Chemical Resistance Chart for IWAKI Metering Pumps

Explanation of footnotes

* : PVC blade hose is not recommended.

(**) :"BVC" type (check valve) is to be used.

1 Not suitable

0 No data

No.	Liquid	Molecular Formula	S.G.	Conc. %	Max. Service Temperature (°C)								
					VC	VH	V6	VM	PC	PH	TC	FC	SH
1	Acetaldehyde	CH_3CHO			-	-	-	-	-	60	-	-	20
2	Acetaldehyde Aqueous	CH_3CHO			-	-	-	-	60	-	-	-	-
3	Acetamide	CH_3CONH_2			-	-	-	-	20	-	-	-	-
4	Acetic Acid	CH_3COOH		10	40	20	40	40	40	20	40	60	20
5	Acetic Acid	CH_3COOH		20	20	20	40	20	20	20	20	60	20
6	Acetic Acid	CH_3COOH		50	20	-	-	20	20	-	20	60	20
7	Acetic Acid	CH_3COOH		80	20	-	-	20	20	-	20	40	20
8	Acetic Acid (Glacial)	CH_3COOH		98	-	-	-	-	-	-	-	-	-
9	Acetic Anhydride	$(CH_3CO_2)_2O$		Pure	-	-	-	-	-	-	-	20	20
10	Acetone	CH_3COCH_3			-	-	-	-	-	20	-	-	20
11	Acetone Aqueous	CH_3COCH_3			40	20	20	40	60	20	60	60	20
12	Acetonitrile	CH_3CN			-	-	-	-	-	-	-	40	-
13	Acetophenone	C_8H_8O			-	-	-	-	-	-	-	20	-
14	Acetyl Acetone	$CH_3COCH_2COCH_3$			-	-	-	-	-	-	-	-	20
15	Acetyl Bromid	CH_3COBr			-	-	-	-	-	-	-	-	-
16	Acetyl Chloride	CH_3COCl			-	-	-	-	-	-	-	40	-
17	Acetylene	C_2H_2			-	-	-	-	60	-	60	60	20
18	Acrylonitrile	CH_2=CHCN			-	20	20	-	-	20	-	40	20
19	Acryric Acid Ethyl Ester				-	-	-	-	-	-	-	40	-
20	Adipic Acid Aqueous	$HO_2C(CH_2)_4CO_2H$		Satu	40	20	-	40	60	20	60	60	-
21	Allly Chloride	CH_2=$CHCH_2Cl$			-	-	-	-	-	-	20	20	-
22	Allyl Alcohol	CH_2=$CHCH_2OH$			-	-	-	-	60	-	60	60	20
23	Almiium Acetate	$(CH_3CO_2)_3Al$		Satu	40	20	20	40	40	20	60	60	20
24	Alminum Bromide	$AlBr_3$		Satu	40	-	-	40	60	-	60	60	-
25	Aluminum Ammonium Sulfate	$(NH_4)_2SO_4Al_2(SO_4)_3$		Satu	-	-	-	-	60	-	60	60	-
26	Aluminum Chloride	$AlCl_3$		Satu	40	20	-	40	60	20	60	60	-
27	Aluminum Fluoride	AlF_3		Satu	-	-	-	-	-	-	-	-	-
28	Aluminum Hydrooxide	$Al(OH)_3$		Satu	40	-	-	40	60	-	60	60	-
29	Aluminum Nitrate	$Al(NO_3)_3 \cdot 9H_2O$		Satu	40	-	-	40	60	-	60	60	-
30	Aluminum Sulfate	$Al_2(SO_4)_3$			40	20	40	40	60	20	60	60	20
31	Amber Acid	$COOH(CH_2)_2COOH$			40	-	-	40	60	-	60	60	-
32	Ammonia Gas	NH_3		100	-	20	20	-	-	20	-	60	20
33	Ammonia Liquid	NH_3			-	-	-	-	-	20	-	60	20
34	Ammonia Water	NH_4OH		10	20	20	20	20	20	20	20	60	20
35	Ammonium Acetate	CH_3COONH_4		Satu	40	-	20	40	60	-	60	60	-
36	Ammonium Bromide	NH_4Br		Satu	-	-	-	-	-	-	-	-	-

Max. Service Temperature (°C)								
PVC	PPG	PVDF	FKM	EPDM	SUS	HC	Ti	CE
1	60	1	1	60	20	60	20	60
1	80	1	60	80	0	0	0	60
1	20	0	20	20	1	1	1	60
60	80	120	40	60	60	20	20	60
40	60	120	20	60	40	20	20	60
40	40	120	20	1	40	20	20	60
40	20	40	20	1	40	20	20	60
1	1	1	1	0	1	20	20	60
1	1	20	1	1	20	20	20	60
1	40	1	1	40	20	20	20	60
60	80	120	100	100	20	20	20	60
0	20	40	0	20	0	0	0	60
0	40	20	1	80	0	0	0	60
1	20	1	1	1	20	20	20	60
0	0	0	60	0	0	0	0	60
0	40	40	1	1	1	20	20	60
1	80	80	100	1	20	20	20	60
20	20	40	1	60	20	20	20	60
1	0	40	0	0	0	0	0	60
60	100	60	80	80	1	20	20	60
1	1	20	40	1	0	0	0	60
1	60	80	80	1	20	20	20	60
40	40	120	80	80	20	20	20	60
60	80	120	80	60	0	0	0	60
1	100	120	100	80	40	0	0	60
60	100	60	100	100	1	20	1	60
60	80	120	100	80	1	1	20	1
60	100	120	100	100	1	1	20	60
60	80	100	100	100	1	1	20	60
60	100	120	60	60	100	20	20	60
60	100	120	100	100	0	0	0	60
60	100	120	1	80	20	20	20	60
1	40	120	1	60	20	20	20	60
60	100	120	20	100	20	20	1	60
60	60	120	100	100	20	0	0	60
0	0	0	20	0	1	20	20	60

37	Ammonium Carbonate	$(NH_4)_2CO_3$		Satu	40	20	40	40	60	20	60	60	20	60	100	120	100	100	120	20	20	60
38	Ammonium Chloride	NH_4Cl		Satu	40	20	40	40	60	20	60	60	20	60	100	80	100	100	40	20	20	60
39	Ammonium Copper				-	-	-	-	20	-	-	-	-	0	20	0	20	20	0	0	0	60
40	Ammonium Difluoride	NH_4HF		Satu	40	-	-	40	60	-	60	60	-	60	80	120	100	100	1	0	0	60
41	Ammonium Fluoride	NH_4F		20	40	-	-	40	60	-	60	60	-	40	80	120	60	60	1	1	0	60
42	Ammonium Hydrogencarbonate	NH_4HCO_3		40	-	-	-	-	20	-	-	-	-	0	20	0	20	20	20	0	0	60
43	Ammonium Hydrogensulfite	NH_4HSO_4		40	20	-	-	20	20	-	-	-	20	20	20	0	20	1	20	20	20	60
44	Ammonium Hydroxide	NH_4OH		40	20	-	-	20	20	-	20	60	-	60	100	120	20	60	0	0	0	60
45	Ammonium Magnesium Sulfate				-	-	-	-	20	20	20	20	20	0	20	20	20	20	20	20	20	60
46	Ammonium Metaphosphate	NH_4PO_3			40	-	-	40	60	-	60	60	-	60	100	120	80	80	0	0	0	60
47	Ammonium Nitrate	NH_4NO_3			40	-	40	40	60	-	60	60	-	60	100	120	80	80	40	1	1	60
48	Ammonium Oxalate	$(NH_4)_2C_2O_4{\cdot}H_2O$			-	-	-	-	-	-	-	20	-	0	20	20	0	20	1	1	0	60
49	Ammonium Perchlorate	NH_4CLO_4			-	-	-	-	-	-	-	20	-	20	0	20	0	0	1	1	20	60
50	Ammonium Persulfate	$(NH_4)_2SO_4$		Satu	-	-	-	-	-	-	-	20	-	20	20	20	0	0	1	1	0	60
51	Ammonium Phoshate	$(NH_4)_3PO_4$			40	-	-	40	60	-	60	60	-	60	100	120	80	80	1	1	20	60
52	Ammonium Sulfate	$(NH_4)_2SO_4$		Satu	40	-	-	40	60	-	60	60	-	60	100	120	80	80	1	1	20	60
53	Ammonium Sulfide			Satu	-	-	-	-	-	-	-	60	-	20	100	120	0	0	1	0	0	60
54	Ammonium Sulfite	$(NH_4)_2SO_3$		Satu	-	-	-	-	20	-	-	-	-	0	20	0	20	0	0	0	0	60
55	Ammonium Thiocyanide	NH_4SCN			-	-	-	-	-	-	-	20	20	20	20	20	0	0	20	20	20	60
56	Amyl Acetate	$CH_3CO_2(CH_2)_4CH_3$		Pure	-	-	-	-	-	-	-	40	20	1	1	40	1	20	40	20	20	60
57	Amyl Alcohol	$C_5H_{11}OH$		Pure	40	-	-	40	60	-	60	60	-	60	80	80	80	80	0	0	0	60
58	Amyl Chloride	$CH_3(CH_2)_4Cl$		Pure	-	-	-	-	-	-	20	60	-	1	1	80	20	1	20	1	20	60
59	Aniline	$C_6H_5NH_2$		Pure	-	-	-	-	40	-	60	60	-	1	40	60	60	20	20	1	20	60
60	Aniline Chloride			5	-	-	-	-	-	-	-	-	-	1	0	0	0	0	1	0	0	60
61	Aniline Hydrochloride	$C_6H_5NH_2$-HCl		Pure	40	-	-	40	-	-	60	60	-	40	0	60	60	1	0	0	0	60
62	Animal Oil				40	20	20	40	60	20	60	60	20	60	100	120	60	60	20	20	20	60
63	Anthraquinone				-	-	-	-	-	-	-	-	-	20	0	0	0	0	1	1	20	60
64	Antimony Oxide	Sb_2O_3		Satu	-	-	-	-	20	-	20	20	-	1	20	20	20	0	0	1	0	60
65	Antimony Trichloride	$SbCl_3$		Satu	40	20	-	40	60	20	40	40	-	60	80	40	80	20	1	20	20	60
66	Aquaregia	$3HCl+HNO_3$			-	-	-	-	-	-	-	60	-	1	1	100	1	40	1	1	20	60
67	Arsenic Acid	H_3AsO_4			40	-	-	40	60	-	60	60	-	40	60	100	100	80	1	1	0	60
68	Asphalt				-	-	-	-	60	-	60	60	-	1	60	120	60	1	0	0	0	60
69	Balium Sulfate	$BaSO_4$		Satu	40	-	-	40	60	-	60	60	-	60	100	120	100	80	1	1	20	60
70	Balium Sulfide	BaS		Satu	40	20	-	40	60	20	60	60	-	60	100	120	100	60	1	20	1	60
71	Barium Carbonate	$BaCO_3$			40	20	20	40	60	20	60	60	20	60	100	120	120	80	20	20	20	60
72	Barium Chloride	$BaCl_2$-$2H_2O$		Satu	40	20	-	40	60	20	60	60	-	60	100	120	120	80	1	20	20	60
73	Barium Hydroxide	$Ba(OH)_2$		Satu	40	-	-	40	60	-	60	60	-	60	80	120	120	100	1	1	20	60
74	Barium Nitrate	$Ba(NO_3)_2$		Satu	40	-	-	40	60	-	60	60	-	60	100	120	120	100	1	1	0	60
75	Barium Peroxide	BaO_2			-	-	-	-	-	-	-	-	-	0	0	0	0	0	1	0	0	60
76	Beer				40	20	40	40	60	20	60	60	20	60	100	120	80	80	120	20	20	60
77	Beet Suger Liquours				40	-	20	40	60	-	60	60	-	60	100	120	80	60	20	0	0	60
78	Benzaldehyde	C_6H_5CHO		10	-	-	-	-	-	-	-	60	-	60	60	60	1	1	1	1	20	60
79	Benzene	C_6H_6		Pure	-	-	-	-	20	-	60	60	-	1	20	60	80	1	1	1	20	60
80	Benzene Sulfonic Acid	$C_6H_5SO_3H$			-	-	-	-	-	-	40	40	-	1	1	40	60	0	0	0	0	60
81	Benzine			Pure	-	-	-	-	40	-	60	60	-	1	40	60	80	1	0	0	0	60

82	Benzoic Acid	$C_7H_5O_2Na$		Pure	40	-	-	40	40	-	60	60	-	60	40	120	100	80	1	1	20	60
83	Benzoyl Chroride	C_6H_5COCL			-	-	-	-	-	-	-	25	-	0	1	25	1	0	1	1	0	60
84	Benzyl Alcohol	$C_6H_5CH_2OH$		Pure	-	-	-	-	60	-	60	60	-	0	60	80	100	40	0	0	0	60
85	Benzyl Benzonate	$C_6H_5CO_2CH\text{-}C_6H_5$		Satu	-	-	-	-	-	-	-	-	-	0	0	0	0	20	0	0	0	60
86	Benzyl Chloride	$C_6H_5CH_2Cl$		Pure	-	-	-	-	-	-	-	60	20	0	20	120	0	0	20	20	20	60
87	Bismuth Carbonate	$BiCO_3$			-	-	-	-	-	-	-	-	20	20	20	0	0	0	20	20	20	60
88	Black Liquore	$Fe(CH_3COO)_2$		Satu	40	-	-	40	60	-	60	60	-	60	80	120	100	80	0	0	0	60
89	Bleaching Liquor	$Ca(ClO)_2$		5	40	-	-	40	-	-	40	60	-	60	0	120	40	40	0	0	0	60
90	Bleaching Liquor	$Ca(ClO)_2$		12	20	-	-	20	-	-	20	60	-	60	0	120	20	20	0	0	0	60
91	Boric Acid	H_3BO_3		Satu	40	20	40	40	60	20	60	60	20	60	100	120	100	80	120	20	20	60
92	Brine(Sodium Chloride)				40	-	-	40	60	-	60	60	-	60	100	120	100	80	1	0	0	60
93	Bromine Vapor			25	20	-	-	20	-	-	60	60	-	20	1	120	60	1	0	0	0	60
94	Bromine Water			Satu	20	-	-	20	-	-	40	60	-	20	1	120	40	1	1	0	0	60
95	Butadien	CH_2 =CH-CH=CH_2		Gas	40	-	-	40	-	-	60	60	-	60	0	80	60	1	0	0	0	60
96	Butane	$CH_3(CH_2)_2CH_3$		Gas	40	-	-	40	60	-	60	60	-	60	80	80	80	1	0	0	0	60
97	Buthyl Acrylate	CH_2=$CHCO_2(CH_2)_3CH_3$			-	-	-	-	-	-	-	40	-	1	1	40	1	40	0	0	0	60
98	Butyl Acetate	$CH_3CO_2C_4H_9$		Pure	-	-	-	-	-	-	-	40	-	1	1	40	1	20	0	0	0	60
99	Butyl Alcohol	CH_9OH			40	-	-	40	40	-	40	60	-	60	80	80	40	80	0	0	0	60
100	Butyl Amine	$CH_3(CH_2)_3NH_2$		Satu	-	-	-	-	-	-	-	20	-	1	1	20	1	1	0	0	0	60
101	Butyl Bromide	$CH_3(CH_2)_3Br$			-	-	-	-	-	-	-	60	-	0	0	80	0	0	0	0	0	60
102	Butyl Carbitol	$CH_2CH_2OC_4H_9\text{-}CH_2CH_2OH$		Pure	-	-	-	-	-	-	-	0	-	0	0	0	0	20	0	0	0	60
103	Butyl Cellosolve	$C_4H_9O(CH_2)_2OH$			-	-	-	-	-	-	60	60	-	0	0	60	80	0	1	0	0	60
104	Butyl Chloride	$CH_3(CH_2)_3Cl$			-	-	-	-	-	-	-	60	-	0	0	80	0	0	0	0	0	60
105	Butyl Diol				20	-	20	20	-	-	60	60	-	20	0	80	120	60	60	0	0	60
106	Butyl Ether	$[CH_3(CH_2)_3]_2O$			-	-	-	-	-	-	-	40	-	1	1	40	1	1	0	0	0	60
107	Butyl Mercaptan	$CH_3(CH_2)_3SH$		Pure	-	-	-	-	-	-	-	60	-	0	0	80	0	0	0	0	0	60
108	Butyl Phenol	$C_5H_4(OH)(C_4H_9)$			-	-	-	-	-	-	-	60	-	0	0	60	0	0	0	0	0	60
109	Butyl Phtalate	$C_6H_4(COOC_4H_9)(COOH)$			-	-	-	-	40	-	40	40	-	0	60	40	40	20	0	0	0	60
110	Butyl Stearate			Pure	-	-	-	-	-	-	60	60	-	0	0	80	60	1	0	0	0	60
111	Butylene	CH_3CH_2CH=CH_2			-	-	-	-	-	-	60	60	-	0	0	80	80	0	0	0	0	60
112	Butyric Acid	$CH_3CH_2CH_2CO_2H$			-	-	-	-	20	-	20	60	-	1	100	120	20	20	0	0	0	60
113	Caffein Citrate				-	-	-	-	-	-	-	60	-	0	0	80	0	0	0	0	0	60
114	Calcium Acetate	$Ca(CH_3COO)_2$		Satu	40	-	-	40	60	-	60	60	-	60	80	120	100	80	0	0	0	60
115	Calcium Bisulfide CaS			Satu	40	-	-	40	60	-	60	60	-	60	100	100	80	0	0	0	0	60
116	Calcium Bisulfite	$Ca(HSO_3)_2$			40	-	-	40	60	-	60	60	-	40	100	100	80	40	0	0	0	60
117	Calcium Bromide	$CaBr_2$			40	-	-	40	60	-	60	60	-	60	60	100	60	60	0	0	0	60
118	Calcium Carbonate	$CaCO_3$			40	-	-	40	60	-	60	60	-	60	100	80	120	60	1	1	1	60
119	Calcium Chlorate	$Ca(ClO_3)_2 2H_2O$		Satu	40	-	-	40	60	-	60	60	-	60	100	120	60	60	1	1	20	60
120	Calcium Chloride	$CaCl_2$		Satu	40	20	20	40	60	20	60	60	20	60	100	120	100	80	20	20	20	60
121	Calcium Hydroxide	$Ca(OH)_2$		50	40	20	-	40	60	20	60	60	-	60	100	120	100	80	1	20	1	60
122	Calcium Nitrate	$Ca(NO_3)_2$		Satu	40	-	-	40	60	-	60	60	-	60	100	120	100	80	1	1	20	60
123	Calcium Sulfate	$CaSO_4$			40	-	-	40	60	-	60	60	-	60	100	120	100	80	1	1	20	60
124	Calcium Sulfide	CaS			40	-	-	40	60	-	60	60	-	60	100	120	100	80	0	0	0	60
125	Calsium Disulfide	$Ca(HS_2)_2$			20	-	-	20	-	-	-	-	-	20	1	1	20	20	1	0	20	60

126	Calsium Hydrosulfate	$CaHSO_4$			-	-	-	-	-	-	-	20	20		20	20	20	0	0	20	20	20	60
127	Calsium Oxide(Slaked Lime)	CaO			-	-	-	-	20	20	20	20	20		0	20	20	20	20	20	20	0	60
128	Cane Suger Liquor				40	-	-	40	60	0	60	60	-		60	100	120	100	80	0	0	0	60
129	Caprylic Acid	$CH_3(CH_2)_6COOH$		Pure	-	-	-	-	-	-	-	60	-		0	0	120	0	0	20	0	0	60
130	Carbitol	$HO(CO_2)_2$-O-$(CH_2)2$-OC_2H_5			40	-	-	40	-	-	-	-	-		40	0	0	40	20	0	0	0	60
131	Carbon Dichloride	CCl_2			-	-	-	-	-	-	-	-	20		0	0	0	0	0	20	20	20	60
132	Carbon Dioxide	CO_2			40	20	20	40	60	20	60	60	20		60	80	120	100	100	20	20	20	60
133	Carbon Disulfide	CS_2		Pure	-	-	-	-	-	-	20	20	20		1	1	20	20	1	20	20	20	60
134	Carbon Monoxide	CO		Gas	40	-	-	40	60	-	60	60	-		60	100	100	80	60	0	0	0	60
135	Carbon Tetrachloride	CCl_4			-	-	-	-	20	-	20	60	-		1	20	60	20	1	1	1	20	60
136	Carbonic Acid (Phenol)	H_2CO_3			40	20	-	40	60	20	60	60	-		60	100	120	100	80	1	20	20	60
137	Casein				-	-	-	-	-	-	60	60	-		0	0	120	80	80	0	0	0	60
138	Castor Oil			Pure	40	20	20	40	60	20	60	60	20		60	100	120	60	60	20	20	20	60
139	Caustic Potash	KOH		25	-	-	40	-	-	-	-	60	-		60	40	60	1	100	60	0	0	60
140	Cellosolve	$C_2H_5O(CH_2)_2OH$			-	-	-	-	-	-	-	60	-		0	40	60	1	20	0	0	0	60
141	Chloramine	CH_3-$C_6H_4SO_2$-$NClNa(H_2O)_3$			-	-	-	-	-	-	-	-	-		0	0	0	0	0	0	0	0	60
142	Chloric Acid	$HClO_3$		20	-	-	-	-	-	-	-	60	-		60	0	80	0	0	1	20	0	60
143	Chlorinated Solvents				-	-	-	-	-	-	-	-	-		0	0	0	20	1	0	0	0	60
144	Chlorine Dioxide	ClO_2		0.3	-	-	-	-	-	-	-	60	-		20	1	60	1	0	1	0	0	60
145	Chlorine Dioxide	ClO_2		1	-	-	-	-	-	-	-	60	-		1	1	60	1	0	1	0	0	60
146	Chlorine Gas (Dry)	Cl_2			20	-	-	20	-	-	20	60	-		60	1	120	20	20	1	1	1	60
147	Chlorine Gas (Wet)	Cl_2			-	-	-	-	-	-	-	60	-		20	1	120	1	1	1	0	0	60
148	Chlorine Water	Cl_2Aq		0.4	-	-	-	-	-	-	-	60	-		40	1	120	1	20	1	0	0	60
149	Chloro Acetic Acid				20	-	-	20	-	-	20	20	-		20	1	20	20	1	1	20	20	60
150	Chloro Benzene	C_6H_5Cl		Pure	-	-	-	-	20	-	20	60	-		1	20	60	20	1	1	0	0	60
151	Chloro Benzyl Chloride				-	-	-	-	-	-	-	-	20		0	1	1	20	1	20	20	20	60
152	Chloro Sulfonic Acid	$SO_2Cl(OH)$		Pure	-	-	-	-	-	-	-	-	-		1	1	1	1	1	1	0	0	60
153	Chloroform	$CHCl_3$		Pure	-	-	-	-	-	-	20	60	-		1	1	60	20	1	20	0	20	60
154	Chlorosene				-	-	-	-	-	-	-	-	-		0	0	0	0	0	20	0	0	60
155	Chlorosulfuric Acid	HSO_3Cl			-	-	-	-	-	-	-	-	-		1	1	1	1	1	1	1	1	60
156	Chromic Acid	H_2CrO_4		10	40	-	-	40	-	-	60	60	-		40	1	120	80	20	1	1	20	60
157	Chromic Acid	H_2CrO_4		20	20	-	-	20	-	-	60	60	-		20	1	120	60	20	1	1	20	60
158	Chromic Acid	H_2CrO_4		40	-	-	-	-	-	-	-	60	-		20	1	100	1	1	1	1	20	60
159	Chromic Acid	H_2CrO_4		50	-	-	-	-	-	-	-	50	-		1	1	50	1	1	1	1	20	60
160	Chrominum Alum	$KCr(SO_4)_2$			20	-	-	20	60	-	60	60	-		20	60	120	100	100	0	0	0	60
161	Citric Acid	$C_6H_8O_7$		10	40	20	40	40	60	20	60	60	20		60	100	100	100	100	60	20	20	60
162	Citric Acid	$(CH_2COOH)_2C(OH)COOH$	1.33	50	20	20	20	20	20	20	20	60	20		40	40	80	20	20	20	20	20	60
163	Coconut Oil				40	-	-	40	60	-	60	60	-		60	80	120	60	40	0	0	0	60
164	Coke Oven Gas				-	-	-	-	-	-	60	60	-		0	0	120	60	40	0	0	0	60
165	Colophonium				-	-	-	-	20	20	20	20	20		0	20	20	20	20	20	20	0	60
166	Copper Acetate	$Cu(CH_3COO)_2$-H_2O		Satu	20	20	20	20	20	20	60	60	20		20	20	120	60	40	40	20	1	60
167	Copper Borofluride	$CuBF_4$			20	-	-	20	20	-	20	60	-		20	20	120	20	100	0	0	0	60
168	Copper Carbonate	$CuCO_3$			20	-	20	20	20	-	20	60	-		20	20	120	20	20	40	1	1	60
169	Copper Chloride	$CuCl_2$			40	-	-	40	60	-	60	60	-		60	100	120	100	100	1	1	20	60
170	Copper Cyanide	CuCN			20	-	20	20	20	-	20	60	-		20	100	100	20	20	20	0	20	60

171	Copper Fluoride	CuF		Satu	20	-	-	20	20	-	20	60	-	60	60	120	20	20	0	0	0	60
172	Copper Sulfate	$CuSO_4$		Satu	40	20	40	40	60	20	60	60	20	60	100	120	100	100	60	20	20	60
173	Corn Oil				20	20	20	20	60	20	60	60	20	20	60	120	60	40	20	20	20	60
174	Corn Syroup				40	-	-	40	60	-	60	60	-	60	100	120	100	80	0	0	0	60
175	Cottonseed Oil				-	-	-	-	60	20	60	60	20	0	100	120	100	60	20	20	20	60
176	Cresol	$C_6H_4(CH_3)OH$		Pure	-	-	-	-	-	-	60	60	20	1	1	80	60	1	20	20	20	60
177	Cresote				-	-	-	-	-	-	-	-	-	1	0	0	20	1	1	1	0	60
178	Croton Aldehyde	CH_3-CH=CH-CHO			-	-	-	-	-	-	20	60	-	0	0	80	20	20	0	0	0	60
179	Crude Oil				20	-	-	20	-	-	20	60	20	60	0	120	20	1	20	20	20	60
180	Cryolite	$NaAlF_6$			-	-	-	-	-	-	-	60	-	60	80	120	0	0	0	0	0	60
181	Cupric Fluoride	CuF_2H_2O		Satu	40	-	-	40	60	-	60	60	-	60	80	120	60	60	0	0	0	60
182	Cupric(Copper) Nitrate	$Cu(NO_3)_2$			40	20	40	40	60	20	60	60	20	60	80	120	100	80	120	20	0	60
183	Cuprous Chloride	CuCl2			40	-	-	40	60	-	60	60	-	60	80	120	100	100	0	0	0	60
184	Cyclohexane	C_6H_{12}			-	-	-	-	-	-	40	60	-	1	1	80	40	1	0	0	0	60
185	Cyclohexanol	$C_6H_{11}OH$		Pure	-	-	-	-	-	-	-	-	-	1	40	80	40	20	1	1	1	1
186	Cyclohexanone	$C_6H_{11}O$		Pure	-	-	-	-	-	-	40	60	20	1	1	80	40	1	20	20	20	60
187	Deazo Solt				-	-	-	-	20	-	20	20	20	0	20	20	20	0	20	20	20	60
188	Decaline	$C_{10}H_{16}$		Pure	-	-	-	-	-	-	20	60	-	0	1	80	20	1	0	0	0	60
189	Decane	$CH_3(CH_2)_8CH_3$		Pure	-	-	-	-	-	-	-	-	-	20	20	80	20	1	1	1	1	1
190	Dexitrine			Satu	40	20	20	40	60	20	60	60	20	60	100	120	100	80	20	20	20	60
191	Diacetone			Pure	-	-	-	-	-	-	-	-	-	1	0	0	0	0	0	0	0	60
192	Diacetone Alcohol	$CH_3COCH_2C(OH)(OH_3)_2$			-	-	-	-	-	20	-	20	20	0	20	20	1	20	20	20	20	60
193	Diacetone Alcohol	$(CH_3)_2C(OH)CH_2COCH_3$		Pure	-	-	-	-	-	-	-	40	-	1	40	40	1	20	0	0	0	60
194	Dibenzyl Ether	$C_6H_5CH_2OCH_2C_6H_5$		Pure	-	-	-	-	-	-	-	40	-	0	0	40	1	1	0	0	0	60
195	Dibutyl Amine	$(C_4H_9)_2NH$		Pure	-	-	-	-	-	-	-	20	-	0	0	20	0	0	0	0	0	60
196	Dibutyl Ether	$[CH_3(CH_2)_3]_2O$			-	-	-	-	-	-	-	40	-	0	0	40	1	1	0	0	0	60
197	Dibutyl Phthalate	$C_6H_4(COOH_4H_9)_2$		Pure	-	-	-	-	20	20	20	40	20	0	20	40	20	40	20	20	20	60
198	Dibutyl Sebacate	H_9C_4OOC-$(CH_2)_8$-$COOC_4$-H_9			-	-	-	-	-	-	-	40	-	0	0	40	1	20	0	0	0	60
199	Dichlorethane	$C_2H_4CL_2$			-	-	-	-	-	-	-	-	-	0	1	0	1	0	1	1	20	60
200	Dichloro Benzen	$C_6H_4Cl_2$		Pure	-	-	-	-	20	-	20	60	20	0	20	60	20	1	20	20	20	60
201	Dichlorobenzyl Chloride	$C_6H_5CHCL_2$			-	-	-	-	-	-	-	20	-	0	20	20	1	20	0	0	0	60
202	Dichloroethylene	$CH_2=CCl_2$		Pure	-	-	-	-	-	-	20	60	20	0	1	60	20	1	20	20	20	60
203	Dichloroisopropyethel	Cl-CH_2-CH-O-CH-CH_2-Cl		Pure	-	-	-	-	-	-	-	40	-	0	0	40	0	0	0	0	0	60
204	Diesel Fuel				20	20	20	20	20	20	20	60	20	20	20	120	20	20	120	20	20	60
205	Diethylamine	$(C_2H_5)_2NH$		Pure	-	-	-	-	20	-	20	20	-	1	40	20	20	20	1	1	20	60
206	Diethylbenzene				-	-	-	-	-	-	-	-	20	0	1	0	20	1	20	20	20	60
207	Diethylcellosolve	$CH_2CH_2(OC_2H_5)_2$			-	-	-	-	-	-	-	-	20	0	0	0	0	1	20	20	20	60
208	Diethylene Glycol				20	-	-	20	20	-	20	20	20	20	20	20	20	0	20	20	20	60
209	Diethylether	$C_2H_5OC_2H_5$		Pure	-	-	-	-	-	-	-	40	-	1	1	40	1	1	0	0	0	60
210	Dietylene Triamine	$H_5N(CH_2CH_2NH)_2H$			-	-	-	-	-	-	20	40	20	0	0	40	20	20	20	20	20	60
211	Diglycolic Acid	$(HO_2CCH_2)_2O+H_2O$		Satu	20	-	-	20	20	-	20	20	-	40	20	20	20	20	0	0	0	60
212	Diisobtylene	C_8H_{16}		Pure	-	-	-	-	-	-	40	60	20	0	0	80	40	20	20	20	20	60
213	Diisobuty Keton	$[(CH_3)_2CHCH_2]_2CO$		Pure	-	-	-	-	-	-	-	-	20	0	0	1	1	1	20	20	20	60
214	Diisoprppyl Ketone	$[(CH_3)_2CH_2)]CO$		Pure	-	-	-	-	-	-	-	-	-	0	0	1	1	20	0	0	0	60
215	Dimethyl Amine	$(CH_3)_2NH$			-	-	-	-	20	-	20	20	-	1	40	20	20	60	20	1	1	60

216	Dimethyl Aniline	$C_8H_{11}N$			-	-	-	-	-	-	-	20	20		0	0	20	1	1	20	20	20	60
217	Dimethyl Formamide	$HCON(CH_3)_2$			-	-	-	-	-	-	-	-	-		1	40	1	1	20	1	0	0	60
218	Dimethyl Phthalate	$C_6H_4(COOCH_3)_2$			-	-	-	-	-	-	20	20	-		0	0	20	20	20	0	0	0	60
219	Dimethyl Sulfate	$(CH_3O)_2SO_2$			-	-	-	-	-	-	-	-	20		0	0	0	1	0	20	20	20	60
220	Dimethyl Sulfoxide	$(CH_3)_2SO$			-	-	-	-	-	-	-	-	-		0	0	1	0	0	0	0	0	60
221	Dimetry Acetaminade	$CH_3CON(CH_3)_2$			-	-	-	-	-	-	-	-	-		1	1	1	0	0	0	0	0	60
222	Dioctyl Phthalate	$C_6H_4(COOH_8H_{17})_2$			-	-	-	-	-	-	20	40	-		0	0	40	20	20	0	0	0	60
223	Dioxane	$C_4H_8O_2$		Pure	-	-	-	-	-	-	-	-	-		1	20	1	1	1	0	0	0	60
224	Dioxolane	$C_3H_6O_2$			-	-	-	-	-	-	-	-	-		0	0	1	1	1	0	0	0	60
225	Diphenyl	$C_6H_5{\cdot}C_6H_5$			-	-	-	-	-	-	-	-	20		0	0	0	0	0	20	20	20	60
226	Diphenyl Oxide	$C_{12}H_8O$		Satu	-	-	-	-	-	-	-	-	-		0	0	0	20	1	0	0	0	60
227	Disodium Phosphate	Na_2HPO_4			-	-	-	-	-	-	-	60	-		60	0	120	0	0	0	0	0	60
228	Epichlorohydrine	C_3H_5OCl		Pure	-	-	-	-	-	-	-	-	-		1	1	1	1	1	0	0	0	60
229	Ethanolamine	$H_2NCH_2CH_2OH$		Pure	-	-	-	-	20	20	-	-	20		0	20	1	20	40	20	20	20	60
230	Ether	C_2H_5O			20	-	-	20	-	-	-	-	-		20	0	0	20	0	1	1	20	60
231	Ethyl Acetate	$CH_3COOC_2H_5$			-	-	-	-	-	-	-	20	-		1	20	20	1	1	1	1	1	60
232	Ethyl Acetoacetate	$CH_3CO\text{-}CH_2COOC_2H_5$		Pure	-	-	-	-	-	-	-	40	-		0	0	40	1	40	0	0	0	60
233	Ethyl Acrylate	$H_2CCH\text{-}COOC_2H_5$		Pure	-	-	-	-	-	-	-	40	-		0	0	40	1	20	0	0	0	60
234	Ethyl Alcohol	C_2H_5OH			40	40	30	40	60	80	60	60	30		60	80	80	80	80	30	80	30	60
235	Ethyl Benzene	$C_6H_5C_2H_5$			-	-	-	-	-	-	20	60	-		0	0	60	20	1	0	0	0	60
236	Ethyl Chloride	C_2H_5Cl			-	-	-	-	-	-	60	60	-		1	1	60	80	40	20	1	20	60
237	Ethyl Ether	$(C_2H_5)_2O$		Pure	-	-	-	-	-	-	-	40	20		1	1	40	1	1	20	20	0	60
238	Ethyl Formate	$HCOOC_2H_5$		Pure	-	-	-	-	-	-	-	-	-		0	0	0	0	20	0	0	0	60
239	Ethyl Hexanol	$CH_3(CH_2)_3CH(C_2H_5)CH_2OH$			-	-	-	-	20	-	20	60	-		0	40	100	20	1	0	0	0	60
240	Ethyl Mercaptan	$C_2H_5\text{-}SH$		Pure	-	-	-	-	-	-	-	-	-		0	0	0	60	40	0	0	0	60
241	Ethyl Oxalate	$(CO_2C_2H_5)_2$			-	-	-	-	-	-	-	-	-		0	0	0	1	20	0	0	0	60
242	Ethylalchol	C_2H_5OH		Pure	40	-	-	40	60	-	60	60	-		60	80	80	80	80	0	0	0	60
243	Ethylen Chrohydrin	$ClCH_2\text{-}CH_2OH$		Pure	-	-	-	-	-	-	-	40	-		0	20	40	1	20	0	0	0	60
244	Ethylene Acrylate				-	-	-	-	-	-	-	20	20		1	0	20	1	1	20	20	20	60
245	Ethylene Bromide	$CH_2Br\text{-}CH_2Br$			-	-	-	-	-	-	-	60	-		0	0	80	1	10	0	0	0	60
246	Ethylene Chloride	$ClCH_2CH_2Cl$			-	-	-	-	-	-	20	60	-		1	1	80	20	1	1	20	20	60
247	Ethylene Diamine	$NH_2CH_2CH_2NH_2$		Pure	-	-	-	-	-	-	-	20	-		0	0	20	0	20	0	0	0	60
248	Ethylene Dibromide	$(CH_2Br)_2$			-	-	-	-	-	-	20	60	20		0	0	80	20	0	20	20	1	60
249	Ethylene Glycol	$CH_2OH\text{-}CH_2OH$		Pure	40	20	-	40	60	20	60	60	-		60	80	80	100	100	1	20	20	60
250	Ethylene Oxido	$(CH_2)_2O$		Pure	-	-	-	-	-	-	-	40	20		1	0	40	1	1	20	20	20	60
251	Ethylene Trichloride	C_2HCl_3			-	-	-	-	-	-	-	20	20		1	1	20	1	1	20	20	20	60
252	Fatty Acid	RCOOH			20	-	-	20	20	-	20	60	20		60	60	120	20	1	20	20	0	60
253	Ferous Nitrate	$Fe(NO_3)_2$		Satu	40	-	-	40	60	-	60	60	-		60	100	120	100	80	0	0	0	60
254	Ferric Chloride	$FeCl_3$			40	-	-	40	60	-	60	60	-		60	100	120	100	100	1	0	0	60
255	Ferric Hydroxide	$Fe(OH)_3$		Satu	40	-	-	40	60	-	60	60	-		60	80	120	80	80	0	0	0	60
256	Ferric Sulfate	$Fe_2(SO_4)_3$			-	-	-	-	-	-	-	-	-		0	0	0	0	0	0	0	0	60
257	Ferric(Iron) Nitrate	$Fe(NO_3)_3$			40	20	20	40	60	20	60	60	20		60	100	120	100	80	20	20	1	60
258	Ferrous Chloride	$FeCl_2$			-	-	-	-	-	-	-	-	-		0	0	0	0	0	0	0	0	60
259	Ferrous Sulfate	$FeSO_4$			-	-	-	-	-	-	-	-	-		0	0	0	0	0	0	0	0	60

260	Ferrous(Iron) Chloride	$FeCl_2$			40	-	-	40	60	-	60	60	-		40	100	120	100	100	1	1	20	60
261	Ferrous(Iron) Hydroxide	$Fe(OH)_2$		Satu	40	-	20	40	60	-	60	60	-		60	80	120	100	80	20	1	1	60
262	Ferrous(Iron) Sulfate	$FeSO_4$			40	-	-	40	60	-	60	60	-		60	100	120	100	100	1	1	20	60
263	Fluoriine Gas	F_2			-	20	-	-	-	-	-	-	-		60	1	120	60	60	1	20	1	1
264	Fluoroboric Acid(Hydrogen Terafluoroborate)	HBF_4		Pure	40	-	-	40	60	-	60	60	-		60	80	120	80	80	1	0	0	60
265	Fluosilicic Acid	H_2SiF_6		50	40	-	-	40	60	-	60	60	-		60	80	120	100	100	1	0	0	60
266	Formaldehyde	HCHO		35	40	20	20	40	60	20	60	60	20		40	80	60	80	80	20	20	20	60
267	Formalin	HCHO		40	40	20	20	40	60	20	60	60	20		40	80	60	80	80	20	20	20	60
268	Formic Acid	HCOOH		90	-	20	-	-	-	20	-	60	-		40	40	80	1	100	1	20	100	60
269	Freon-11	CCl_3F			20	-	-	20	-	-	20	60	20		60	0	120	20	1	20	20	20	60
270	Freon-113	$CClF_2$-$CClF_2$			20	-	-	20	-	-	20	60	20		20	0	120	20	1	20	20	20	60
271	Freon-114	$CClF_2$-$CCLF_2$			20	-	-	20	-	-	40	60	0		20	0	120	40	1	0	0	0	60
272	Freon-12	CCl_2F_2			20	20	20	20	-	-	20	60	20		60	0	120	20	20	20	20	20	60
273	Freon-21	$CHCl_2F$			-	-	-	-	-	-	-	60	20		1	0	120	1	1	20	20	20	60
274	Freon-22	$CHClF_2$			-	-	-	-	-	-	-	60	-		1	0	120	1	20	0	0	0	60
275	Fructose (Fruit Suger)				40	-	-	40	-	-	60	60	-		60	0	120	100	80	0	0	0	60
276	Fuel Oil				-	-	-	-	-	-	-	-	-		0	0	0	0	0	0	0	0	60
277	Fuming Sulfric Acid	H_4SO_4+SO_3			-	-	-	-	-	-	-	-	-		1	1	1	1	1	60	0	0	60
278	Furan				-	-	-	-	-	-	-	-	-		0	0	1	1	1	20	0	0	60
279	Furfural	$C_5H_4O_2$		Pure	-	-	-	-	-	-	40	60	-		0	1	100	40	100	0	0	0	60
280	Furfuryl Alchool	C_5H_6O2		Pure	-	-	-	-	-	-	-	-	-		0	20	1	1	1	20	0	0	60
281	Furric Sulfide	Fe_2S			40	-	-	40	60	-	60	60	-		60	100	120	80	80	0	0	0	60
282	Gallic Acid	$C_7H_6O_5 \cdot H_2O$			-	-	-	-	-	-	20	40	-		0	0	40	20	20	0	0	0	60
283	Gasoline				-	-	-	-	-	-	60	60	20		1	1	80	80	1	20	20	20	60
284	Gasoline-Sour				20	-	-	20	-	-	20	60	-		60	1	120	20	1	0	0	0	60
285	Gelatin				40	20	20	40	60	20	60	60	20		60	100	120	100	80	20	20	20	60
286	Gin				40	-	-	40	60	-	60	60	-		60	80	120	100	80	0	0	0	60
287	Glacial Acetic Acid				-	-	-	-	20	-	20	60	-		1	20	80	20	1	1	0	0	60
288	Glucose	$C_6H_{12}O_6$			40	-	-	40	60	-	60	60	-		60	100	120	80	80	0	0	0	60
289	Glue				-	-	-	-	-	-	60	60	-		0	0	120	100	80	100	0	0	60
290	Glycerine	$C_3H_5(OH)_3$	1.46	100	-	-	-	-	-	-	-	-	-		0	0	0	0	0	0	0	0	60
291	Glycerol	$C_3H_5(OH)_3$			40	20	40	40	60	20	60	60	20		60	100	120	80	80	40	20	20	60
292	Glycolic Acid	$CH_2(OH)COOH$		Satu	-	-	-	-	20	-	20	40	-		0	100	40	20	20	0	0	0	60
293	Grape Suger	$C_6H_{12}O_6$			40	-	-	40	60	-	60	60	-		60	100	120	80	80	0	0	0	60
294	Heavy Oil				-	-	-	-	-	-	-	-	-		1	1	0	1	1	120	0	0	60
295	Heptane	$CH_3(CH_2)_5CH_3$			40	-	-	40	40	-	60	60	20		60	40	80	60	1	20	20	20	60
296	Hexane	C_5H_{14}			20	-	-	20	20	-	20	60	20		40	40	80	20	1	20	20	20	60
297	Hexyl Alchol(Hexanol)	$CH_3(CH_2)_5OH$			40	20	20	40	20	20	60	60	20		60	20	80	120	40	20	20	20	60
298	Hydrazine	H_2N-NH_2		Pure	-	-	-	-	-	-	-	-	-		1	1	1	1	20	1	20	20	60
299	Hydrobromic Acid	HBr			40	-	-	40	60	-	60	60	-		60	100	120	80	80	0	0	0	60
300	Hydrocfluoric Acid	HF		50	20	20	-	20	-	-	60	60	-		20	1	120	100	60	1	20	20	60
301	Hydrochloric Acid	HCl		15	40	20	-	40	60	20	60	60	-		60	80	120	80	60	1	20	20	60
302	Hydrochloric Acid	HCl		25	40	20	-	40	60	20	60	60	-		60	80	120	80	60	1	20	20	60
303	Hydrochloric Acid	HCl		35	40	20	-	40	40	20	40	60	-		60	80	120	40	40	1	20	20	60
304	Hydrochloric Acid	HCl		38	40	-	-	40	40	-	40	60	-		60	80	120	40	1	1	20	20	60
305	Hydrocyanic Acid(Prussic Acid)	HCN		10	20	-	-	20	20	-	20	60	-		60	60	120	20	20	0	0	0	60

306	Hydrofluoric Acid	HF		Dilute	40	20	-	40	-	-	60	60	-	40	1	120	120	100	1	20	20	60
307	Hydrofluoric Acid	HF		30	40	20	-	40	-	-	60	60	-	40	1	120	100	80	1	20	20	60
308	Hydrofluoric Acid	HF		40	20	20	-	20	-	-	60	60	-	20	1	120	100	40	1	20	20	60
309	Hydrogen	H_2			40	-	-	40	60	-	60	60	-	60	80	100	60	60	0	0	0	60
310	Hydrogen Fluoride(Anhydrous)	HF			-	-	-	-	-	-	-	60	-	0	0	120	1	20	0	0	0	60
311	Hydrogen Peroxide	H_2O_2		5	40	-	40	40	60	-	60	60	-	40	80	120	80	60	60	0	0	60
312	Hydrogen Peroxide	H_2O_2		20	40	-	-	40	60	-	60	60	-	40	80	120	80	60	0	0	0	60
313	Hydrogen Peroxide	H_2O_2		30	20	-	-	20	60	-	60	60	-	20	60	120	80	20	0	0	0	60
314	Hydrogen Peroxide	H_2O_2		50	20	-	-	20	-	-	40	60	-	20	1	120	40	1	20	0	0	60
315	Hydrogen Peroxide	H_2O_2		90	-	-	-	-	-	-	20	60	-	0	0	80	20	1	1	0	0	60
316	Hydrogen Sulfide(Aqueous)	H_2S			40	-	-	40	60	-	60	60	-	60	80	120	60	100	0	0	0	60
317	Hydrogen Sulfide(Dry)	H_2S			40	-	40	40	60	-	60	60	-	60	100	120	100	100	120	0	0	60
318	Hydroiodoc Acid	HI			40	-	-	40	40	-	40	60	-	40	40	120	40	40	1	0	0	60
319	Hydroquinone	$C_6H_4(OH)_2$		Satu	40	20	20	40	-	-	40	60	20	60	0	80	40	20	20	20	0	60
320	Hypochlorous Acid	HClO		10	40	-	-	40	40	-	40	60	-	40	60	120	40	40	0	0	0	60
321	Iodine	I_2			20	-	-	20	20	-	20	60	-	20	80	120	20	1	20	0	0	60
322	Iodine Solution			10	-	-	-	-	-	-	0	60	-	40	0	120	0	0	0	0	0	60
323	Isobutyl Alcohol	$(CH_3)_2CHCH_2OH$		Pure	-	-	-	-	-	-	20	60	-	0	0	80	20	20	0	0	0	60
324	Iso-Octane	C_8H_{18}			-	-	-	-	-	-	20	60	20	0	0	80	20	1	20	20	20	60
325	Isophorone			Pure	-	-	-	-	-	-	-	-	-	0	0	0	1	1	0	0	0	60
326	Isopropyl Acetate	$CH_3COOCH(CH_3)_2$			-	-	-	-	-	-	-	-	-	0	0	0	1	20	0	0	0	60
327	Isopropyl Alcohol	$(CH_3)_2CHOH$		Pure	40	20	20	40	60	20	60	60	20	60	60	80	100	60	20	20	20	60
328	Isopropyl Chloride	$(CH_3)_2CHCl$			-	-	-	-	-	-	20	40	-	0	0	40	20	1	0	0	0	60
329	Isopropyl Ether	$(CH_3)_2CH\text{-}O\text{-}CH(CH_3)_2$		Pure	-	-	-	-	-	-	-	40	20	0	20	40	1	1	20	20	20	60
330	Jet Fuel Jp-4				20	-	-	20	-	-	20	60	20	20	0	80	20	1	20	20	20	60
331	Jet Fuel Jp-5				20	-	-	20	-	-	20	60	20	20	0	80	20	1	20	20	20	60
332	Kerosene				20	-	-	20	20	-	20	60	20	60	40	80	20	1	20	20	20	60
333	Lacquer				-	-	-	-	-	-	-	-	-	0	0	0	1	1	20	0	0	60
334	Lactic Acid	$CH_3CH(OH)COOH$		25	40	20	20	40	60	20	60	60	20	60	80	120	100	100	20	20	20	60
335	Lauric Acid	$CH_3(CH_2)_{10}COOH$			-	-	-	-	20	-	20	60	-	0	20	120	20	0	20	0	0	60
336	Lauroy Chloride	$C_{12}H_{23}OCl$		Pure	-	-	-	-	-	-	-	60	-	0	0	120	0	0	0	0	0	60
337	Lead Acetate	$Pb(CH_3COO)_23H_2O$		Satu	40	20	40	40	60	20	60	60	20	60	80	120	80	80	40	20	20	60
338	Lead Chloride	$PbCl_2$			40	-	-	40	60	-	60	60	-	60	60	120	100	80	0	0	0	60
339	Lead Nitrate	$Pb(NO_3)_2$		Satu	-	-	40	-	-	-	-	-	-	60	80	100	100	80	120	1	1	1
340	Lead Sulfate	$PbSO_4$			40	-	-	40	60	-	60	60	-	60	80	120	100	80	0	0	0	60
341	Lemon Oil				-	-	-	-	-	-	-	60	-	0	1	120	0	0	20	0	0	60
342	Linolenic Acid	$CH_3(CH{=}CH\text{-}CH_3)_3(CH_2)_7COOH$			20	-	-	20	20	-	20	60	-	60	20	120	20	1	20	0	0	60
343	Linolenic Oil				-	-	-	-	-	-	-	60	-	60	0	120	0	0	0	0	0	60
344	Linseed Oil				40	20	20	40	40	20	40	60	20	60	80	120	40	20	20	20	20	60
345	Lithium Bromide	LiBr			40	-	-	40	-	-	60	60	-	60	0	120	100	0	0	0	0	60
346	Litium Chloride	LiCl		Satu	40	20	20	40	60	20	60	60	20	60	80	120	80	40	20	20	20	60
347	Litium hydroxide				-	-	-	-	20	20	20	20	20	0	20	20	20	20	20	20	20	60
348	Lubricating Oil	(ASTM1)			40	-	-	40	-	-	60	60	20	60	0	120	100	0	120	20	20	60
349	Lubricating Oil	(ASTM2)			-	-	-	-	-	-	-	60	20	60	0	120	0	0	120	20	20	60
350	Lubricating Oil	(ASTM3)			40	-	-	40	20	-	60	60	20	60	20	120	100	1	120	20	20	60
351	Machine Oil				40	-	-	40	60	-	60	60	-	60	60	100	60	1	0	0	0	60

352	magnasium Carbonate	$MgCO_3$			40	20	40	40	60	20	60	60	20	60	100	120	100	80	100	20	20	60
353	Magnasium Citrate				40	-	-	40	60	-	60	60	-	60	100	120	100	80	0	0	0	60
354	Magnecium Hydroxide	$Mg(OH)_2$		Satu	40	20	20	40	60	20	60	60	20	60	80	120	100	80	20	20	20	60
355	Magnesium Carbonate	$MgCO_3$	1.0		-	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0	60
356	Magnesium Chloride	$MgCl_2$		Satu	40	20	40	40	60	20	60	60	20	60	100	120	100	100	60	20	20	60
357	Magnesium Fluoride	MgF_2			-	-	-	-	-	-	-	-	-	20	20	50	20	20	1	0	0	1
358	Magnesium Hypochloride	$Mg(Ocl)_2$			-	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0	60
359	Magnesium Nitrate	$Mg(NO_3)_2$-$6H_2O$			40	20	20	40	60	20	60	60	20	60	80	120	100	80	20	20	20	60
360	Magnesium Sulfate	$MgSO_4$			40	20	40	40	60	20	60	60	20	60	80	120	100	100	60	20	20	60
361	Magnesium Sulphate	$MgS0_4$	1.19	25.2	-	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0	60
362	Maleic Acid	$(CHCOO)_2$			40	20	-	40	60	20	60	60	-	60	100	120	80	60	1	20	0	60
363	Malic Acid	$C_4H_6O_5$			40	20	20	40	60	20	60	60	20	60	100	120	60	100	20	20	20	60
364	Manganse Chloride	$MnCl_2$			20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	60
365	Manganse Sulfate	$MnSO_4$			40	-	20	40	60	-	60	60	-	40	100	120	100	80	20	0	0	60
366	Mercuric Chloride	$HgCl_2$			40	-	-	40	60	-	60	60	-	60	80	120	60	60	1	0	0	60
367	Mercuric Cyanide	$Hg(CN)_2$		Satu	40	-	-	40	60	-	60	60	-	60	80	120	60	20	0	0	0	60
368	Mercuric Sulfate	$HgSO_4$		Satu	20	-	-	20	20	-	20	60	-	60	80	120	20	20	0	0	0	60
369	Mercurous Nitrate	$Hg(NO_3)_2$			20	20	20	20	20	20	20	60	20	20	20	120	20	20	20	20	0	60
370	Mercury	Hg			20	20	20	20	20	20	20	60	20	60	80	120	20	20	60	20	20	60
371	Mercury Fulminate				-	-	-	-	-	-	-	20	-	0	20	20	0	0	20	0	0	60
372	Methane	CH_4			40	-	-	40	60	-	60	60	-	60	100	120	100	80	0	0	0	60
373	Methane Sulfonic Acid	CH_3SO_3H			-	-	-	-	-	-	0	40	-	0	0	40	0	0	0	0	0	60
374	Methyl Acetate	CH_3COOCH_3		Pure	-	-	-	-	-	20	-	40	20	1	20	40	1	20	20	20	20	60
375	Methyl Acrylate	$CH_2CHCOOCH_3$		Pure	-	-	-	-	-	-	20	40	20	0	0	40	20	1	20	20	20	60
376	Methyl Alcohol	CH_3OH			40	20	-	40	40	20	40	60	-	60	80	80	40	80	1	20	20	60
377	Methyl Amine	CH_3NH_2			-	-	-	-	-	-	-	-	20	1	1	1	20	20	20	20	20	60
378	Methyl Bromide	CH_3Br			-	-	-	-	-	-	-	60	0	0	1	80	0	20	20	0	0	60
379	Methyl Cellosolve	$HOCH_2CH_2OCH_3$			-	-	-	-	-	-	-	60	0	0	0	60	0	20	0	0	0	60
380	Methyl Chloride	CH_3Cl			-	-	-	-	-	-	-	60	20	0	0	60	1	20	20	20	20	60
381	Methyl Chloroform	CH_3CCl_3			-	-	-	-	-	-	20	60	-	0	0	60	20	1	20	0	0	60
382	Methyl Ether	$(CH_3)_2O$			-	-	-	-	-	-	-	-	-	0	0	0	1	1	0	0	0	60
383	Methyl Ethyl Ketone	$CH_3COC_2H_5$			-	-	-	-	-	20	-	-	20	1	20	1	1	20	20	20	20	60
384	Methyl Formate	$HCOOCH_3$			-	-	-	-	-	-	-	-	-	0	0	0	0	20	0	0	0	60
385	Methyl Isobutyl Carbinol	$(CH_3)_2CHCH_2CH(OH)(CH_3)$			-	-	-	-	-	-	-	-	-	0	0	0	20	20	0	0	0	60
386	Methyl Isobutyl Ketone	$(CH_3)_2CHCH_2COCH_3$			-	-	-	-	-	-	-	-	-	1	20	0	1	20	20	0	0	60
387	Methyl Isopropyl Ketone	$(CH_3)_2CH$-C-CH_3			-	-	-	-	-	-	-	-	-	0	0	1	0	1	0	0	0	60
388	Methyl Methacrylate	$CH_2C(CH_3)COOCH_3$			-	-	-	-	-	-	-	20	-	0	0	20	1	1	0	0	0	60
389	Methyl Salicylate	$C_8H_8O_3$			-	-	-	-	-	-	-	-	-	0	0	0	20	1	20	0	0	60
390	Methyl Sulfoxide	$(CH_3)_2SO$			-	-	-	-	-	-	-	-	-	0	0	1	0	0	0	0	0	60
391	Methylene Bromide	CH_2Br_2			-	-	-	-	-	-	20	60	-	0	0	80	20	1	0	0	0	60
392	Methylene Chloride	CH_2Cl_2			-	-	-	-	-	-	-	40	20	1	1	40	1	1	20	20	20	60
393	Methylene Iodide	CH_2I_2			-	-	-	-	-	-	60	60	-	0	0	80	100	1	0	0	0	60
394	Milk				-	-	-	-	-	-	-	60	-	60	100	120	0	0	0	0	0	60
395	Mineral Oil				20	-	-	20	20	-	20	60	20	40	40	120	20	1	20	20	20	60

396	Mixture Acid	50%H_2SO_4+50%HCℓ			-	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0	60
397	Monochloro-Benzene	C_6H_5Cl			-	-	-	-	20	-	20	60	-	0	20	60	20	1	0	0	0	60
398	Monochlro Acetic Acid	$ClCH_2COOH$			20	-	-	20	20	-	20	60	-	60	40	80	20	1	0	0	0	60
399	Monoethanol Amin	$H_2NCH_2CH_2OH$			-	-	-	-	-	-	-	-	-	0	0	0	0	20	0	0	0	60
400	Monomethyl-Anline	$C_6H_5NHCH_3$			-	-	-	-	-	-	-	-	-	0	0	0	20	0	0	0	0	60
401	Motor Oil				-	-	-	-	-	-	20	60	-	0	0	120	20	0	0	0	0	60
402	Naphtha				-	-	-	-	20	-	20	60	20	1	20	80	20	1	20	20	20	60
403	Naphthalene	$C_{10}H_8$			-	-	-	-	20	-	20	60	20	0	20	80	20	1	20	20	20	60
404	Naphthalene Sulfonate	$C_{10}H_8SO_3H_2O$			-	-	-	-	-	-	-	-	20	0	0	0	0	0	20	20	20	60
405	Natural Gas				40	-	-	40	-	-	60	60	-	60	1	120	100	1	1	1	1	60
406	Nickel Acetate	$Ni(CH_3COO)_2$			20	-	-	20	20	-	20	60	-	60	80	100	20	1	0	0	0	60
407	Nickel Aminosulfonate	$N:(NH_2SO_3)_2 - H_2O$			-	-	-	-	-	-	60	60	-	0	0	80	60	100	0	0	0	60
408	Nickel Chloride	$NiCl_2$		Satu	40	20	-	40	60	20	60	60	-	60	80	120	100	100	1	20	20	60
409	Nickel Nitrate	$Ni(NO_3)_2$-$6H_2O$		Satu	20	20	20	20	20	20	60	60	20	20	20	120	120	100	120	20	0	60
410	Nickel Sulfate	$NiSO_4$		Satu	40	20	20	40	60	20	60	60	20	60	100	120	80	100	20	20	0	60
411	Nicotine	$C_{10}H_{14}N_2$			-	-	-	-	-	-	-	40	-	0	0	40	0	0	0	0	0	60
412	Nicotine Acid	$C_6H_5O_2N$			-	-	-	-	-	-	-	60	-	0	0	120	0	20	0	0	0	60
413	Nitric Acid	HNO_3		10	40	20	40	40	60	20	60	60	20	60	100	120	100	60	60	20	20	60
414	Nitric Acid	HNO_3		30	40	20	40	40	60	20	60	60	20	40	80	120	60	40	60	20	20	60
415	Nitric Acid	HNO_3		50	20	-	-	20	40	-	40	60	20	20	40	120	40	1	60	20	20	60
416	Nitric Acid	HNO_3		70	-	-	-	-	-	-	-	60	20	20	1	80	1	1	60	20	20	60
417	Nitric Acid	HNO_3		98	-	-	-	-	-	-	-	40	20	1	1	40	1	1	20	20	20	60
418	Nitrobenzene	$C_6H_5NO_2$			-	-	-	-	20	20	60	60	20	1	20	60	60	60	20	20	20	60
419	Nitroethane	$CH_3CH_2NO_2$			-	-	-	-	-	20	-	20	20	0	20	20	1	20	20	20	20	60
420	Nitrogen Dioxide	NO_2			-	-	-	-	-	-	-	-	-	0	0	0	60	0	0	0	0	60
421	Nitrogen Monoxide(**)	NO			40	-	-	40	60	-	60	60	-	60	60	60	60	60	0	0	0	60
422	Nitroglycerin	$C_3H_5N_3O_9$			-	-	-	-	-	-	-	-	20	0	0	0	20	0	20	20	20	60
423	Nitromethane	CH_3NO_2		Pure	-	-	-	-	-	-	-	40	-	0	0	40	0	20	0	0	0	60
424	Nitrous Acid	HNO_3		10	-	-	-	-	20	-	20	60	-	0	20	80	20	20	20	0	0	60
425	Nitrous Oxide	N_2O			40	-	-	40	60	-	60	60	-	60	80	100	120	80	0	0	0	60
426	Octane	C_8H_{18}			-	-	-	-	-	-	20	60	-	0	0	80	20	1	0	0	0	60
427	Oleic Acid	$C_2H_2(CH_2)_7COOH$			40	-	-	40	60	-	60	60	20	60	60	100	120	1	20	20	20	60
428	Olive Oil				40	20	20	40	60	20	60	60	20	60	100	120	60	20	20	20	20	60
429	Oxalic Acid	HOOCCOOH		20	40	-	20	40	60	-	60	60	-	60	100	120	60	40	20	1	1	60
430	Oxalic Acid	HOOCCOOH		50	20	-	-	20	20	-	20	60	-	60	100	120	20	20	1	0	0	60
431	Oxygen Gas	O_2			20	20	20	20	20	20	20	60	20	20	20	80	20	20	20	20	20	60
432	Ozone	O_3			20	-	20	20	-	-	20	60	-	40	1	80	20	20	20	0	0	60
433	Pains Solvents				-	-	-	-	-	-	-	-	-	0	0	0	1	1	0	0	0	60
434	Palm Oil			100	-	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0	60
435	Palmitic Acid	$C_{15}H_{31}COOH$		5	-	-	-	-	20	-	20	60	-	0	100	120	20	20	0	0	0	60
436	Palmitic Acid	$C_{15}H_{31}COOH$		10	-	-	-	-	20	-	20	60	-	0	80	120	20	20	0	0	0	60
437	Palmitic Acid	$C_{15}H_{31}COOH$		70	-	-	-	-	20	-	20	60	-	0	80	120	20	20	0	0	0	60
438	Paraffin				20	-	-	20	20	-	20	60	20	20	20	120	20	1	20	20	20	60
439	Peanut Oil				-	-	-	-	-	-	-	60	-	20	20	120	0	0	0	0	0	60
440	Perchloric Acid	$HClO_4$		10	20	-	-	20	20	-	20	60	-	20	40	120	20	20	1	1	1	60

441	Perchloric Acid	$HClO_4$		70	-	-	-	-	-	-	-	40	-	0	0	40	0	0	0	0	0	60
442	Perchloroethylene	$CC\ell_2CC\ell_2$	1.62	100	-	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0	60
443	Perphoshate				20	-	-	20	20	-	20	60	-	60	100	120	20	20	0	0	0	60
444	Petroleum Oil				20	-	-	20	20	-	20	60	-	20	20	120	20	1	120	0	0	60
445	Phenol (Carbonic Acid)	C_6H_5OH			20	20	20	20	20	20	20	60	20	60	60	60	20	20	60	20	20	60
446	Phenyl Disulfide	$C_6H_5SSC_6H_5$			-	-	-	-	-	-	-	-	-	0	0	0	20	1	0	0	0	60
447	Phenylhydrazine	$C_6H_5NHNH_2$			-	-	-	-	-	-	-	40	-	1	1	40	1	20	0	0	0	60
448	Phogene Gas	$COCl_2$			-	-	-	-	-	-	-	-	-	0	1	0	0	0	0	0	0	60
449	Phosgene Liquid	$COCl_2$			-	-	-	-	-	-	-	20	-	20	20	20	0	0	0	0	0	60
450	Phoshours Pentoxide	P_2O_5			-	-	-	-	-	-	-	60	-	20	20	120	0	0	0	0	0	60
451	Phosphoric Acid	H_3PO_4		10	40	20	40	40	60	20	60	60	20	60	100	120	80	100	80	20	1	60
452	Phosphoric Acid	H_3PO_4		50	-	20	40	-	-	20	-	-	20	40	60	120	80	100	80	20	1	1
453	Phosphoric Acid	H_3PO_4		80	-	20	20	-	-	20	-	-	20	20	40	120	80	100	80	20	1	1
454	Phosphorus Oxchoride	$POCl_3$			-	-	-	-	-	-	-	-	-	1	1	1	1	1	0	0	0	60
455	Phosphorus Trichloride	PCl_3		Pure	-	-	-	-	-	-	-	60	-	1	1	120	1	1	20	0	20	60
456	Phosphrous Red	P_4			-	-	-	-	-	-	-	60	-	20	20	120	0	0	0	0	0	60
457	Photographic Developer				-	20	20	-	-	20	-	20	20	20	20	20	1	20	20	20	0	60
458	Photographic Fixative				-	20	-	-	-	20	-	20	-	20	20	20	1	20	1	20	20	60
459	Phthalic Acid	$C_6H_4(COOH)_2$			-	-	-	-	-	-	20	60	-	1	1	100	20	20	20	1	1	60
460	Pickling Solution				-	-	-	-	-	-	-	60	-	60	80	120	0	0	0	0	0	60
461	Picric Acid	$C_6H_3O_7N_3$		10	40	-	-	40	60	-	20	20	-	60	100	20	80	80	1	1	0	60
462	Plating Solution (Brass)				20	-	-	20	20	-	20	60	-	60	80	120	20	20	0	0	0	60
463	Plating Solution (Cadmium)				20	-	-	20	-	-	20	60	-	60	1	120	20	20	1	0	0	60
464	Plating Solution (Chrome)				-	-	-	-	-	-	-	60	-	60	1	120	0	0	1	0	0	60
465	Plating Solution (Copper)				20	-	-	20	20	-	20	60	-	60	80	100	20	20	1	0	0	60
466	Plating Solution (Gold)				20	-	-	20	-	-	20	60	-	60	1	120	20	20	1	0	0	60
467	Plating Solution (Lead)				20	-	-	20	20	-	20	60	-	60	60	120	20	1	1	0	0	60
468	Plating Solution (Nickel)				20	-	-	20	20	-	20	60	-	60	60	120	20	20	1	0	0	60
469	Plating Solution (Rhodium)				20	-	-	20	20	-	20	60	-	60	60	120	20	20	1	0	0	60
470	Plating Solution (Silver)				-	-	-	-	-	-	20	60	-	0	0	60	20	20	1	0	0	60
471	Plating Solution (Tin)				40	-	-	40	60	-	60	60	-	60	60	120	80	60	1	0	0	60
472	Plating Solution (Zinc)	$(CH_3)_2CH\text{-}C\text{-}CH_3$			-	-	-	-	-	-	-	-	-	0	0	0	20	20	1	0	0	60
473	Poly Aluminum Chloride	$[Al_2(OH)nCl_6\text{-}n]m$			40	-	-	40	60	-	60	60	-	40	60	60	60	60	0	0	0	60
474	Polyethylene-Glycol	$HOCH_2(CH_2OCH_2)nCH_2OH$			40	-	-	40	60	-	60	60	-	60	100	120	100	80	0	0	0	60
475	Polyvinyl Acetate	$[CH_3COOCH_2\text{-}CH_2]n$			-	-	-	-	-	-	20	60	-	0	0	120	20	20	0	0	0	60
476	Polyvinyl Alcohol	$[\text{-}CH_2\text{-}CH(OH)\text{-}]n$			40	-	-	40	60	-	60	60	-	60	80	120	60	40	0	0	0	60
477	Polyvinyl Butyrate				-	-	-	-	-	-	-	20	-	0	20	20	1	20	20	0	0	60
478	Potash	K_2CO_3			40	-	-	40	60	-	60	60	-	60	80	120	100	80	0	0	0	60
479	Potassium	K			-	-	20	-	-	-	-	20	-	60	80	20	1	20	20	0	0	60
480	Potassium Acetate	CH_3CO_2K		Satu	20	-	-	20	20	-	20	60	-	20	20	120	20	20	0	0	0	60
481	Potassium Alminume Sulfate	$K_2O\text{-}3Al_2O_36SiO_2\text{-}2H_2O$			-	-	-	-	-	-	-	-	-	60	80	120	100	80	1	1	0	1
482	Potassium Alum	$K_2SO_4Al_2(SO_4)_3\ 24H_2O$		Satu	40	-	40	40	60	-	60	60	-	60	80	120	120	60	120	0	0	60
483	Potassium Bicarbonate(Hydrogencarbonate)	$KHCO_3$		Satu	40	20	20	40	60	20	60	60	20	60	80	120	100	80	20	20	0	60
484	Potassium Bichromate	$K_2Cr_2O_7$		Satu	40	-	40	40	60	-	60	60	-	40	80	120	100	80	120	0	0	60
485	Potassium Bisulfate	$KHSO_4$			40	-	-	40	60	-	60	60	-	60	100	120	100	80	0	0	0	60
486	Potassium Borate				40	-	20	40	60	-	60	60	-	60	100	120	100	80	20	0	0	60

487	Potassium Bromate	$KBrO_3$			-	-	-	-	-	-	-	60	-	60	80	120	0	0	0	0	0	60
488	Potassium Bromide	KBr			40	20	40	40	60	20	60	60	20	60	100	120	100	80	80	20	30	60
489	Potassium Carbonate	K_2CO_3			40	20	20	40	60	20	60	60	20	60	100	120	100	80	20	20	1	60
490	Potassium Chlorate	$KClO_3$			40	20	40	40	60	20	60	60	20	60	80	120	60	40	40	20	1	60
491	Potassium Chloride	KCl			40	20	40	40	60	20	60	60	20	60	100	120	100	80	120	20	20	60
492	Potassium Chromate	K_2CrO_4		30	40	20	20	40	60	20	60	60	20	60	80	120	100	80	20	20	0	60
493	Potassium Coppercyanide	$K_3[Cu(CN_4)]$			40	-	-	40	60	-	60	60	-	60	100	120	100	100	0	0	0	60
494	Potassium Cyanide	KCN			20	20	20	20	20	20	20	60	20	60	100	120	20	20	20	20	0	60
495	Potassium Dichromate	$K_2Cr_2O_7$	1.07	10	20	20	20	20	20	20	20	20	20	60	40	20	20	20	20	20	20	60
496	Potassium Ferricyanide(Red)	$K_3[Fe(CN)_6]$			20	20	20	20	20	20	60	60	20	20	20	120	60	60	60	20	0	60
497	Potassium Ferricyanide(Yellow)	$K_3[Fe(CN)_6]$	1.16		20	-	20	20	20	-	60	60	-	20	20	120	60	60	60	0	0	60
498	Potassium Ferrocyanide	$K_4[Fe(CN)_6]$			20	-	-	20	20	-	60	60	-	20	20	120	60	60	0	0	0	60
499	Potassium Fluoride				20	-	20	20	20	-	60	60	-	20	20	120	100	80	20	0	0	60
500	Potassium Hydroxide	KOH		25	-	20	40	-	-	20	-	60	20	60	80	60	1	100	120	20	20	60
501	Potassium Hypochlorite	$KClO_4$			20	-	-	20	-	-	20	60	-	20	0	60	20	1	0	0	0	60
502	Potassium Iodide	KI			40	20	20	40	60	20	60	60	20	60	100	120	100	80	20	20	0	60
503	Potassium Nitrate	KNO_3			40	20	40	40	-	-	60	60	20	60	0	120	100	80	40	20	20	60
504	Potassium Oxalate	$K_2(COO)_2$			-	-	-	-	-	-	-	-	-	0	0	0	0	0	20	0	0	60
505	Potassium Perborate				-	-	-	-	-	-	-	60	-	60	100	120	0	0	0	0	0	60
506	Potassium Perchlorate	$KClO_4$			-	-	-	-	-	-	-	60	-	60	60	120	0	0	20	0	20	60
507	Potassium Permagnate	$KMnO_4$		10	40	-	40	40	60	-	60	60	-	60	80	120	60	60	40	0	0	60
508	Potassium Permagnate	$KMnO_4$		25	40	20	20	40	60	20	60	60	20	60	80	120	60	40	20	20	1	60
509	Potassium Permanganate	$KMnO_4$	1.03	4	-	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0	60
510	Potassium Persulfate	$K_2S_2O_5$			-	-	-	-	-	-	-	60	-	20	20	120	0	0	0	0	0	60
511	Potassium Silicats	K_2SiO_3			-	-	-	-	-	-	-	-	-	0	0	0	0	0	0	1	1	60
512	Potassium Sulfate	$CrK(SO_4)_2 \cdot 12H_2O$		10	40	20	-	40	60	20	60	60	-	60	100	120	100	80	1	20	20	60
513	Potassium Sulfiede	K_2S			20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	60
514	Potassium Sulfite	K_2SO_3			40	20	20	40	60	20	60	60	20	60	60	60	60	60	20	20	20	60
515	Potassium Tartraate	$C_6H_5KO_6$		50	-	-	-	-	-	-	-	-	-	0	0	0	20	20	20	0	0	60
516	Propane	$CH_3COC_4H_9$			20	-	-	20	20	-	20	60	20	20	20	80	20	1	20	20	20	60
517	Propionic Acid	C_2H_5COOH			-	-	-	-	-	-	-	-	-	0	0	0	0	0	0	20	20	60
518	Propyl Acetate	$CH_3CO_2C_3H_7$		Pure	-	-	-	-	-	-	-	40	-	0	0	40	1	20	0	0	0	60
519	Propyl Nitrate (Nitropropane)				-	-	-	-	-	-	-	-	20	0	0	0	0	20	20	20	20	60
520	Propylaceton	$CH_3COC_4H_9$			-	-	-	-	-	-	-	-	-	0	0	1	0	0	0	0	0	60
521	Propylalcohol	C_3H_7OH			40	-	-	40	60	-	60	60	-	80	80	120	100	80	0	0	0	60
522	Propylene Dichloride	$CH_3CHClCH_2Cl$			-	-	-	-	-	-	-	-	20	0	1	0	20	1	20	20	20	60
523	Propylene Oxide	C_3H_6O			-	-	-	-	-	-	-	-	-	0	0	1	1	0	0	0	0	60
524	Pyridine	C_5H_5N			-	-	-	-	-	-	-	-	-	1	60	1	1	20	20	1	1	60
525	Pyrogallol	$C_6H_3(OH)_3$			-	-	-	-	-	-	-	20	-	0	0	20	0	0	20	0	0	60
526	Rhodan Salts				40	-	-	40	60	-	60	60	-	60	80	120	80	60	0	0	0	60
527	Rosin (Colophonium)				-	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0	60
528	Salicylic Acid	$C_6H_4(OH)(COOH)$			20	20	20	20	-	-	20	60	20	20	0	100	20	20	20	20	0	60
529	Salicylic Aldehyde	$C_6H_4(OH)(CHO)$			-	-	-	-	-	-	20	40	-	0	0	40	20	20	0	0	0	60
530	Salt Water				40	-	-	40	60	-	60	60	-	60	80	120	80	80	1	0	0	60
531	Sea Water				40	-	-	40	60	-	60	60	-	60	100	120	80	80	1	0	0	60

532	Sewage				40	-	-	40	60	-	60	60	-	60	100	120	80	60	0	0	0	60
533	Silane	SiH_4			-	-	-	-	-	-	-	-	20	0	0	0	0	0	20	20	20	60
534	Silicic Acid	SiO_3-nH_2O			40	20	40	40	60	20	60	60	20	60	100	120	100	80	40	20	20	60
535	Silicone Oil				40	20	20	40	40	20	40	60	20	60	100	120	40	20	20	20	20	60
536	Silver Chroride	AgCl			-	-	-	0	20	20	20	20	-	0	20	20	20	20	1	20	20	60
537	Silver Cyanide	Ag-CN			40	-	-	40	60	-	60	60	-	60	100	120	60	60	0	0	0	60
538	Silver Nitrate	$AgNO_3$			40	-	-	40	60	-	60	60	-	60	100	120	80	80	1	1	20	60
539	Silver Sulfate	$AgSO_4$			40	-	-	40	60	-	60	60	-	60	100	120	100	80	0	0	0	60
540	Soap				40	20	40	40	60	20	60	60	20	60	100	120	100	80	120	20	20	60
541	Sodium (Tetra) Borate	$Na_2B_4O_7$		Satu	-	-	-	-	60	20	60	60	20	0	100	120	80	60	20	20	20	60
542	Sodium Acetate	CH_3CO_2Na		Satu	20	20	20	20	20	20	20	60	20	60	100	120	20	80	20	20	20	60
543	Sodium Alum	Na $Al(SO_4)_2$			40	-	-	40	60	-	60	60	-	60	100	120	100	80	0	0	0	60
544	Sodium B(D)ichromate	$Na_2Cr_2O_7$		20	40	20	40	40	60	20	60	60	20	40	80	120	100	80	120	20	20	60
545	Sodium Benzoate	$C_7H_5O_2Na$			20	20	20	20	20	20	20	60	20	60	100	120	20	20	20	20	20	60
546	Sodium Bicarbonate(Hydrogencarbonate)	$NaHCO_3$	1.20	20	40	20	20	40	60	20	60	60	20	60	60	60	60	60	20	20	20	60
547	Sodium Bisulfate(Hydrosulfate)	$NaHSO_4$			40	-	-	40	60	-	60	60	-	60	60	60	60	60	1	1	1	60
548	Sodium Bisulfite(Hydrogen Sulfite)	$NaHSO_3$			40	-	20	40	60	-	60	60	-	60	100	80	100	100	20	1	1	60
549	Sodium Bromate	$NaBrO_3$			-	-	-	-	20	-	20	20	-	0	20	20	20	20	1	0	0	60
550	Sodium Bromide	NaBr			20	20	-	20	20	20	20	60	-	60	100	120	20	20	1	20	0	60
551	Sodium Carbonate	Na_2CO_3	1.10	10	40	20	40	40	60	20	60	60	20	60	100	120	100	80	60	20	20	60
552	Sodium Chlorate	$NaClO_3$		Satu	40	20	-	40	60	20	60	60	-	60	80	120	100	100	1	20	20	60
553	Sodium Chloride	NaCℓ	1.19	25	20	20	-	20	20	20	20	60	-	20	20	80	20	20	1	20	1	60
554	Sodium Chloride(Saline solution)	NaCl			40	-	-	40	60	-	60	60	-	60	100	120	80	80	1	0	0	60
555	Sodium Chlorite	$NaClO_2$		25	-	-	-	-	-	-	20	20	-	1	1	20	60	40	1	1	100	60
556	Sodium Cyanide	NaCN			40	20	20	40	60	20	60	60	20	60	100	120	60	60	20	20	20	60
557	Sodium Cyanide	NaCN	1.22	40	-	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0	60
558	Sodium Ferricyanide	$Na_3[Fe(CN)_6]H_2O$		10	40	20	20	40	60	20	60	60	20	60	80	120	60	60	20	20	0	60
559	Sodium ferrocyanide	$Na_4[Fe(NC)]10H_2O$		Satu	40	20	20	40	60	20	60	60	20	60	80	120	60	60	20	20	20	60
560	Sodium Fluoride				40	20	20	40	60	20	60	60	20	60	100	120	60	60	20	20	20	60
561	Sodium Hydroxide	NaOH		5	-	-	-	-	-	-	-	-	20	60	0	0	0	0	20	20	20	60
562	Sodium Hydroxide	NaOH		15	-	-	40	-	-	-	-	60	-	60	40	60	1	100	120	0	0	60
563	Sodium Hydroxide	NaOH		30	-	-	40	-	-	-	-	20	-	60	80	20	1	100	120	0	0	60
564	Sodium Hydroxide	NaOH		50	-	-	40	-	-	-	-	20	-	60	80	20	1	80	120	1	1	60
565	Sodium Hypochlorite	NaClO		3	40	20	-	40	60	20	60	60	-	40	60	60	60	40	1	20	20	60
566	Sodium Hypochlorite	NaClO		5	40	40	-	40	40	40	60	60	-	40	40	60	60	40	1	50	1	60
567	Sodium Hypochlorite	NaClO		7	40	20	-	40	20	20	60	60	-	40	20	60	60	20	1	30	1	60
568	Sodium Hypochlorite	NaClO		10	40	-	-	40	20	-	40	60	-	40	20	60	40	1	1	1	1	60
569	Sodium Hypochlorite	NaClO		13	40	-	-	40	20	-	40	60	-	40	20	60	40	1	1	1	1	60
570	Sodium Hyposulfate	$Na_2SO_2O_4$			-	-	-	-	20	-	20	20	-	0	20	20	20	20	1	0	0	60
571	Sodium Metal	Na			-	-	-	-	-	-	-	-	20	1	0	1	0	0	20	20	0	1
572	Sodium Metasilicate	Na_2SiO_3			40	-	-	40	60	-	60	60	-	60	100	120	100	100	0	0	0	60
573	Sodium Nitrate	$NaNO_3$		Satu	40	-	40	40	60	-	60	60	-	60	100	120	100	80	120	1	0	60
574	Sodium Nitrite	$NaNO_2$		Satu	40	-	-	40	60	-	60	60	-	60	100	120	100	80	1	1	20	60
575	Sodium Oxalate	$(COONa)_2$			-	-	-	-	20	-	20	20	-	0	20	20	20	20	20	0	0	60
576	Sodium Palmitate	$Na(C_{15}H_{31}COO)$			-	-	-	-	-	-	-	60	-	0	0	120	0	0	0	0	0	60
577	Sodium Perborate	$NaBO_3$ -$4H_2O$			-	-	-	-	20	-	20	60	-	0	20	120	20	20	1	1	0	60

578	Sodium Perchlorate	$NaClO_4$			-	20	20	-	-	20	-	60	20	60	80	120	1	20	20	20	20	60
579	Sodium Peroxide	Na_2O_2			20	20	20	20	20	20	20	60	20	60	80	120	20	20	20	20	20	60
580	Sodium Phoshate	$Na_2HPO_4 \cdot 12H_2O$			40	-	-	40	60	-	60	60	-	60	80	100	100	80	1	1	20	60
581	Sodium Phoshate Acid	$NaH_2PO_4 \cdot 2H_2O$			40	-	-	40	60	-	60	60	-	60	80	120	100	80	0	0	0	60
582	Sodium Phoshate Alkaline	$Na_3PO_4 \cdot 12H_2O$			40	-	-	40	60	-	60	60	-	60	80	120	100	80	0	0	0	60
583	Sodium Salicylate	$C_6H_4(OH)COONa$			-	-	-	-	-	-	-	-	-	0	0	0	0	0	20	0	0	60
584	Sodium Silicate	Na_2SiO_2			20	20	20	20	20	20	20	20	20	60	80	20	20	20	20	20	20	60
585	Sodium Silicoflouride	Na_2SiF_6			40	-	-	40	60	-	60	60	-	60	60	120	60	60	0	0	0	60
586	Sodium Sulfate	Na_2SO_4	1.10	14	40	20	40	40	60	20	60	60	20	60	80	120	100	80	60	20	20	60
587	Sodium Sulfide	Na_2S			40	20	40	40	60	20	60	60	20	60	80	120	100	80	120	20	20	60
588	Sodium Sulfite	Na_2SO_3			40	20	20	40	60	20	60	60	20	60	100	120	80	80	20	20	20	60
589	Sodium Thiocyanate	NaSCN			40	-	-	40	60	-	60	60	-	60	60	120	80	60	0	0	0	60
590	Sodium Thiosulfate	$Na_2S_2O_3$			20	20	20	20	20	20	20	60	20	60	80	120	20	20	20	20	20	60
591	Sodium Thiosulfate	$Na_2S_2O_3$			40	-	40	40	60	-	60	60	-	60	100	120	100	100	80	0	0	60
592	Sour Crude Oil				-	-	-	0	20	-	20	60	-	0	60	120	20	1	0	0	0	60
593	Soybean Oil				40	-	-	40	60	-	60	60	-	60	100	120	80	60	0	0	0	60
594	Stannic Chloride	$SnCl_2$			-	-	-	-	-	-	-	60	-	60	80	120	1	60	1	0	0	60
595	Stannous Chloride	$SnCl_2$			40	-	-	40	60	-	60	60	-	60	80	120	60	0	1	0	0	60
596	Starch	$(C_5H_{10}O_5)n$			40	-	-	40	60	-	60	60	-	60	80	120	100	80	0	0	0	60
597	Stearic Acid	$CH_3(CH_2)_{16}COOH$			40	-	-	40	60	-	60	60	20	60	80	120	60	1	120	20	20	60
598	Styrene Monomer	$C_6H_5CH=CH_2$			-	-	-	-	-	-	-	60	-	0	0	80	1	1	0	0	0	60
599	Sulfiteliquar	$NaHSO_3$		6	40	-	-	40	60	-	60	60	-	60	100	120	60	60	0	0	0	60
600	Sulfonated Oil				-	-	-	-	-	-	-	-	-	0	0	0	20	20	0	0	0	60
601	Sulfulic Acid	H_2SO_4		10	40	20	40	40	60	20	60	60	20	60	100	120	100	80	80	20	1	60
602	Sulfulic Acid	H_2SO_4		30	40	20	40	40	60	20	60	60	20	60	100	120	100	60	80	20	1	60
603	Sulfulic Acid	H_2SO_4		50	40	20	40	40	60	20	60	60	20	60	100	120	100	80	100	20	1	60
604	Sulfulic Acid	H_2SO_4		60	40	20	40	40	60	20	60	60	20	60	100	120	100	80	80	20	1	60
605	Sulfulic Acid	H_2SO_4		70	40	20	40	40	60	20	60	60	20	60	80	120	100	80	80	20	1	60
606	Sulfulic Acid	H_2SO_4		80	40	20	40	40	60	20	60	60	20	60	80	120	80	60	60	20	1	60
607	Sulfulic Acid	H_2SO_4		90	40	20	40	40	60	20	60	60	20	60	80	120	80	40	60	20	1	60
608	Sulfulic Acid	H_2SO_4		98	-	-	-	-	-	-	-	60	20	20	1	60	1	1	60	20	1	60
609	Sulfur	S			-	-	20	-	-	-	-	60	-	60	100	120	1	20	20	1	1	60
610	Sulfur Chloride	S_2Cl_2			-	-	-	-	-	-	20	60	-	0	1	120	20	1	0	0	0	60
611	Sulfur Dioxide (Dry)	SO_2			40	-	-	40	40	-	40	60	-	60	60	120	40	100	0	0	0	60
612	Sulfur Dioxide (Wet)	SO_2			40	-	40	40	60	-	60	60	-	60	60	120	60	100	100	0	0	60
613	Sulfuric Anhydride	SO_3			-	-	-	-	-	-	-	-	-	1	1	1	1	1	0	0	0	60
614	Sulfurous Acid	H_2SO_3			40	20	20	40	60	20	60	60	20	60	100	120	80	100	20	20	20	60
615	Sulphuric Acid	H_2SO_4		75	-	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0	60
616	Sulphuric Acid	H_2SO_4	1.84	98	-	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0	60
617	Surfamic Acid	HSO_2NH_2		20	-	-	-	-	-	-	-	-	-	1	1	1	0	0	0	0	0	60
618	Surflic Dichloride	SCl_2			-	-	-	-	-	-	20	60	-	0	1	120	20	1	0	0	0	60
619	Tall Oil				-	-	-	-	-	-	20	60	-	0	0	120	20	1	0	0	0	60
620	Tannic Acid	$C_{76}H_{52}O_{46}$			-	20	20	-	-	20	-	60	20	20	100	120	0	20	80	20	20	60
621	Tar			Satu	-	-	-	-	20	-	20	60	-	1	20	120	20	1	0	0	0	60

622	Tartaric Acid	$C_4H_6O_6$			20	20	20	20	20	20	20	60	20	60	80	120	20	80	20	20	20	60
623	Tetrachloro Ethane	$Cl_2CH{\cdot}CHCl_2$		Pure	-	-	-	-	-	-	20	60	-	0	0	80	20	1	0	0	0	60
624	Tetrachloro(Perchloro) Ethylene	$CCl_2=CCl_2$		Pure	-	-	-	-	20	-	40	60	20	1	20	60	40	1	20	20	20	60
625	Tetraethyl Lead	$Pb(C_2H_5)_4$			-	-	-	-	-	-	-	60	-	0	0	120	0	0	0	0	0	60
626	Tetrahydrofuran	C_4H_8O		Pure	-	-	-	-	-	-	-	20	-	1	20	20	1	1	0	0	0	60
627	Tetraline (Tetrahydro Naphthalene)	$C_{10}H_{12}$			-	-	-	-	-	-	-	0	-	0	0	0	20	1	0	0	0	60
628	Tetramethyl Anmonium Hydroxide			50	-	-	-	-	-	-	-	60	-	0	0	80	0	0	0	0	0	60
629	Tetrial Butyl alcohool	$(CH_3)_3C(OH)$			20	-	-	20	20	-	20	60	-	20	20	80	20	20	0	0	0	60
630	Tetrial Butyl Catechol	$C_6H_3(C_4H_9)(OH)_2$			-	-	-	-	-	-	-	-	-	0	0	0	0	20	0	0	0	60
631	Tin Chloride	$SNCl_2{\cdot}2H_2O$			20	-	-	20	20	-	20	20	-	20	20	20	20	20	1	1	20	60
632	Titanic Sulfate	$Ti(SO_4)_2$			-	-	-	-	-	-	-	60	-	60	80	120	0	0	0	0	0	60
633	Titanium Dioxide	TiO_2			-	-	-	-	20	20	20	20	20	0	20	20	20	20	20	20	20	60
634	Titanium Tetrachloride	$TiCl_4$			-	-	-	-	-	-	-	-	-	0	20	1	1	1	1	1	0	60
635	Titanous Sulfate	$Ti_2(SO_4)_3$			-	-	-	-	-	-	-	60	-	60	100	120	0	0	0	0	0	60
636	Toluene	$C_6H_5CH_3$			-	-	-	-	20	-	20	60	20	1	20	60	20	1	20	20	20	60
637	Tomato Juice				-	-	-	-	-	-	-	60	-	60	100	120	0	0	0	0	0	60
638	Triacetin	$C_3H_5O_3(COCH_3)_3$			-	-	-	-	-	-	-	-	-	0	0	0	20	20	0	0	0	60
639	Tributyl Phosphate	$(C_4H_9O)_3PO$			-	-	-	-	-	-	-	40	-	0	40	40	1	20	20	0	0	60
640	Trichloroacetic Acid	$Cl_3C{\cdot}COOH$			-	-	-	-	-	-	-	40	-	1	60	40	1	1	1	0	0	60
641	Trichloroethlene	$ClHC=CCl_2$			-	-	-	-	20	-	20	60	-	1	20	60	20	1	0	0	0	60
642	Trichloroethylene	$C_2HCℓ_3$			-	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0	60
643	Triethanolamine	$N(CH_2CH_2OH_3)$			-	-	-	-	-	-	-	-	20	1	1	1	1	20	20	20	20	60
644	Triethyl Propan				-	-	-	-	-	-	-	60	-	0	0	80	0	0	0	0	0	60
645	Triethylamine	$(C_2H_5)_3N$			-	20	20	-	-	20	-	20	20	20	20	20	1	20	20	20	20	60
646	Trisodium Phosphate	Na_3PO_4	1.02	4	-	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0	60
647	Turbin Oil				20	-	-	20	20	-	20	20	-	20	20	20	60	1	0	0	0	60
648	Turpentine Oil				-	-	-	-	20	-	20	60	-	0	20	120	20	20	0	0	0	60
649	Uranium Chloride				-	-	-	-	20	-	-	-	-	0	20	0	20	20	1	0	0	60
650	Uranium Oxide				-	-	-	-	20	-	20	20	-	0	20	20	20	20	20	0	0	60
651	Urea	$CO(NH_2)_2$		Pure	20	20	20	20	20	20	20	60	20	60	100	120	20	20	20	20	20	60
652	Uric Acid	$C_5H_4N_4O_3$			-	-	-	-	-	-	-	-	20	0	0	0	0	0	20	20	20	60
653	Urine			80	40	-	-	40	60	-	60	60	-	60	80	120	100	100	0	0	0	60
654	Vaseline				20	-	-	20	20	-	20	60	-	60	80	120	20	1	0	0	0	60
655	Vegetable Oil				20	-	20	20	20	-	20	60	-	20	20	120	20	20	20	0	0	60
656	Vineger				40	20	20	40	60	20	60	60	20	60	100	120	60	60	20	20	20	60
657	Vinyl Acetate	$CH_3COOCH=CH_2$			-	-	-	-	-	-	-	60	20	1	0	120	1	20	20	20	20	60
658	Whisky				40	20	20	40	60	20	60	60	20	60	60	120	60	80	20	20	20	60
659	White Acid			Pure	-	-	-	-	-	-	-	60	-	0	0	80	0	0	0	0	0	60
660	White Liiquor				40	-	-	40	40	-	40	60	-	60	60	120	40	80	0	0	0	60
661	Wine				40	-	-	40	40	-	40	60	-	60	60	120	40	80	0	0	0	60
662	Xylene	$C_6H_4(CH_3)_2$			-	-	-	-	-	-	20	60	20	1	1	80	20	1	20	20	20	60
663	Yellow Phoshorus	P_4			-	-	-	-	-	-	-	60	-	20	20	120	0	0	0	0	0	60
664	Zinc Acetate	$(CH_3COO)_2Zu$			40	-	-	40	60	-	60	60	-	60	100	120	100	80	0	0	0	60
665	Zinc Bromide	$ZnBr_2$			40	-	-	40	60	-	60	60	-	60	80	80	60	60	0	0	0	60
666	Zinc Chloride	$ZnCl_2$			40	-	-	40	60	-	60	60	-	60	80	80	60	60	0	0	0	60
667	Zinc Nitrate	$Zn(NO_3)_2$-$6H_2O$			40	-	-	40	60	-	60	60	-	60	100	120	100	80	0	0	0	60

668	Zinc Sulfate	$ZnSO_4$			40	-	40	40	60	-	60	60	-	60	100	120	100	80	100	0	0	60

Note: The data presented in this selection chart is based on information furnished by the manufacturers of the raw materials and our experience. This information may be considered as a basis for recommendation, but **NOT AS A GUARANTEE**. Materials should be tested under actual service to determine suitability for a particular purpose.

IWAKI Europe GmbH