>	5-10%	K	0	0			

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## Corrosion resistance table

Medium	Chemical formula	Concentration	Temp. °C	304 cr 18 ni 9	316	cr 17 ni 12 mo 2,5
Nickel sulphate	NiSO <sub>4</sub>	all conc.	K	0	0	
Mineral oil			K	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 <sub>6</sub> H <sub>5</sub> OH	all conc.	20-50	0	0	
		70-100%	K	1	0	
Phosphoric acid	H <sub>3</sub> PO <sub>4</sub>	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	
		80%	146=K	2	2	
		85%	20	0	0	
		85%	50	0	0	
		85%	95	2	1	
		85%	156=K	2	2	

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# Technical Data

## Corrosion resistance table

Medium	Chemical formula	Concentration	Temp. °C	304 cr 18 ni 9	316	cr 17 ni 12 mo 2,5
Phosphorus pentoxide dry and moist	P <sub>2</sub> O <sub>5</sub>	dry	20	0	0	
		moist	20	1	0	
Nitric acid	HNO <sub>3</sub>	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	
		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			
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 <sub>2</sub>	all conc.	20	0	0	
Tin, melted	Sn	melted	300	0	0	
			400	1	1	
			500-700	2	2	
Stannous (II) chloride	SnCl <sub>2</sub>	5-24%	20	P2	P1	
		18-24%	K	P2	P2	
Toluene	C <sub>6</sub> H <sub>5</sub> CH <sub>3</sub>	100%	K	0	0	
Trichloroethylene (technical grade)	C <sub>2</sub> HCl <sub>3</sub>	100%	20	0	0	
Urine	-	-	0-60	P0	P0	

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# Technical Data

## Corrosion resistance table

Medium	Chemical formula	Concentration	Temp. °C	304	cr 18 ni 9	316	cr 17 ni 12 mo 2,5
Urea	CO(NH <sub>2</sub> ) <sub>2</sub>	-	180	0		0	
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 <sub>2</sub> O <sub>2</sub>	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	
Tartaric acid	C <sub>2</sub> H <sub>2</sub> (OH) <sub>2</sub> (COOH) <sub>2</sub>	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 <sub>3</sub>	0,5-50%	20-100	P2		P2	
Iron (III) nitrate (ferric nitrate)	Fe(NO <sub>3</sub> ) <sub>3</sub>	all conc.	20	0		0	
Iron (III) sulphate (ferric sulphate)	Fe <sub>2</sub> (SO <sub>4</sub> ) <sub>3</sub>	10%	20-K	0		0	
Xylene	C <sub>6</sub> H <sub>4</sub> (CH <sub>3</sub> ) <sub>2</sub>	all conc.	K	0		0	
Silver nitrate	AgNO <sub>3</sub>	all conc.	20-K	0		0	
		melted	250	0		0	
Hydrochloric acid	HCl	0.1%	20-50	P1		P0	
		0.1%	100=K	P1S		POS	
		0.2%	20	P1		P0	
		0.2%	50	P1		P0	
		0.5%	20	P1		P0	
		0.5%	50	P1		P0	
		0.5%	100=K	2		2	
		1%	20	P1		P0	
		1%	50	2		P1	
		1%	60	2		2	
		1%	80	2		2	
		1%	100=K	2		2	
		2%	20	2		P1	
		2%	60	2		2	
		2%	100=K	2		2	
		3%	20	2		P1	

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# Technical Data

## Corrosion resistance table

Medium	Chemical formula	Concentration	Temp. °C	304 cr 18 ni 9	316	cr 17 ni 12 mo 2,5		
Hydrochloric acid (continued)	HCl	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			
		Sulphur	S	melted	240	0	0	
				melted	445=K	2	1	
boiling	570			2	2			
Sulphur chloride	S <sub>2</sub> Cl <sub>2</sub>	dry 100%	20	0	0			
		dry 100%	136=k	0	0			
		moist	20	PI	PI			
Sulphuric acid	H <sub>2</sub> SO <sub>4</sub>	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					
40%	20	2	2					
40%	40	2	2					
40%	60	2	2					
40%	90	2	2					
50%	20	2	2					

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# Technical Data

## Corrosion resistance table

Medium	Chemical formula	Concentration	Temp. °C	304	cr 18 ni 9	316	cr 17 ni 12 mo 2,5
Sulphuric acid (continued)	H <sub>2</sub> SO <sub>4</sub>	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			
Hydrogensulphide	H <sub>2</sub> S	dry gas	100	0		0	
		4%	200	0		0	
		moist gas	20	P15		0	
Sulphurous acid (SO <sub>2</sub> dissolved in water)	H <sub>2</sub> SO <sub>3</sub>	2% SO <sub>2</sub>	50	0		0	
		5% SO <sub>2</sub>	20			0	
		10% SO <sub>2</sub>	160	1		0	
		20% SO <sub>2</sub>	20	1		0	
		saturated with SO <sub>2</sub>	20	1		0	
		saturated with SO <sub>2</sub>	135	1		0	
		saturated with SO <sub>2</sub>	200	2		1	
Sulphur dioxide	SO <sub>2</sub>	dry gas	100	0		0	
		100%					
		dry gas					
		liquid	25	0		0	
		100%					
		moist gas	20	1		0	
		oxygen free	100	1		0	