



ITT

Commercial Water

Goulds Pumps

G&L Series Technical Data Section 10 Applications

304 Stainless Steel Products Material Suitability For Pumpage

Effective February, 2002

Item No.	Pumpage Type	Formula	Conc. %	Temp. °C	*Code Level
1	Acetic acid	CH ₃ COOH	10	20	2
2	Ammonium bicarbonate	NH ₄ CO ₃	10	20	2
3	Ammonium carbonate	(NH ₄) ₂ CO ₃		60	3
4	Ammonium chloride	NH ₄ Cl	10	20	3
5	Ammonium hydroxide	NH ₄ OH	10	<80	3
6	Ammonium nitrate	NH ₄ NO ₃	5		3
7	Beer				1
8	Benzilic acid	C ₆ H ₅ COOH	10	20	2
9	Benzilic acid	"		20	2
10	Boric acid	H ₃ BO ₃	5	20	1
11	Boric acid	"	5	80	2
12	Brine				2
13	Butyric acid	C ₃ H ₇ COOH	Wat. Sol.		2
14	Calcium chloride	C _A Cl ₂		20	3
15	Calcium nitrate	C _A (NO ₃) ₂	10		2
16	Calcium phosphate	C _{A3} (PO ₄) ₂	10	≤100	2
17	Citric acid	C ₆ H ₈ O ₇	5	20	2
18	Coffee				1
19	Copper sulfate	CuSO ₄	5	20	2
20	Ethylene glycol	CH ₂ OHCH ₂ OH			1
21	Fluosilicic acid	H ₂ SiF ₆	20	20	4
22	Fruit juices				1
23	Hydrocyanic acid	HCN		20	2
24	Hydrogen peroxide			20	2
25	Lactic acid	C ₃ H ₆ O ₃	5	≤65	3
26	Lactic acid	"	10	20	2
27	Magnesium chloride	MgCl ₂			3
28	Magnesium sulfate	MgSO ₄		20	2
29	Maleic acid	(CHCO ₂ H) ₂	10	20	3
30	Milk				1
31	Nitric acid	HNO ₃	20	20	4
32	Nitric acid	"	20	70	4
33	Oleic acid	C ₁₈ H ₃₄ O ₂	20	20	3
34	Oxalic acid	(COOH) ₂	≤10	≤20	2
35	Oxalic acid	(COOH) ₂	10	70	4

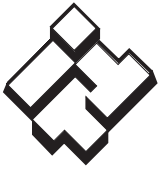
Where hot and aggressive liquids are to be pumped, in addition to checking the chemical compatibility, bear in mind that any deviations in temperature, density and viscosity from the reference data would bring about variations in terms of power input, hydraulic performance and suction capacity. Make sure, in all cases, that the power input is not higher than the rated power and the suction lift does not exceed the permissible values.



www.goulds.com

Goulds Pumps is a brand of ITT Corporation.

Engineered for life



ITT

Commercial Water

Item No.	Pumpage Type	Formula	Conc. %	Temp. °C	*Code Level
36	Phosphoric acid	H ₃ PO ₄		≤80	3
37	Phthalic acid	C ₆ H ₄ (COOH) ₂	Wat. Sol.	20	2
38	Potassium bicarbonate	KHCO ₃	30	20	1
39	Potassium carbonate	K ₂ CO ₃	40	20	2
40	Potassium chloride	K C _L	10	20	2
41	Potassium hydroxide	K OH	10	<80	2
42	Potassium permanganate	KM _N O ₄		20	2
43	Potassium phosphate	KH ₂ PO ₄	10	80	3
44	Potassium sulfate	K ₂ SO ₄			2
45	Propionic acid	CH ₃ CH ₂ CO ₂ H	20	20	2
46	Propylene glycol	CH ₃ CHOCH ₂ OH	60	20	3
47	Salicylic acid	C ₆ H ₄ OHCOOH		20	2
48	Sodium bicarbonate	N _A HCO ₃	10	20	1
49	Sodium carbonate	N _{A2} CO ₃		<60	1
50	Sodium chloride	N _A C _L			3
51	Sodium hydroxide	N _A OH	<10	<60	2
52	Sodium nitrate	N _A NO ₃	10		2
53	Sodium phosphate	N _{A3} PO ₄		≤100	1
54	Sodium sulfate	N _{A2} SO ₄	5	<60	2
55	Sulfuric acid	H ₂ SO ₄	10	20	4
56	Sulfurous acid	H ₂ SO ₃	Sat	20	3
57	Sulfurous acid	"	10	20	2
58	Tannic acid	C ₇₆ H ₅₂ O ₄₆	10	20	1
59	Tartaric acid	C ₄ H ₆ O ₆	10	20	2
60	Tea				1
61	Vinegar			≤60	1
62	Water			≤110	1
63	Water, condensation				1
64	Water, de-cationized				3
65	Water, demineralized				1
66	Water, distilled				1
67	Water, mine				1
68	Water, sea				3
69	Water, thermal				1
70	Wine-Whiskey				1

Code Key: 1 = Good 2 = Fair 3 = Poor 4 = Not Recommended

Important – Pumpages coded 3 “poor” may result in reduced or unsatisfactory service life. Refer to “user” in house engineers for product acceptability.



Goolds Pumps, G&L and the ITT Engineered Blocks Symbol are registered trademarks and tradenames of ITT Corporation.

SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE.

TD GL-C February, 2008

© 2008 ITT Corporation

Engineered for life