

corrosion resistance guide



R = resistant to corrosion

C = partial corrosion occurs

N = not recommended

	% Concentration	°C Temperature	Mild steel	304 stainless steel	321 stainless steel	316 stainless steel	Incoloy 825	Incoloy 600	Incoloy 625	Incoloy 800	Monel 400	Nickel 200	Aluminium	Titanium
acetic acid	100	20	N	C	R	R	R	C	R	R	C	N	C	R
acetic acid	50	100	N	N	N	R	R	C	R	C	C	N	N	R
acetic acid	100	100	N	N	N	C	C	N	C	C	C	N	N	R
acetone		100	C	R	R	R	R	R	R	R	R	R	R	R
alcohol		70	R	R	R	R	R	R	R	R	R	R	R	R
aluminium chloride	0 to 30	30	N	N	N	N	C	C	R	N	C	C		
ammonia, wet	all	30	N	R	R	R	R	C	R	R	N	N		R
ammonia, dry	all	hot	N	N	N	N	R	C	R	R	N	N	R	R
benzene	100	30	C	R	R	R	R	R	R	R	C	R	R	R
calcium chloride	0 to 25	30	N	N	N	C	R	R	R	C	R	R	N	R
calcium hydroxide	0 to 30	100	N	R	R	R	R	R	R	C	R	R		R
carbon monoxide	100	450	R	R	R	R	R	R	R	R	R	R	R	R
carbon dioxide	100	450	R	R	R	R	R	R	R	R	R	R	R	R
caustic soda	0 to 75	30	C	R	R	R	R	C	R	C	R	R	N	
chlorine, dry	100	550	N	N	N	N	N	R	C	R	C	C		
chlorine, wet	100	70	N	N	N	N	N	N	N	N	N	N		
citric acid	100	30	N	C	C	C	R	C	R	C	C	C		
coke oven gas			N	C	C	C	R	C	R	C	N	N	N	
combustion gas		<450	N	C	C	C	R	C	R	C	N	N	N	
		>450	N	C	C	C	C	C	R	R	N	N	N	
ethyl acetate		30	N	C	C	R	R	C	R	C	C	C		
ethylene glycol	100	30	N	C	C	C	R	C	R	C	C	C		
ferric chloride		30	N	N	N	N	C	N	C	N	N	N	N	R
fluorine, dry			C	C	C	C	C	R	C	R	C	C	N	R
fluorine, wet	0 to 100		N	N	N	N	N	N	N	N	N	C	N	
formic acid		100	N	N	N	N	R	C	R	N	C	C		
fuel oil		30	N	N	N	N	R	N	R	R	R	N		
hydrazine	0 to 37	35	N	N	N	N	N	N	N	N	N	N	N	
hydrochloric acid	10 to 100	35	N	N	N	N	N	N	N	N	N	N	N	
hydrochloric acid	0 to 20	35	N	N	N	N	C	C	R	N	R	C	N	
hydrogen sulphide, dry	0 to 20	150	N	R	R	R	R		R	C	C			
hydrogen sulphide, wet	5	20	N	C	C	C	R	C	R	C	C	R	R	
lead acetate	0 to 50	30	N	R	R	R	R	R	R	R	R	R		
magnesium chloride		30	N	N	N	N	R	R	R	R	R	R	N	R
methanol		100	C	R	R	R	R	R	R	R	R	R	C	R
muriatic acid	65		N	N	N	N	N	N	C	N	C	N	N	C
nitric acid	100	30	N	C	C	R	R	C	R	R	N	N	C	R
nitric acid	5	80	N	N	N	N	R	N	R	C	N	N	N	R
nitrous acid	100	20	N	R	R	R	R	C	R	C	N	N	N	R
oxalic acid	100	30	N	N	N	N	C	N	C	N	C	N		
petrol	0 to 25	30	C	R	R	R	R	R	R	R	R	R	N	R
phenol	25 to 85	30	N	R	R	R	R	C	R	C	C	R		
phosphoric acid	all	30	N	N	N	N	R	R	R	C	R	C		

phosphoric acid	0 to 50	85	N	N	N	N	R	N	R	N	R	R		
potassium chloride	0 to 50	30	N	C	C	C	R	R	R	R	R	R	C	R
potassium hydroxide		30	N	R	R	R	C	C	C	C	R	R		R
potassium hydroxide	all	100	N	C	C	C	C	C	C	C	R	R		R
potassium nitrate	10	30	N	R	R	R	R	C	R	R	C	C		R
potassium sulphate	all	30	N	R	R	R	R	R	R	R	R	C	C	R
sodium bicarbonate	all	30	N	R	R	R	R	C	R	C	R	C		R
sodium chloride		3.0	N	N	N	C	R	C	R	R	R	C	N	R
sulphur dioxide, wet		70	N	N	N	C	R	R	R	R	R	R	N	R
sulphur dioxide, dry	0 to 15	300	N	C	C	R	R	R	R	R	R	R	R	R
sulphuric acid	15 to 75	30	N	N	N	C	R	C	R	C	C	C	N	N
sulphuric acid	75 to 96	30	N	N	N	N	R	N	R	C	N	N	N	N
sulphuric acid	0 to 60	30	C	C	C	C	R	N	R	N	N	N	N	N
sulphurous acid		100	N	N	N	N	C	N	C	N	R	N	N	N
trichloroethylene		100	N	C	C	C	C	C	C	C	R	R		R
water, clean		100	C	R	R	R	R	R	R	R	R	R	R	R
water, sea		100	N	N	N	C	R	R	R	R		R	N	R

Data sheet – TR 003

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