

GJL250 cast iron according to DIN EN1561
 0.7040 Ductile Iron cast according to DIN EN 1563
 1.0619 Steel cast according to DIN EN 10213-2
 1.4408 Stainless Steel according to DIN EN 10213

Symbol explanation for sealing material

• = OK
 - = NOK

Symbol explanation for metallic

0= practically resistant, abrasion 0-2, 4 gr/m² /day
 1 = fairly resistant, abrasion 2, 4-24 gr/m² /day
 2= low resistant; abrasion 24-72 gr/m² /day
 3= non-resistant; abrasion 72 gr/m² /day
 - = not tested or not customary

materialabbreviations

Kp= boiling point
 satd. sol.= saturated solution
 hyd. sol. = hydrate solution
 conc.= concantre
 all = all

Fluid	Chemical Formula	Concentration and Temperature		Sealing Ring		Metalic material			Material Code
		%	°C	YX-GT	Teflon(PTFE)	GJL 250 0.7040	1.0619	1.4408	
Aceton	CH ₃ COCH ₃		20	•	•	0	0	0	all
Acetylen	C ₂ H ₂			•	•	0	0	0	III, VII, X, Xb
Air, dry				•	•	0	0	0	all
Alum	KAl(SO ₄) ₂	10	20	•	•	-	-	0	X, Xb
Alum	KAl(SO ₄) ₂	10	100	•	•	-	-	0	X, Xb
Aluminium acetate	(CH ₃ COO) ₃ Al			•	•	3	3	0	X, Xb
Aluminium chlorate	Al(ClO ₃) ₃			•	•	-	-	0	X, Xb
Aluminium ethylate	Al(OCH ₂ CH ₃) ₃			•	•	0	0	0	all
Aluminium fluoride	AlF ₃			•	•	0	0	0	III, VII
Aluminium oxyde	Al ₂ O ₃			•	•	0	0	0	all
Ammonium	NH ₃			•	•	0	0	0	VIII, Xb
Ammonium hydroxyde	NH ₄ OH	10	20	•	•	0	0	0	III, VIII, X, Xb
Ammonium hydroxyde	NH ₄ OH	10	100	•	•	0	0	0	III, VIII, X, Xb
Ammonium bicarbonate	(NH ₄)HCO ₃			•	•	0	0	0	III, VIII, X, Xb
Ammonium carbonate	(NH ₄) ₂ CO ₃		Kp	•	•	2	2	0	X, Xb
Ammonium chloride	NH ₄ Cl	5	5	•	•	1	1	0	all
Ammonium chloride	NH ₄ Cl	10	10	•	•	1	1	0	all
Ammonium chloride	NH ₄ Cl	10	10	•	•	3	3	0	X, Xb
Ammonium chloride	NH ₄ Cl	50	50	•	•	1	1	0	all ¹⁾
Ammonium diphosphate	(NH ₄) ₂ HPO ₄			•	•	1	1	0	III, VIII, X, Xb
Ammonium nitrate	NH ₄ NO ₃		20	•	•	2	2	0	X, Xb
Ammonium sulphate	(NH ₄) ₂ SO ₄		20	•	•	3	3	0	X, Xb
Aniline	C ₆ H ₅ NH ₂			•	•	0	0	0	all
Arsenic acid	H ₃ ASO ₄			•	•	2	2	0	X, Xb
Asphalt (tar)				•	•	-	-	0	X, Xb
Beer				•	•	3	3	0	X, Xb
Benzine				•	•	0	0	0	all
Benzene	C ₆ H ₆			•	•	0	0	0	all
Bleaching liquor (chloride of lime)				•	•	-	-	1	X, Xb
Borax	Na ₂ B ₄ O ₇ ·10 H ₂ O			•	•	-	-	-	X, Xb

Chemical Corrosion Table



Fluid	Chemical Formula	concentration and Temperature		Sealing Ring		Metalic material			Material Code
		%	°C	YX-GT	Teflon(PTFE)	G.JL 250 0.7040	1.0619	1.4408	
Boric acid	H ₃ BO ₃	4	20	•	•	2	2	0	X, Xb
Boric acid	H ₃ BO ₃	4	100	•	•	2	2	0	X, Xb
Boric acid	H ₃ BO ₃	100	100	•	•	2	2	0	X, Xb
Butane	C ₄ H ₁₀			•	•	0	0	0	all
Buttermilk			20	•	•	-	-	0	X, Xb
Butyl acetate	CH ₃ COOCH ₂ CH ₂ CH ₂ CH ₃			•	•	0	0	0	all
Butyl alcohol	CH ₃ (CH ₂) ₃ OH			•	•	0	0	0	all
Calcium bisulphite	Ca(HSO ₃) ₂		20	-	•	2	3	0	X, Xb
Calcium bisulphite	Ca(HSO ₃) ₂		200	•	•	2	3	0	X, Xb
Calcium chloride	CaCl ₂	20		•	•	1	1	0	X, Xb
Calcium chloride	CaCl ₂	100		•	•	2	2	1	X, Xb
Calcium hydroxide (milk of lime)	Ca(OH) ₂			•	•	0	0	0	all
Calcium hypochlorite	Ca(ClO) ₂			-	•	2	2	1	X, Xb
Calcium sulphate	CaSO ₄			•	•	0	0	0	all
Carbon dioxide, dry	CO ₂	to	150	•	•	0	0	0	all
Carbon dioxide, dry	CO ₂		400	•	•	0	0	0	VII, X, Xb
Carbon disulphide	CS ₂	20		•	•	0	0	0	III, VIII, Xb
Carbon tetrachloride	CCl ₄			•	•	1	1	0	all
Chlor sulphonic acid	HOSO ₂ Cl		Kp	•	•	1	1	3	all
Chloroform	CHCl ₃		20	•	•	0	0	0	all
Chloroform	CHCl ₃			•	•	0	0	0	all
Chromic acid	H ₂ CrO ₄	10	20	•	•	1	0	0	III, VIII, X, Xb
Chromic acid	H ₂ CrO ₄	10	Kp	•	•	-	-	0	X, Xb
Chromic acid	H ₂ CrO ₄	50	20	•	•	0	0	0	III, VIII, X, Xb
Citric acid	(CH ₂ COOH) ₃ Cu (OH)COOH		20	•	•	3	3	0	X, Xb
Citric acid	(CH ₂ COOH) ₃ C (OH)COOH		Kp	•	•	3	3	0	X, Xb
Clophen T 64				•	•	0	0	0	all
Copper acetate watsol.	(CH ₃ COO) ₂ Cu		20	•	•	0	0	0	all
Copper acetate wat.sol.	(CH ₃ COO) ₂ Cu		Kp	•	•	2	2	0	X, Xb
Copper sulphate	CuSO ₄	20		•	•	3	2	0	X, Xb
Copper sulphate	CuSO ₄	Kp		•	•	3	2	0	X, Xb
Diazotation bath, (weakly acid)			20	•	•	2	2	1	X, Xb
Diazotation bath, (weakly acid)			80	•	•	2	2	1	X, Xb
Diesel oil			20	•	•	0	0	0	all
Diphyl				•	•	0	0	0	all 3)
Dowtherm A				•	•	0	0	0	all 3)
Dye liquor, alkaline or neutral			20	•	•	-	-	0	X, Xb
Dye liquor, alkaline or neutral			Kp	•	•	-	-	0	X, Xb
Dye liquor, organic as it			20	•	•	-	-	0	X, Xb
Dye liquor, organic as it			Kp	•	•	-	-	0	X, Xb
Dye liquor, strongly sulphuric acid	H ₂ SO ₄ aboand 0,3%		20	•	•	-	-	0	X, Xb
Dye liquor, strongly sulphuric acid	H ₂ SO ₄ aboand 0,3%		Kp	•	•	-	-	0	X, Xb
Dye liquor, weakly sulphuric acid	H ₂ SO ₄ aboand 0,3%		Kp	•	•	-	-	0	X, Xb
Ethane	C ₂ H ₆			•	•	0	0	0	all
Ethanol	C ₂ H ₅ OH			•	•	0	0	0	all
Ethyl acetate	CH ₃ COOCH ₂ CH ₃		Kp	•	•	0	0	0	all
Ethyl ether	C ₂ H ₅ OCH ₂ CH ₃			-	•	1	1	0	all

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		%	°C	YX-GT	Teflon(PTFE)	GJL 250 0.7040	1.0619	1.4408	
Ethylen chloride (Dichlorethan)	(CH ₂ Cl) ₂	20		•	•	0	0	0	all all ¹⁾
Ethylene	C ₂ H ₄			-	•	0	0	0	
Fatty acids from C6				•	•	1	1	0	all
Formaldehyde	HCHO	40	20	•	•	3	3	0	X,Xb
Formaldehyde	HCHO	40	Kp	•	•	3	3	0	X,Xb
Formic acid	HCOOH	10	20	•	•	3	3	0	X,Xb
Formic acid	HCOOH	10	100	•	•	3	3	1	X,Xb
Formic acid	HCOOH	100	20	•	•	3	3	0	X,Xb
Formic acid	HCOOH	100	100	•	•	3	3	1	X,Xb
Freon				•	•	0	0	0	all
Glacial acetic acid	CH ₃ COOH	10	20	•	•	2	2	0	X,Xb
Glacial acetic acid	CH ₃ COOH	10	20	•	•	2	2	0	X,Xb
Glacial acetic acid	CH ₃ COOH	50	Kp	•	•	2	2	0	X,Xb
Glacial acetic acid	CH ₃ COOH	50	20	•	•	3	2	0	X,Xb
Glacial acetic acid	CH ₃ COOH	50	Kp	•	•	3	2	1	X,Xb
Glacial acetic acid	CH ₃ COOH	80	20	•	•	3	2	1	X,Xb
Glacial acetic acid	CH ₃ COOH	80	Kp	•	•	3	2	1	X,Xb
Glycerine	(CH ₂ OH) ₂ CHOH		20	•	•	2	2	0	X,Xb
Glycerine	(CH ₂ OH) ₂ CHOH		100	•	•	2	2	0	X,Xb
Grape vinegar			20	•	•	-	-	0	X,Xb
Heat transfer oils				•	•	0	0	0	all ³⁾
Hydrochloric acid	HCl	0,2	20	•	•	3	3	0	X,Xb
Hydrochloric acid	HCl	0,2	50	•	•	3	3	1	X,Xb
Hydrochloric acid	HCl	1	20	•	•	3	3	1	X,Xb
Hydrochloric acid, dry	HCl		20	•	•	1	1	1	all
Hydrochloric acid, dry	HCl		100	•	•	1	1	2	all
Hydrojen	H ₂			•	•	0	0	0	all ⁴⁾
Hydrojen peroxide	H ₂ O ₂		20	•	•	3	3	0	X,Xb
Hydrojen peroxide	H ₂ O ₂		50	-	•	3	3	0	X,Xb
Hydrojen sulphide, gas, dry	H ₂ S		20	•	•	-	-	0	X,Xb
Hydrojen sulphide, gas, wet	H ₂ S		20	•	•	-	-	0	X,Xc1)
Hydroxylamine sulphate	(NH ₂ OH) ₂ HSO ₄	10	20	-	•	-	-	0	X,Xb
Hydroxylamine sulphate	(NH ₂ OH) ₂ HSO ₄	10	Kp	-	•	-	-	0	X,Xb
Illuminating gas				•	•	0	0	0	all
Kreosote			20	•	•	-	-	0	X,Xb
Kreosote			Kp	•	•	-	-	0	X,Xb
Lead acetate (lead sugar)	Pb(CH ₃ COO) ₂	100	Kp	•	•	3	3	2	X,Xb
Lead arsenate	Pb(AsO ₃) ₂			•	•	-	-	0	X,Xb
Linseed oil			20	•	•	-	-	0	X,Xb
Linseed oil			100	•	•	-	-	0	X,Xb
M.E.K (Butanone)	CH ₃ COCH ₃		Kp	•	•	1	1	0	
Manganous chloride	MnCl ₂		20	•	•	2	2	0	X,Xb
Manganous chloride	MnCl ₂		Kp	•	•	2	2	0	X,Xb
Magnesium sulphate	MgSO ₄		20	•	•	1	1	0	all
Magnesium sulphate	MgSO ₄		Kp	•	•	1	1	0	all
Mercury	Hg		20	•	•	1	1	0	III, VIII, X,Xb
Mercury (II) chloride	HgCl ₂		20	•	•	3	3	0	X,Xb
Mercury (II) nitrate	Hg(NO ₃) ₂		20	•	•	3	3	0	X,Xb
Methyl alcoho	CH ₃ OH		20	•	•	0 ²⁾	0 ²⁾	0	all
Methyl alcoho	CH ₃ OH		Kp	•	•	0 ²⁾	0 ²⁾	0	all
Methylene chloride	CH ₂ Cl ₂		20	•	•	1	1	0	Xb
Methylene chloride	CH ₂ Cl ₂		Kp	•	•	1	1	0	Xb
Milk				•	•	2	2	0	X,Xb

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		%	°C	YX-GT	Teflon(PTFE)	GJL 250 0.7040	1.0619	1.4408	
Milk of lime	Ca(OH) ₂		20	•	•	0	0	0	all
Milk of lime	Ca(OH) ₂		Kp	•	•	0	0	0	all
Natrium acetate	CH ₃ COONa	20	20	•	•	1	1	0	all
Natural gas				•	•	1	0	0	all
Nitric acid	HNO ₃	10	20	•	•	3	3	0	X,Xb
Nitric acid	HNO ₃	10	Kp	•	•	3	3	0	X,Xb
Nitric acid	HNO ₃	40	20	•	•	3	3	0	X,Xb
Nitric acid	HNO ₃	40	Kp	•	•	3	3	0	X,Xb
Nitric acid	HNO ₃	konz.	20	-	•	3	3	0	X,Xb
Nitric acid	HNO ₃	konz.	Kp	-	•	3	2	1	X,Xb
Nitrogen	N ₂			•	•	0	0	0	all
Oils (lubricatingoils, mineral)			20	•	•	0	0	0	all
Oils (andgetable)			20	•	•	0	0	0	all
Oleic acid	C ₁₇ H ₃₃ COOH			-	•	0	0	0	all
Oxalic acid	COOHCOOH			-	•	2	2	0	X,Xb
Oxygen	O ₂		20	•	•	0	0	0	all
Penthyl acetate	CH ₃ COOCH ₅			•	•	0	0	0	all
Petroleum ether				•	•	0	0	0	all
Phenol	C ₆ H ₅ OH			•	•	2	2	0	X,Xb
Phosphoric acid	H ₃ PO ₄	10	20	•	•	2	2	0	X,Xb
Phosphoric acid	H ₃ PO ₄	10	50	•	•	3	3	0	X,Xb
Phosphoric acid	H ₃ PO ₄	50	20	•	•	2	2	0	X,Xb
Phosphoric acid	H ₃ PO ₄	50		•	•	3	3	1	X,Xb
Phosphoric acid	H ₃ PO ₄	80		•	•	3	3	0	X,Xb
Phosphoric acid	H ₃ PO ₄	80		•	•	3	3	2	X,Xb
Potassium acetate	CH ₃ COOK	50	Kp	•	•	0	0	0	all
Potassium carbonate	K ₂ CO ₃		20	•	•	1	0	0	all
Potassium carbonate (potash)	K ₂ CO ₃		Kp	•	•	1	0	0	all
Potassium chlorate	KClO ₃		Kp	-	•	2	2	0	X,Xb
(at 100° , sat. sol)									
Potassium chromium sulphate	KCr(SO ₄) ₂ 12H ₂ O		20	•	•	-	-	0	X,Xb
Potassium chromium sulphate(chromic alum)	KCr(SO ₄) ₂ 12H ₂ O	25	Kp	•	•	-	-	3	
Potassium cyanide solution	KCN	5	20	•5)	•	1	1	1	III, VIII, X,Xb
Potassium dichromate	K ₂ Cr ₂ O ₇		20	•	•	0	0	0	all
Potassium dichromate	K ₂ Cr ₂ O ₇		Kp	-	•	2	2	0	X,Xb
Potassium hydrochlorite	KOCl		20	•	•	2	2	1	X,Xb
Potassium hydrochlorite up to 20 g akt. Cl2/l	KOCl		40	•	•	2	2	1	X,Xb
Potassium hydrogenartrate	COOH(CH ₂)H COOK		20	•	•	-	-	0	X,Xb
Potassium hydrogenartrate (at 100° , sat.sol)	COOH(CH ₂)H COOK		Kp	•	•	-	-	1	X,Xb
Potassium hydroxyde	KOH	25	20	•	•	0	0	0	all
Potassium hydroxyde	KOH	25	Kp	•	•	-	-	0	X,Xb
Potassium hydroxyde	KOH	50	20	•	•	0	0	0	all
Potassium hydroxyde	KOH		Kp	•	•	3	3	0	X,Xb
Potassium iodide	KJ	50	Kp	•	•	2	2	0	Xb
Potassium iodide	KJ			•	•	1	1	0	III, VIII, X,Xb
Potassium nitrate	KNO ₃		20	-	•	0	0	0	all
Potassium nitrate	KNO ₃		Kp	-	•	2	2	0	X,Xb
Potassium permanga nate	KMnO ₄		20	•	•	0	0	0	all
Potassium permanga nate	KMnO ₄		Kp	-	•	3	3	0	X,Xb
Propane	CH ₄		20	•	•	0	0	0	all

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Salicylic	$C_7H_7O_3$		20	•	•	2	2	0	X, Xb
Salpeter				•	•	0	0	0	all
Sea water			20	•	•	3	3	0	X, Xb
Sea water			Kp	•	•	3	3	0	X, Xb
Silicone oil				•	•	0	0	0	all
Soap				•	•	0	0	0	all
Sodium carbonate	Na_2CO_3		20	•	•	0	0	0	all
Sodium carbonate	Na_2CO_3		Kp	•	•	1	1	1	all
Sodium hydroxide	$NaOH$			•	•	0	0	0	all
Sodium hydroxide	$NaOH$	20	Kp	•	•	-	-	0	X, Xb
Sodium hydroxide	$NaOH$	35	20	•	•	0	0	0	all
Sodium hydroxide	$NaOH$	35	Kp	•	•	3	3	3	X, Xb
Sodium sulphate	Na_2SO_4			•	•	0	0	0	all
Sole	$NaCl$		20	•	•	3	3	1	X, Xb
Spinbath (up to% H2SO4)			80	•	•	3	3	0	X, Xb
Starch solution				•	•	2	2	0	X, Xb
Steam (water vapour)				•	•5)	0	0	0	all
Stearic acid	$C_{17}H_{35}COOH$			•	•	2	2	0	X, Xb
Sugar			20	•	•	1	1	0	all
Sugar			80	•	•	1	1	0	all
Sulphite lye (fresh cooking liquoor, spend liquoor)	$Ca(HSO_3)_2$		20	•	•	-	-	0	X, Xb
Sulphite lye (fresh cooking liquoor, spend liquoor)	$Ca(HSO_3)_2$		80	•	•	-	-	0	
Sulfphuric acid	H_2SO_4	1	20	•	•	3	3	0	X, Xb
Sulfphuric acid	H_2SO_4	10	20	•	•	3	3	0	X, Xb
Sulfphuric acid	H_2SO_4	90	20	•	•	1	1	0	1)
Sulfphuric acid	H_2SO_4	konz.	20	•	•	0	0	0	all1)
Sulphur dioxide	SO_2			•	•	3	3	0	X, Xb
Sulphurous acid (cold) sat. sol.	H_2SO_3			•	•	3	3	0	X, Xb
Tannic acid	$C_{76}H_{52}O_{46}$	10	20	•	•	2	2	0	X, Xb
Tannic acid	$C_{76}H_{52}O_{46}$	10	Kp	•	•	3	3	0	X, Xb
Tannic acid	$C_{76}H_{52}O_{46}$	50	20	•	•	2	2	0	X, Xb
Tar (neutral)	$(CHOHCOOH)_2$		180	•	•	1	1	0	III, VII, X, Xb
Tartaric acid	$C_6H_8O_6$		20	•	•	2	2	0	X, Xb
Toluol	CH_2Cl_3		20	•	•	0	0	0	all
Trichlorethylene	$(NH_2)_2CO$			•	•	1	1	0	all
Turpentine oil			20	•	•	0	0	0	all
Urea			20	•	•	1	1	0	all
Water (fresh-a. drinking water)	H_2O			•	•	0	0	0	all
Water glass (K- and Na-silicate)	K_2SiO_3NaHCL			•	•	0	0	0	all
Xylene	$CH_3(CH_2)_2$		20	•	•	0	0	0	all