

TANTALUM – corrosion resistance

Medium	Formula	K [%]	Tantalum		Niobium	
			T [°C]	Behavior	T [°C]	Behavior
Acetic acid	CH ₃ COOH		150	✓	100	✓
Acetic acid vapor	CH ₃ COOH		390	✓	100	✓
Acetic anhydride	(CH ₃ CO) ₂ O		150	✓		
Air			250	✓	250	✓
Alcohols	ROH		-	✓		
Ammonia	NH ₃		100	✓		
Aqua regia	x HNO ₃ + y HCl		80	✓	80	✓
Arsenic acid	H ₃ AsO ₄		150	✓		
Barium hydroxide	Ba(OH) ₂		100	✓		
Benzene	C ₆ H ₆		150	✓		
Benzoic acid	C ₆ H ₅ COOH		150	✓	100	✓
Bromine, dry	Br ₂		180	✓		
Bromine, moist	Br ₂ +H ₂ O		150	✓		
Calcium hydroxide	Ca(OH) ₂		150	✓		
Carbon monoxide	CO		350	✓		
Caustic soda	NaOH	< 5	100	✓		✗
Chlor acetic acid	CH ₂ Cl - COOH		150	✓		
chlorinated brine			150	✓		
Chlorine, dry	Cl ₂		150	✓	150	✓
Chlorine, moist	Cl+H ₂ O		80	✓	80	✓
Chromic acid	H ₂ SO ₄ + CrO ₃		120	✓		
Chromium plating bath			150	✓		
Citric acid	C ₆ H ₈ O ₇		150	✓		✓
Ferrous sulphate	FeSO ₄ x 7 H ₂ O		150	✓	100	✓
Fluorine	F			✗		✗
Formaldehyde	HCHO		150	✓		
Formic acid	HCOOH		150	✓	100	✓
Glycollic acid	C ₂ H ₄ O ₃		100	✓		
Hydroiodic acid	HJ		150	✓		✗

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Hydrobromic acid	HBr		150	✓		✗
Hydrocarbons	C _n H _m		150	✓	150	✓
Hydrochloric acid	HCl	< 30	190	✓	110	✓
Hydrogen Fluorine	HF			✗		✗
Hydrogen peroxide	H ₂ O ₂		150	✓		✗
Hydrogen sulphide	H ₂ S		600	✓	600	✓
Iodine	J ₂		150	✓		✗
Karamid solvents	CO(NH ₂) ₂		100	✓		
lactic acid	CH ₃ CHOH COOH	< 85	150	✓	150	✓
Magnesium sulphate	MgSO ₄		150	✓		✓
Methanol	CH ₃ OH		150	✓		
Methyl sulphuric acid	CH ₃ OSO ₃ H		150	✓		
Monochloroacetic acid	C ₂ H ₃ ClO ₂		150	✓	100	✓
Nitric acid	HNO ₃	< 65	190	✓	190	✓
Nitrous acid	HNO ₂		150	✓		
Oxalic acid	(COOH) ₂		150	✓		✗
Perchloric acid	HClO ₄		150	✓		✓
Phenol	C ₆ H ₅ OH			✓		✓
Phosphoric acid	H ₃ PO ₄		210	✓	80	✓
Potassium chloride	KCl		80	✓	80	✓
Potassium hydroxide	KOH	< 5	100	✓		
Rare gases			2400	✓	2400	✓
Silver nitrate	AgNO ₃		150	✓	100	✓
Sodium chloride	NaCl		80	✓	80	✓
Sulphuric acid	H ₂ SO ₄	< 98	200	✓	100	✓
Sulphurous acid	H ₂ SO ₃		200	✓		
Tannic acid	C ₆ H ₂ (OH) ₃ COOH		100	✓		
Tartaric acid	C ₄ H ₆ O ₄	< 20	150	✓	150	✓
water steam	H ₂ O		200	✓	200	✓