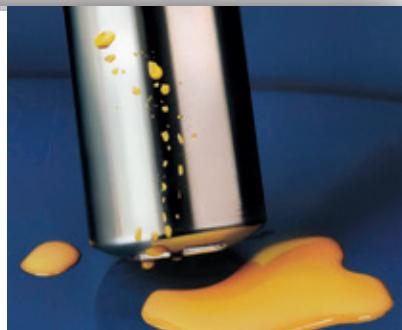
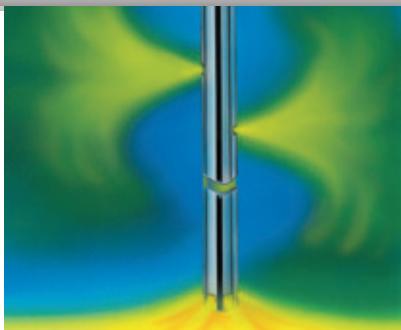


Chemical resistance table

for Lutz pump tubes, flow meters
and nozzles



Safety is our Concern

Chemical Resistance Table

Finding your way around the Lutz chemical resistance table

1. General

This chemical resistance table contains reasonably concise information about the chemical resistance characteristics of the different types of pump tubes and flow meters to various media. The materials coming into contact with the liquids which are employed in the pump tubes have been tested with regard to their chemical resistances and assessed for use at room temperature.

The chemical resistance table is intended as a guide to the suitability of each pump tube; it also specifies any materials which are wholly unsuitable for certain concrete applications. Please do not hesitate to consult us directly if you are unable to find the most suitable material for your pump tube or copy and fill out the form on page 19 and fax back to us.

In cases where the resistance characteristics cannot be verified, or where any other reservations exist regarding the use of a particular combination of materials, we strongly recommend trying out the equipment under operating conditions. We can provide samples of various materials on request. It should be remembered that discolouring on the surface, minor increases in the weight and/or volume and changes to the mechanical properties (strain characteristics, strength properties, etc.) do not necessarily affect functioning to a sufficient extent to preclude the use of a material.

Since corrosion is influenced by a variety of factors, the information contained in the table cannot necessarily be applied to all operating conditions. Corrosion may be accelerated by temperature increases, by medium concentrations or by the entry of water into media which are otherwise pure. Discrepancies regarding the long-term resistance of plastics and elastomers are also possible, depending on the amount of impurities in the medium as well as on the compounding and degree of vulcanisation of the sealing materials.

The table specifications are based on the assumption that no other mechanical forces are effective.

2. How to use the table

The corrosive media are arranged in the table in alphabetical order. Formulas of chemical compounds are included for the purposes of simplification. Where known and meaningful, the table also lists the concentration, density, temperature classes, danger classes and explosion groups of the media.

This table is an excellent guide for liquids at ambient temp (68 °F) since a large part of the information it contains was only available at ambient temperature. In view of the continuing advances in the field of plastics, extensive suitability tests may reveal that some of the materials employed in our pumps can be substituted or that others which are not mentioned can in fact be used. New materials are therefore likely to be added to the table at some stage in the future. At the same time we are constantly endeavouring to eliminate any gaps in our information.

All the information in the resistance characteristics table is based on empirical values supplied by industry and on the results of tests performed in our own laboratories.

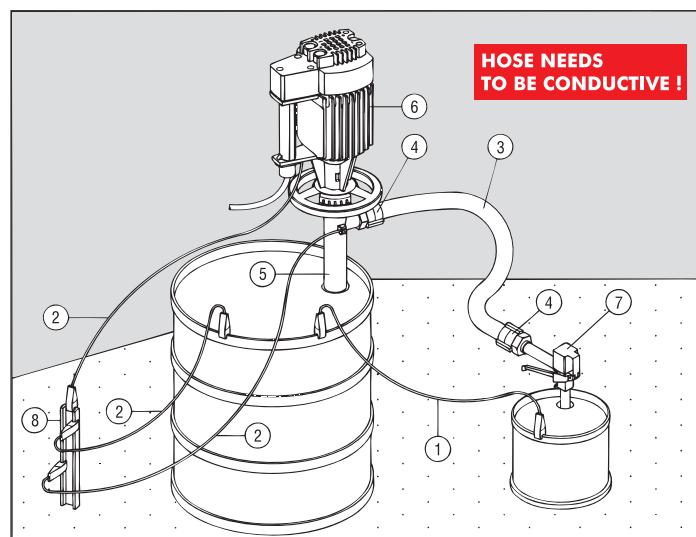
The resistance data specified for the individual products do not provide any entitlement to make warranty claims, since it is merely intended to serve as a recommendation for practical applications.

You can make your product choice more reliable by taking account of your own experience with regard to the resistance of particular materials to aggressive media.

Special attention should be paid to the guidelines concerning flammable liquids.

Meanings of symbols and notes:

- Resistant
- Non-resistant
- ② Special seal EPDM
- ③ Special seal FPM-FEP
- ④ Special bearing Rulon
- ⑤ Measuring chamber f. Nitric Acid
- ⑥ On demand
- sat. saturated



Bonding and Grounding Diagram

- ① Bonding wire
- ② Ground wire
- ③ Conductive hose
- ④ Conductive fitting of the hose into hose connector
- ⑤ Metal pump tube for zone "0" in Stainless steel or Hastelloy "C"
- ⑥ Explosion proof motor Silver Star ME I 6 or MD1xL/MD2xL (Ex)
- ⑦ Nozzle in Stainless steel (handregulated)
- ⑧ Earthing rod

WARNING: When using in hazardous location or when pumping flammable or explosive liquids only pump tubes marked "Zone 0" are to be used. Such metal tubes are only Stainless Steel and Hastelloy "C" tubes.

All reprints, transcripts and copies of this publication, either in part or in full, require the prior written agreement of Lutz.



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- ④ = Special bearing Rulon
- ⑤ = Measuring chamber for Nitric Acid
- ⑥ = On demand

Use only Lutz Silver Star ME16,
MD1xL/ND2xL with stainless steel or
Hastelloy C pump tubes.

No.	Medium	Formula	% Concentration	Spec. gravity	Temperature Class (EN)	Lutz Pump Tubes								Lutz Flow Meters						Nozzles				
						PP		PVDF	Alu	SS		HC	TR	ST	SL	LM	UN	VA						
						MMS-PP SS RE 88 PP, MP-PP	MMS-PP HC	MSL-PP 41 SS	B2 SL-PP MSL-PP 41 HC	MMS-PVDF, B200 MMS-PVDF	MSL-PVDF	MMS-Alu	MSL-Alu	MMS-SS B70V-SR-PTEE MS MSL-SS	RE 88 SS MP-SS	SL-HC	TR3-PP	TR3-PVDF	PP/SAN/BaFe	PPO/PPS	PPS/LCP/BaFe	SS/PPS	Nozzle PP/FPM	Nozzle PVDF/FPM
1	Acetaldehyde	CH ₃ CHO	40			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2	Acetaldehyde	CH ₃ CHO	pure	0.79	T4	<input type="radio"/> Ex	-	-	-	-	-	-	-	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3	Acetamide	CH ₃ CONH ₂	pure	0.98			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	-	-	<input type="radio"/>								
4	Acetic Acid	CH ₃ COOH	10			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	-	-	<input type="radio"/>									
5	Acetic Acid	CH ₃ COOH	25			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	-	-	<input type="radio"/>									
6	Acetic Acid	CH ₃ COOH	50			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	-	-	<input type="radio"/>									
7	Acetic Acid	CH ₃ COOH	80			-	-	<input type="radio"/>	<input type="radio"/>	-	<input type="radio"/>	-	-	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8	Acetic Acid	CH ₃ COOH	100	1.05	T1	<input type="radio"/> Ex	-	-	-	-	-	-	-	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9	Acetic Anhydride	(CH ₃ CO) ₂ O	pure	1.09	T2	<input type="radio"/> Ex	-	-	-	-	-	-	-	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10	Acetic Ester	CH ₃ COOC ₂ H ₅	100	1.03	T2		-	-	-	-	-	-	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11	Acetic Methyl Ester	CH ₃ COOCH ₃	100	0.93	T1	<input type="radio"/> Ex	-	-	-	-	-	-	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12	Acetone	CH ₃ COCH ₃	10		T1	<input type="radio"/> Ex	-	-	-	-	-	-	-	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13	Acetone	CH ₃ COCH ₃	pure	0.79	T1	<input type="radio"/> Ex	-	-	-	-	-	-	-	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14	Acetonitrile	CH ₃ CN		0.78	T1	<input type="radio"/> Ex	-	-	-	-	-	-	-	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15	Acrylonitrile	CH ₃ CHCN	pure	0.81	T1	<input type="radio"/> Ex	-	-	-	-	-	-	-	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
16	Adipic Acid	HOOC(CH ₂) ₄ COOH	sat.	1.36	T2		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
17	Allyl Alcohol	H ₂ C=CHCH ₂ OH	96	0.85	T2	<input type="radio"/> Ex	-	-	-	-	-	-	-	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
18	Alum	KAl(SO ₄) ₂ ·12H ₂ O	50				<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
19	Aluminium Chloride	AlCl ₃	10			-	<input type="radio"/>	-	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	-	-	-	-	<input type="radio"/>							
20	Aluminium Chloride	AlCl ₃	sat.			-	<input type="radio"/>	-	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	-	-	-	-	<input type="radio"/>							
21	Aluminium Nitrate	Al(NO ₃) ₃	sat.			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	-	-	<input type="radio"/>									
22	Aluminium Sulfate	Al ₂ (SO ₄) ₃	10			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	-	-	<input type="radio"/>									
23	Aluminium Sulfate	Al ₂ (SO ₄) ₃	sat.	1.61		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	-	-	<input type="radio"/>									
24	Ammonia	NH ₃	sat.	0.61	T1	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	-	-	<input type="radio"/>									
25	Ammonium Acetate	CH ₃ COONH ₄				<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
26	Ammonium Carbonate	(NH ₄) ₂ CO ₃				<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
27	Ammonium Chloride	NH ₄ Cl	sat.	1.07		-	<input type="radio"/>	-	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	-	-	-	<input type="radio"/>								
28	Ammonium Di-Hy. Phosphate	NH ₄ H ₂ PO ₄				<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	-	-	<input type="radio"/>									



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Use only LUTZ Silver Star ME16,
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No.	Medium	Formula	% Concentration	Spec. gravity	Temperature Class (EN)	Lutz Pump Tubes					Lutz Flow Meters					Nozzles												
						PP		PVDF	Alu	SS	HC	TR	ST	SL	LM	UN	VA											
						MMS-PP SS RE 88 PP, MP-PP	MMS-PP HC	MSL-PP 41 SS	B2 SL-PP MSL-PP 41 HC	MMS-PVDF, B200 MMS-PVDF	MSL-PVDF	MMS-Alu	MSL-Alu	MMS-SS B70V-SR-PTEE MS MSL-SS	B2 SL-SS (not Ex) RE 88 SS MP-SS	SL-HC	TR3-PP	TR3-PVDF	PP/SLCP/BaFe	PP/PPS	PP/SLCP	SS/PPS	Nozzle Alu/NBR					
29	Ammonium Fluoride	NH ₄ F	14			-	○	-	○	○	○	-	-	-	-	○	○	-	○	-	○	-	-	-				
30	Ammonium Fluorosilicate	(NH ₄) ₂ SiF ₆	pure			②	②	○	○	②	○	②	○	○	○	-	-	-	③	③	○	○	○	②	②	-		
31	Ammonium Nitrate	NH ₄ NO ₃	10			○	○	○	○	○	○	-	-	○	○	○	○	○	○	○	○	○	○	-	○	-		
32	Ammonium Nitrate	NH ₄ NO ₃	50	1.23		○	○	○	○	○	○	-	-	○	○	○	○	○	○	○	○	○	○	○	-	○	-	
33	Ammonium Nitrate	NH ₄ NO ₃	sat.			○	○	○	○	○	○	-	-	○	○	○	○	○	○	○	○	○	○	○	-	○	-	
34	Ammonium Sulfate	(NH ₄) ₂ SO ₄	10			○	○	○	○	○	○	-	-	-	○	○	○	○	○	○	○	○	○	○	-	○	-	
35	Ammonium Sulfate	(NH ₄) ₂ SO ₄	50	1.28		○	○	○	○	○	○	-	-	-	○	○	○	○	○	○	○	○	○	○	-	○	-	
36	Ammonium Sulfate	(NH ₄) ₂ SO ₄	sat.	1.3		○	○	○	○	○	○	-	-	-	○	○	○	○	○	-	○	○	○	○	-	○	-	
37	Ammonium Sulfide	(NH ₄) ₂ SO ₃	10			○	○	○	○	○	○	-	-	○	○	○	○	○	○	○	○	○	○	○	-	○	-	
38	Amyl Acetate	CH ₃ CO ₂ C ₂ H ₁₁	pure	0.88	T2	Ex	-	-	-	-	-	-	-	⑥	○	○	○	-	-	-	○	○	-	-	-	③	-	
39	Amyl Alcohol	C ₅ H ₁₁ OH	pure	0.82	T3	Ex	-	-	-	-	-	-	-	②	○	○	○	-	-	-	○	○	○	-	-	○	②	-
40	Amyl Chloride	CH ₃ (CH ₂) ₄ Cl	pure	0.87	T3	Ex	-	-	-	-	-	-	-	○	○	○	○	-	-	-	○	○	-	-	-	○	-	
41	Aniline	C ₆ H ₇ N	pure	1.01	T1		-	-	-	-	-	-	-	○	○	○	○	-	-	-	○	○	-	-	-	○	-	
42	Anone	C ₆ H ₁₀ O	pure	0.95	T2	Ex	-	-	-	-	-	-	-	⑥	○	○	○	-	-	-	○	○	○	-	-	○	③	-
43	Antifreeze	HOCH ₂ CH ₂ OH	pure	1.11	T2		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
44	Arsenic Acid	H ₃ AsO ₄	10			○	○	○	○	○	○	-	-	○	○	○	○	○	○	○	○	○	○	○	-	○	-	
45	Arsenic Acid	H ₃ AsO ₄	80			○	○	○	○	○	○	-	-	○	○	○	○	○	○	○	○	○	○	○	-	○	-	
46	Barium Chloride	BaCl ₂	10			-	○	-	○	○	○	-	-	-	-	-	-	○	○	-	○	-	-	-	○	-		
47	Barium Chloride	BaCl ₂	25	1.27		-	○	-	○	○	○	-	-	-	-	-	-	○	○	-	○	-	-	-	○	-		
48	Barium Hydroxide	Ba(OH) ₂	sat.			○	○	○	○	○	○	-	-	○	○	○	○	○	○	○	○	○	○	-	○	-		
49	Battery Acid (Sulphur Acid)	H ₂ SO ₄	40	1.3		-	○	-	○	○	○	-	-	-	-	-	-	○	○	-	○	-	-	-	○	-		
50	Benzaldehyde	C ₆ H ₅ CHO	0.1			○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○		
51	Benzaldehyde	C ₆ H ₅ CHO	pure	1.05	T4		-	-	-	-	-	-	②	○	②	○	○	-	-	-	○	○	○	-	-	○	②	-
52	Benzene	C ₆ H ₆	pure	0.88	T1	Ex	-	-	-	-	-	-	-	○	○	○	○	-	-	-	○	○	-	-	○	③	-	
53	Benzoic Acid	C ₆ H ₅ COOH	10	1.27	T1		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	-	
54	Benzyl Alcohol	C ₇ H ₈ O	pure	1.04	T2	Ex	-	-	-	-	-	-	-	○	○	○	○	-	-	-	○	○	-	-	○	○	-	
55	Benzyl Chloride	C ₆ H ₅ CH ₂ Cl		1.11	T1		-	-	-	-	-	-	-	○	○	○	○	-	-	-	○	○	-	-	○	-	-	
56	Bitter Salt	MgSO ₄	10			○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	-	○	○	○	○	-	



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No.	Medium	Formula	% Concentration	Spec. gravity	Temperature Class (EN)	Use only Lutz Silver Star ME I 6, MDIx/ND2xL with stainless steel or Hastelloy C pump tubes.	Lutz Pump Tubes					Lutz Flow Meters					Nozzles										
							PP		PVDF	Alu	SS	HC	TR	ST	SL	LM	UN	VA									
							MMS-PP SS RE 88 PP, MP-PP	MMS-PP HC	MSL-PP 41 SS	B2 SL-PP MSL-PP 41 HC	MMS-PVDF, B200 MMS-PVDF	MSL-PVDF	MMS-Alu	MSL-Alu	MMS-SS B70V-SR-PTEE MS MSL-SS	RE 88 SS MP-SS	SL-HC	TR3-PP	TR3-PVDF	PP0/SAN/BaFe	PP0/PPS	PPS/LCP/BaFe	SS/PPS	Nozzle Alu/NBR			
57	Bitter Salt	MgSO ₄	sat.	1.28			○	○	○	○	○	○	○	○	○	○	○	-	○	-	-	○	○	○	○	-	
58	Bleaching Solution	NaOCl	10				-	-	-	-	○	○	-	-	-	-	○	○	-	-	○	○	-	-	-		
59	Bleaching Solution	NaOCl	12.5				-	-	-	-	○	○	-	-	-	-	○	○	-	-	○	○	-	-	-		
60	Bleaching Solution	NaOCl	20				-	-	-	-	○	○	-	-	-	-	○	○	-	-	○	○	-	-	-		
61	Borax	Na ₂ B ₄ O ₇	10				○	○	○	○	○	○	-	-	○	○	○	○	○	-	○	○	○	○	-		
62	Borax	Na ₂ B ₄ O ₇	sat.	1.03			○	○	○	○	○	○	-	-	○	○	○	○	○	-	○	○	○	○	-		
63	Boric Acid	H ₃ BO ₃	10				○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	-		
64	Boric Acid	H ₃ BO ₃	sat.	1.01			○	○	○	○	○	○	-	-	○	○	○	○	○	-	○	○	○	○	-		
65	Bromic Acid	HBrO ₃	10				-	-	⑥	⑥	-	⑥	-	-	-	-	-	-	-	-	-	-	○	○	-		
66	Bromine	Br ₂	pure	3.19			-	-	-	-	-	-	-	-	-	-	○	-	-	-	-	-	○	-	-		
67	Butane	C ₄ H ₁₀	50	0.58	T2	Ex	-	-	-	-	-	-	-	-	○	○	○	○	-	-	-	○	○	-			
68	Butane Diol	HO(CH ₂) ₄ OH	pure	1.01	T2		-	-	-	-	○	○	○	○	○	○	○	-	○	○	○	○	○	○			
69	Butanol	C ₄ H ₉ OH	100	0.81	T2	Ex	-	-	-	-	-	-	-	-	②	○	○	○	-	-	-	○	○	-	○	②	
70	Butyl Acetate	CH ₃ CO ₂ (CH ₂) ₃ CH ₃	100	0.88	T2	Ex	-	-	-	-	-	-	-	-	⑥	○	○	○	-	-	-	○	○	-	-	○	③
71	Butyl Alcohol	C ₄ H ₉ OH	100	0.81	T2	Ex	-	-	-	-	-	-	-	-	②	○	○	○	-	-	-	○	○	-	-	○	②
72	Butyl Chloride	CH ₃ (CH ₂) ₃ Cl	pure	0.89	T3	Ex	-	-	-	-	-	-	-	-	-	-	-	○	-	-	-	○	-	-	-		
73	Butyl Glycol	HO(CH ₂) ₄ OH		0.9	T3		-	-	-	-	○	○	○	○	○	○	○	-	○	○	○	○	-	○	○		
74	Butyl Phenol	C ₁₀ H ₁₄ O	pure				-	-	○	○	-	○	-	-	⑥	○	○	○	-	-	-	○	○	○	③	③	
75	Butyl Phthalate	C ₆ H ₄ (COOC ₄ H ₉) ₂	pure	1.05	T2		-	-	-	-	○	-	○	⑥	○	○	○	-	-	-	○	○	-	③	○	③	
76	Butylene Glycol	C ₄ H ₁₀ O ₂	pure	1.01	T2		-	-	-	-	○	○	○	○	○	○	○	-	○	○	○	○	-	○	○		
77	Butyric Acid	CH ₃ (CH ₂) ₂ CO ₂ H	20	0.88			○	○	○	○	○	○	-	-	○	○	○	○	○	-	○	○	○	-	○		
78	Butyric Acid	CH ₃ (CH ₂) ₂ CO ₂ H	pure	0.96	T2		○	○	○	○	○	○	-	-	○	○	○	○	○	-	○	○	○	-	○		
79	Calcium Chlorate	Ca(ClO ₃) ₂	10				○	○	○	○	○	○	-	-	○	○	○	○	○	-	○	○	○	-	○		
80	Calcium Chloride	CaCl ₂	10				○	○	○	○	○	○	-	-	○	○	○	○	○	-	○	○	○	-	○		
81	Calcium Chloride	CaCl ₂	sat.	1.4			○	○	○	○	○	○	-	-	○	○	○	○	○	-	○	○	○	-	○		
82	Calcium Di-Hy. Sulphite	Ca(HSO ₃) ₂	10				○	○	○	○	○	○	-	-	○	○	○	○	○	-	○	○	○	-	○		
83	Calcium Di-Hy. Sulphite	Ca(HSO ₃) ₂	sat.				○	○	○	○	○	○	-	-	○	○	○	○	○	-	○	○	○	-	○		
84	Calcium Hypochlorite	Ca(ClO) ₂	10				-	○	-	○	○	○	-	-	-	-	○	○	○	-	○	-	○	○	-		



Lutz-Chemical Resistance Table

- = Resistant
- = Non-resistant
- ② = Special seal EPDM
- ③ = Special seal FPM-FEP
- ④ = Special bearing Rulon
- ⑤ = Measuring chamber for Nitric Acid
- ⑥ = On demand

No.	Medium	Formula	% Concentration	Spec. gravity	Temperature Class (EN)	Lutz Pump Tubes								Lutz Flow Meters						Nozzles				
						PP		PVDF	Alu	SS		HC	TR	ST	SL	LM	UN	VA						
						MMS-PP SS RE 88 PP, MP-PP	MMS-PP HC	MSL-PP 41 SS	B2-SL-PP MSL-PP 41 HC	MMS-PVDF, B200 MMS-PVDF	MSL-PVDF	MMS-Alu	MSL-Alu	MMS-SS B70V-SR-PTEE MS MSL-SS	RE 88 SS MP-SS	SL-HC	TR3-PP	TR3-PVDF	PP/SAN/BaFe	PPO/PPS	PPS/LCP/BaFe	SS/PPS	Nozzle Alu/NBR	
85	Calcium Nitrate	Ca(NO ₃) ₂	50	1.48		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
86	Camphor	C ₁₀ H ₁₆ O				-	-	<input type="checkbox"/>	<input type="checkbox"/>	-	<input type="checkbox"/>	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
87	Caprylic Acid	CH ₃ (CH ₂) ₆ COOH				-	-	-	-	<input type="checkbox"/>	<input type="checkbox"/>	-	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
88	Carbolic Acid	C ₆ H ₅ OH	50		T1	-	-	-	-	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
89	Carbolic Acid	C ₆ H ₅ OH	90	1.07	T1	-	-	-	-	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
90	Carbon Tetrachloride	CCl ₄	pure	1.59		-	-	-	-	<input type="checkbox"/>	<input type="checkbox"/>	-	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
91	Carbonic Acid	H ₂ CO ₃				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	-	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
92	Castor Oil	Mixture		0.96		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
93	Caustic Potash	KOH	20	1.19		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	-	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	-	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
94	Caustic Potash	KOH	30	1.29		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	-	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	-	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
95	Caustic Potash	KOH	60	1.63		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	-	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	-	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
96	Chloric Acid	HClO ₃	10			-	<input type="checkbox"/>	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	-	-	-	-	-	<input type="checkbox"/>							
97	Chlorine Solution	NaOCl	10			-	-	-	-	<input type="checkbox"/>	<input type="checkbox"/>	-	-	-	-	-	<input type="checkbox"/>							
98	Chlorine Solution	NaOCl	12.5			-	-	-	-	<input type="checkbox"/>	<input type="checkbox"/>	-	-	-	-	-	<input type="checkbox"/>							
99	Chlorine Water	Cl ₂ /H ₂ O	sat.			-	-	-	-	<input type="checkbox"/>	<input type="checkbox"/>	-	-	-	-	-	<input type="checkbox"/>							
100	Chloroacetic Acid	ClCH ₂ COOH	85	1.36		-	<input checked="" type="checkbox"/>	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	-	-	-	-	-	<input type="checkbox"/>	-	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
101	Chloroacetic Acid	ClCH ₂ COOH	98	1.36		-	<input checked="" type="checkbox"/>	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	-	-	-	-	-	<input type="checkbox"/>	-	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
102	Chlorobenzene	C ₆ H ₅ Cl	pure	1.11	T1	<input type="checkbox"/>	<input type="checkbox"/>			-	-	-	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	-	-	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
103	Chloroethane	CH ₃ CH ₂ Cl	pure	0.92	T1	-	-	-	-	<input type="checkbox"/>	<input type="checkbox"/>	-	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	-	<input type="checkbox"/>	-	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
104	Chloroform	CHCl ₃	100	1.48		-	-	-	-	-	<input type="checkbox"/>	-	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	-	-	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
105	Chlorosulphonic Acid	HSO ₃ Cl	pure	1.77		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
106	Chlorothene	Cl ₂ CCH ₃	pure	1.34		-	-	-	-	<input type="checkbox"/>	<input type="checkbox"/>	-	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	-	<input type="checkbox"/>	-	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
107	Chlorotoluene	C ₇ H ₇ Cl		1.11	T1	-	-	-	-	-	-	-	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	-	-	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
108	Chromic Acid	H ₂ CrO ₄	30			-	-	-	-	<input type="checkbox"/>	<input type="checkbox"/>	-	-	-	-	-	<input type="checkbox"/>	-	<input type="checkbox"/>					
109	Chromic Acid	H ₂ CrO ₄	50			-	<input type="checkbox"/>	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	-	-	-	-	-	<input type="checkbox"/>							
110	Citric Acid	C ₆ H ₈ O ₇	50	1.22		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	-	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
111	Clophene	Mixture	pure			-	-	-	-	-	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	-	-	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
112	Clove Oil	Mixture				-	-	-	-	-	-	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	-	-	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Use only Lutz Silver Star ME I 6,
MDX/ND2XL with stainless steel or
Hastelloy C pump tubes.

Ex



Lutz-Chemical Resistance Table

○ = Resistant
 - = Non-resistant
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 ③ = Special seal FPM-FEP

④ = Special bearing Rulon
 ⑤ = Measuring chamber for Nitric Acid
 ⑥ = On demand

No.	Medium	Formula	% Concentration	Spec. gravity	Temperature Class (EN)	Lutz Pump Tubes					Lutz Flow Meters					Nozzles					
						PP		PVDF	Alu	SS	HC	TR	ST	SL	LM	UN	VA				
						MMS-PP SS RE 88 PP, MP-PP	MMS-PP HC	MSL-PP 41 SS B2, SL-PP MSL-PP 41 HC	MSL-Alu	MMS-SS B70V-SR-PTEE MS MSL-SS RE 88 SS MP-SS	MSL-Alu	MSL-Alu	MSL-Alu	MSL-Alu	MSL-Alu	MSL-Alu	TR3-PP	TR3-PVDF	PPS/LCP/BaFe	PPS/LCP/BaFe	SS/PPS
113	Copper Acetate	<chem>Cu(C2H3O2)2</chem>	10			-	-	-	-	-	-	-	-	-	-	○	-	○	○	-	-
114	Copper Nitrate	<chem>Cu(NO3)2</chem>	25	1.25		○	○	○	○	○	○	-	-	○	○	○	○	-	○	○	-
115	Copper Sulfate	<chem>CuSO4</chem>	18	1.21		○	○	○	○	○	○	-	-	○	○	○	○	-	○	○	-
116	Copper Sulfate	<chem>CuSO4</chem>	sat.			○	○	○	○	○	○	-	-	○	○	○	○	-	○	○	-
117	Copper(I)Chloride	<chem>CuCl</chem>	20	1.21		-	-	-	-	-	-	-	-	-	-	-	-	○	-	○	-
118	Copper(II)Chloride	<chem>CuCl2</chem>	50			○	○	○	○	○	○	-	-	○	○	○	○	-	○	○	-
119	Corn Oil	Mixture	pure			○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
120	Cresol	<chem>C7H8O</chem>		1.05	T1	-	-	-	○	○	○	○	○	○	○	-	○	-	○	○	-
121	Crotonaldehyde	<chem>C4H6O</chem>	pure	0.85	T3	Ex	-	-	-	-	-	-	-	○	○	○	-	-	○	○	-
122	Cyano Hydrogen Acid	HCN	pure	0.69	T1	Ex	-	-	-	-	-	-	-	○	○	○	-	-	○	○	-
123	Cyclohexane	<chem>C6H12</chem>	pure	0.78	T3	Ex	-	-	-	-	-	-	-	○	○	○	-	-	○	○	-
124	Cyclohexanol	<chem>C6H11OH</chem>	pure	0.94	T3	-	-	-	○	○	-	-	○	○	○	○	-	○	-	○	-
125	Decalin	<chem>C10H18</chem>	pure	0.88	T3	-	-	-	○	○	○	○	○	○	○	-	○	○	○	○	-
126	Dextrin	<chem>(C6H10O5)xH2O</chem>	18			○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
127	Dibutyl Ether	<chem>C4H9OC4H9</chem>	pure	1.05	T2	-	-	-	-	○	-	○	⑥	○	○	○	-	-	○	○	-
128	Dibutyl Phthalate	<chem>C6H4(CO2C4H9)2</chem>	pure	1.26	T2	Ex	-	-	-	-	-	-	-	○	○	○	-	-	-	○	-
129	Dichloro Acetic Acid	<chem>Cl2CHCOOH</chem>	100	1.33	T1	-	-	-	-	-	-	-	⑥	○	○	○	-	-	○	○	-
130	Dichloro Difluormethane	<chem>CF2Cl2</chem>	pure	1.56		-	②	-	○	②	○	-	-	-	○	-	-	③	-	○	-
131	Dichloro Ethane	<chem>ClCH2CH2Cl</chem>	pure	1.22	T1	Ex	-	-	-	-	-	-	-	○	○	○	-	-	○	○	-
132	Dichloro Ethylene 1.1	<chem>Cl2CCH2</chem>	pure	1.32		-	-	-	-	-	-	-	⑥	○	○	○	-	-	③	-	-
133	Dichloro Methane	<chem>CH2Cl2</chem>	100			-	-	-	○	○	○	○	○	○	○	-	○	○	○	○	○
134	Diesel Fuel	Mixture	30			○	○	○	○	○	○	-	-	○	○	○	○	-	⑥	-	⑥
135	Diethanolamine	<chem>HN(CH2CH2OH)2</chem>		1.1	T2	-	-	-	-	-	-	-	⑥	○	○	○	-	-	○	○	-
136	Diethyl Ether	<chem>(CH3CH2)2O</chem>	pure	0.77	T4	Ex	-	-	-	-	-	-	-	⑥	○	○	○	-	-	○	○
137	Diethylamine	<chem>(CH3CH2)2NH</chem>	100	0.71	T4	Ex	-	-	-	-	-	-	-	⑥	○	○	○	-	-	○	○
138	Diglycolic Acid	<chem>C4H6O5</chem>	pure	0.73	T2	-	-	-	○	-	○	-	-	⑥	○	○	○	-	③	③	-
139	Diglycolic Acid	<chem>C4H6O5</chem>	sat.			○	○	○	○	○	○	-	-	○	○	○	○	-	⑥	○	-
140	Dimethyl Benzene	<chem>C6H4(CH3)2</chem>	pure	0.95	T2	-	-	-	-	-	-	-	-	○	○	○	-	-	○	○	-



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No.	Medium	Formula	% Concentration	Spec. gravity	Temperature Class (EN)	Use only Lutz Silver Star ME16, MD1xL/ND2xL with stainless steel or Hastelloy C pump tubes.	Lutz Pump Tubes					Lutz Flow Meters					Nozzles															
							PP		PVDF	Alu	SS	HC	TR	ST	SL	LM	UN	VA														
							MMS-PP SS RE 88 PP, MP-PP	MMS-PP HC	MSL-PP 41 SS	B2-SL-PP MSL-PP 41 HC	MMS-PVDF, B200 MMS-PVDF	MSL-PVDF	MMS-Alu	MSL-Alu	MMS-SS B70V-SR-PTEE MS MSL-SS	RE 88 SS MP-SS	SL-HC	TR3-PP	TR3-PVDF	PP/SAN/BaFe	PPO/PPS	PPS/LCP/BaFe	PPS/LCP	SS/PPS	Nozzle Alu/NBR							
141	Dimethyl Formamide	HCON(CH ₃) ₂	pure	1.03	T2	Ex	-	-	-	-	-	-	-	○	○	○	○	-	-	○	○	○	-	-	○	②	-					
142	Dimethylamine	C ₂ H ₇ N	pure	0.86	T1	Ex	-	-	-	-	-	-	-	○	○	○	○	-	-	○	○	○	-	-	○	○	-					
143	Dioxane	C ₄ H ₈ O ₂	10	0.7		Ex	-	-	-	-	-	-	-	○	○	○	○	-	-	○	○	○	-	-	○	○	③	-				
144	Ethanol	CH ₃ CH ₂ (OH)	pure	0.79	T2	Ex	-	-	-	-	-	-	-	○	○	○	○	-	-	○	○	○	-	-	○	○	②	-				
145	Ether	(C ₂ H ₅) ₂ O	pure	0.71	T4	Ex	-	-	-	-	-	-	-	○	○	○	○	-	-	○	○	○	-	-	○	○	③	-				
146	Ethereal Oils	Mixture					-	-	-	-	-	-	-	○	○	○	○	-	-	○	○	○	-	-	○	○	③	-				
147	Ethyl Acetate	CH ₃ COOCH ₂ CH ₃	pure	0.9	T1	Ex	-	-	-	-	-	-	-	○	○	○	○	-	-	○	○	○	-	-	○	○	③	-				
148	Ethyl Acrylate	CH ₂ =CHCO ₂ CH ₂ CH ₃	pure		T2	Ex	-	-	-	-	-	-	-	○	○	○	○	-	-	-	○	○	-	-	○	○	③	-				
149	Ethyl Alcohol	CH ₃ CH ₂ (OH)	pure	0.79	T2	Ex	-	-	-	-	-	-	-	○	○	○	○	-	-	○	○	○	-	-	○	○	②	-				
150	Ethyl Benzene	CH ₃ CH ₂ C ₆ H ₅	pure	0.87	T2	Ex	-	-	-	-	-	-	-	○	○	○	○	-	-	○	○	○	-	-	○	○	③	-				
151	Ethyl Chloride	C ₂ H ₅ Cl	pure	0.92	T1		-	-	-	○	○	-	-	○	○	○	○	-	○	-	-	○	-	○	-	○	-	-				
152	Ethyl Glycol	HOCH ₂ CH ₂ OH	pure	0.93	T3	Ex	-	-	-	-	-	-	-	○	○	○	○	-	-	○	○	○	-	-	○	○	-	-				
153	Ethylene Chlorohydrin	ClCH ₂ CH ₂ OH	pure	1.2	T2	Ex	-	-	-	-	-	-	-	○	○	○	○	-	-	-	○	○	-	-	○	-	②	-				
154	Ethylene Di- Bromide	Br(CH ₂) ₂ Br	pure	2.18			-	-	-	-	-	-	-	○	○	○	○	-	-	○	-	○	-	-	○	-	-	-				
155	Ethylene Diamine	(CH ₂) ₂ (NH ₂) ₂	pure	0.98	T2	Ex	-	-	-	-	-	-	-	○	○	○	○	-	-	-	○	-	-	-	○	-	○	②	-			
156	Ethylene Dichloride	Cl(CH ₂) ₂ Cl	pure	1.26	T2	Ex	-	-	-	-	-	-	-	○	○	○	○	-	-	-	○	○	-	-	○	-	-	-	○	-		
157	Ethylene Glycol	(CH ₂ OH) ₂	pure	1.11	T2		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
158	Ethylene Oxide	(CH ₂) ₂ O	pure	0.89	T2		-	-	-	-	-	-	-	○	○	○	○	-	-	○	○	○	-	-	○	○	-	-	③	-		
159	Fatty Acids	C _n H _{2n+1} COOH	100	0.9			○	○	○	○	○	○	○	-	○	○	○	○	○	○	○	○	-	○	○	○	-	○	-	○	-	
160	Ferric(III)Chloride	FeCl ₃	pure				○	○	○	○	○	○	○	-	○	○	○	○	○	○	○	○	-	○	○	○	-	○	-	○	-	
161	Ferric(III)Sulfate	Fe ₂ (SO ₄) ₃	20	1.21			○	○	○	○	○	○	○	-	○	○	○	○	○	○	○	○	-	○	○	○	-	○	-	○	-	
162	Ferrous(II)Chloride	FeCl ₂	10	1.09			-	○	-	○	○	○	○	-	-	-	-	-	○	○	○	○	-	○	-	○	-	○	-	○	-	-
163	Ferrous(II)Chloride	FeCl ₂	50				-	○	-	○	○	○	○	-	-	-	-	-	○	○	○	○	-	○	-	○	-	○	-	○	-	-
164	Ferrous(II)Nitrate	Fe(NO ₃) ₂	50	1.55			-	○	-	○	○	○	○	-	-	-	-	-	○	○	○	○	-	○	-	○	-	○	-	○	-	-
165	Ferrous(II)Sulfate	FeSO ₄	50	1.61			○	○	○	○	○	○	○	-	-	○	○	○	○	○	○	○	-	○	-	○	-	○	○	○	-	-
166	Fish-Liver Oil	Mixture		0.98			○	○	○	○	○	○	○	-	-	○	○	○	○	○	○	○	-	○	○	○	○	○	○	○	○	○
167	Formaldehyde	HCHO	10				○	○	○	○	○	○	○	-	-	○	○	○	○	○	○	○	-	○	○	○	-	○	-	○	-	-
168	Formaldehyde	HCHO	35				○	○	○	○	○	○	○	-	-	○	○	○	○	○	○	○	-	○	○	○	-	○	-	○	-	-



Lutz-Chemical Resistance Table

- = Resistant
- = Non-resistant
- ② = Special seal EPDM
- ③ = Special seal FPM-FEP
- ④ = Spec
- ⑤ = Mea
- ⑥ = On

No.	Medium	Formula	% Co	Spec.	Temp	Use of MDIx Haspel	MMS RE 88	MMS	MSL-I	B2 S1 MSL-I	MMS	MSL-I	MMS	MSL-I	MMS B70V	B2 S1 MSL-I	MSL-I	RE 88 MP-SI	SL-HC	TR3-P	TR3-P	PPO/I	PPS/I	SS/PH	Nozzl	Nozzl	Nozzl	Nozzl						
169	Formaldehyde	HCHO	40				○	○	○	○	○	○	○	-	-	○	○	○	○	○	-	○	○	○	○	-	○	-	○	-				
170	Formamide	HCONH ₂	100				②	②	○	○	②	○	○	○	○	○	○	○	○	-	○	○	○	○	○	○	○	○	○	○				
171	Formic Acid	HCOOH	50				②	②	○	○	②	○	-	-	②	○	○	○	○	-	-	-	③	-	○	○	○	○	○	○	-	○		
172	Formic Acid	HCOOH	pure	1.22	T1	Ex	-	-	-	-	-	-	-	-	②	○	○	○	-	-	-	-	-	○	○	-	-	-	○	-	○	-		
173	Freon 12	Cl ₂ CF ₂	pure	1.32			-	-	-	-	-	-	-	⑥	○	○	○	-	-	-	③	-	○	○	-	-	-	③	-	○	-			
174	Fruit Juices	Mixture					○	○	○	-	○	-	-	-	○	-	○	○	○	○	○	○	○	○	○	○	○	○	○	-	○	-		
175	Fuel Oil	Mixture					-	-	-	-	○	○	○	○	○	○	○	○	○	-	○	○	○	○	○	○	-	○	○	○				
176	Furfural	C ₅ H ₄ O ₂		1.16			-	-	-	-	-	-	○	⑥	○	○	○	○	-	-	-	○	○	-	-	○	○	○	○	○	③	-		
177	Furfuryl Alcohol	C ₅ H ₆ O ₂	pure	1.13	T2		-	-	-	-	-	-	②	○	②	○	○	○	-	-	-	○	○	-	-	○	○	○	○	○	○	②	-	
178	Gallic Acid	C ₆ H ₂ (OH) ₃ COOH	50				○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	-	○	-	○	○	○	○	○	○	○		
179	Glauber's Salt	Na ₂ SO ₄	50	1.46			○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	-	○	-	○	○	○	○	○	○	○		
180	Gluconic Acid	C ₆ H ₁₂ O ₇					○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	-	○	-	○	○	○	○	○	○	-		
181	Glucose	C ₆ H ₁₂ O ₆	pure	1.13			○	○	○	○	○	○	○	-	-	○	○	○	○	○	○	○	-	○	○	-	○	○	○	○	○	-	○	
182	Glycerine	C ₃ H ₈ O ₃	pure	1.26	T2		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○		
183	Glycol	HOCH ₂ CH ₂ OH	pure	1.11	T2		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○		
184	Glycolic Acid	HOCH ₂ COOH	37				○	○	○	○	○	○	○	-	-	○	○	○	○	○	○	○	⑥	⑥	-	○	○	○	○	-	○	-		
185	Glycolic Acid	HOCH ₂ COOH	70				-	○	-	○	○	○	○	-	-	-	-	○	○	○	○	⑥	⑥	-	○	-	○	○	-	-	-	-		
186	Heptane	C ₇ H ₁₆	pure	0.68	T3	Ex	-	-	-	-	-	-	-	-	-	○	○	○	○	○	-	-	-	○	○	○	-	-	○	○	-	-		
187	Hexamethylene Tetramine	(CH ₂) ₆ N ₄	10				-	-	-	-	-	-	-	-	○	⑥	○	○	○	-	-	-	-	⑥	⑥	○	-	-	○	③	-	-		
188	Hexane	C ₆ H ₁₄	pure	0.66	T3	Ex	-	-	-	-	-	-	-	-	-	○	○	○	○	○	-	-	-	○	○	○	-	-	○	○	-	-		
189	Hexanol	CH ₃ (CH ₂) ₄ CH ₂ OH		0.83	T3	Ex	-	-	-	-	-	-	-	-	-	○	○	○	○	○	-	-	-	○	○	○	-	-	○	○	-	-		
190	Hydrazine	H ₂ NNH ₂	pure				○	○	○	○	○	○	○	-	-	○	○	○	○	○	○	○	⑥	⑥	-	⑥	○	○	-	○	-	○		
191	Hydrobromic Acid	HBr	10	1.07			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	○	-	-	-	-	-	-	-	
192	Hydrobromic Acid	HBr	48	1.44			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	○	-	-	-	-	-	-	-
193	Hydrochloric Acid	HCl	10				-	○	-	○	○	○	○	-	-	-	-	-	-	○	○	○	-	○	-	○	○	-	○	○	-	-	-	
194	Hydrochloric Acid	HCl	30				-	○	-	○	○	○	○	-	-	-	-	-	-	○	○	○	-	○	-	○	-	○	○	-	○	-	-	
195	Hydrochloric Acid	HCl	sat.	1.2			-	○	-	○	○	○	○	-	-	-	-	-	-	○	○	○	-	○	-	○	-	○	○	-	○	○	-	-
196	Hydrocyanic Acid	HCN	pure	0.69	T1	Ex	-	-	-	-	-	-	-	-	-	○	○	○	○	○	-	-	-	○	○	-	-	○	-	-	○	-	-	



Lutz-Chemical Resistance Table

- = Resistant
- = Non-resistant
- ② = Special seal EPDM
- ③ = Special seal FPM-FEP
- ④ = Special bearing Rulon
- ⑤ = Measuring chamber for Nitric Acid
- ⑥ = On demand

No.	Medium	Formula	% Concentration	Spec. gravity	Temperature Class (EN)	Lutz Pump Tubes								Lutz Flow Meters					Nozzles		
						PP		PVDF	Alu	SS		HC	TR	ST	SL	LM	UN	VA			
						MMS-PP SS RE 88 PP, MP-PP	MMS-PP HC	MSL-PP 41 SS	B2 SL-PP MSL-PP 41 HC	MMS-PVDF, B200 MMS-PVDF	MSL-PVDF	MMS-Alu	MSL-Alu	MMS-SS B70V-SR-PTEE MS B2 SL-SS (not Ex) MSL-SS	RE 88 SS MP-SS	SL-HC	TR3-PP	TR3-PVDF	PP0/SAN/BaFe	PP0/PPS	PPS/LCP/BaFe
197	Hydrofluoric Acid	HF	40	1.06		-	⑥	-	⑥	⑥	⑥	-	-	-	-	-	⑥	⑥	-	-	-
198	Hydrofluoric Acid	HF	60			-	-	-	⑥	-	⑥	-	-	-	-	-	-	-	-	○	○
199	Hydrofluoric Acid	HF	70	1.23		-	-	-	⑥	-	⑥	-	-	-	-	-	-	-	-	○	○
200	Hydrofluosilicic Acid	H ₂ SiF ₆	32			-	○	-	○	○	○	-	-	-	-	○	○	○	○	○	○
201	Hydrogen Peroxide	H ₂ O ₂	3	1.01		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
202	Hydrogen Peroxide	H ₂ O ₂	10	1.04		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
203	Hydrogen Peroxide	H ₂ O ₂	20	1.07		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
204	Hydrogen Peroxide	H ₂ O ₂	30	1.11		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
205	Hydrogen Peroxide	H ₂ O ₂	90	1.42		-	-	-	-	○	○	○	○	○	○	○	-	○	⑥	⑥	-
206	Hydroiodic Acid	HJ	pure			-	-	-	○	-	○	-	-	-	○	-	-	⑥	⑥	-	③
207	Hydrosilicofluoric Acid	H ₂ SiF ₆	32	1.17		-	○	-	○	○	○	-	-	-	○	○	-	⑥	⑥	-	○
208	Ink	Mixture		1		-	-	-	-	-	-	-	○	○	○	-	-	⑥	⑥	-	○
209	Iodine Tincture	Mixture				-	○	-	○	○	○	-	-	-	○	○	-	-	○	-	○
210	Iodoform	CHI ₃				○	○	○	○	○	○	-	-	○	○	○	○	-	○	○	○
211	Isobutyl Alcohol	C ₃ H ₇ CH ₂ OH	100	0.81	T2	Ex	-	-	-	-	-	-	○	○	○	○	-	-	○	○	○
212	Iooctane	C ₈ H ₁₈	pure	0.69	T2	Ex	-	-	-	-	-	-	○	○	○	○	-	-	○	○	○
213	Iooctanol	C ₈ H ₁₇ OH	pure	0.83		-	-	-	-	-	-	-	○	○	○	○	-	-	○	○	○
214	Isopropanol	(CH ₃) ₂ CHOH	pure	0.78	T2	Ex	-	-	-	-	-	-	○	○	○	○	-	-	○	○	○
215	Isopropyl Acetate	CH ₃ COOCH(CH ₃) ₂		0.89	T2	Ex	-	-	-	-	-	-	②	○	○	○	-	-	○	○	②
216	Isopropyl Ether	(CH ₃) ₂ CHOCH(CH ₃) ₂	pure	0.73	T2	Ex	-	-	-	-	-	-	⑥	○	○	○	-	-	○	○	③
217	Kerosene	Mixture	pure	0.83	T3	Ex	-	-	-	-	-	-	○	○	○	○	-	-	○	○	○
218	Lactic Acid	CH ₃ CHOHCOOH	10			○	○	○	○	○	○	-	○	○	○	○	○	○	○	○	○
219	Lactic Acid	CH ₃ CHOHCOOH	90			○	○	○	○	○	○	-	○	○	○	○	-	○	○	○	○
220	Lanolin	Mixture	pure			○	○	○	○	○	○	-	○	○	○	○	○	○	○	○	○
221	Lead Acetate	Pb(CH ₃ CO ₂) ₂	10			○	○	○	○	○	○	-	○	○	○	○	-	○	○	○	○
222	Lead Acetate	Pb(CH ₃ CO ₂) ₂	sat.			○	○	○	○	○	○	-	○	○	○	○	-	○	○	○	○
223	Lead Nitrate	Pb(NO ₃) ₂	20	1.33		○	○	○	○	○	○	-	○	○	○	○	○	○	○	○	○
224	Lead Tetraethyl	(C ₂ H ₅) ₄ Pb	pure	1.66		○	○	○	○	○	○	-	○	○	○	○	-	○	○	○	-



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No.	Medium	Formula	% Concentration	Spec. gravity	Temperature Class (EN)	Lutz Pump Tubes								Lutz Flow Meters						Nozzles								
						PP		PVDF	Alu	SS		HC	TR	ST	SL	LM	UN	VA										
						MMS-PP SS RE 88 PP, MP-PP	MMS-PP HC	MSL-PP 41 SS	B2-SL-PP MSL-PP 41 HC	MMS-PVDF, B200 MMS-PVDF	MSL-PVDF	MMS-Alu	MSL-Alu	MMS-SS B70V-SR-PTEE MS B2-SL-SS (not Ex)	RE 88 SS MP-SS	SL-HC	TR3-PP	TR3-PVDF	PP0/SAN/BaFe	PP0/PPS	PPS/LCP/BaFe	SS/PPS	Nozzle Alu/NBR					
225	Lime Milk	<chem>Ca(OH)2</chem>	15			○	○	-	-	○	-	-	-	○	-	○	○	○	-	○	○	○	-	○	-			
226	Linseed Oil	Mixture	pure			○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	-			
227	Lithium Chloride	<chem>LiCl</chem>	45	1.3		-	○	-	○	○	○	○	-	-	-	-	○	○	○	○	○	○	-	○	-			
228	Lithium Sulfate	<chem>Li2SO4</chem>	25	1.23		○	○	○	○	○	○	○	-	-	○	○	○	○	○	○	○	○	-	○	-			
229	Magnesium Carbonate	<chem>MgCO3</chem>				○	○	○	○	○	○	○	-	-	○	○	○	○	○	○	○	○	-	○	-			
230	Magnesium Chloride	<chem>MgCl2</chem>	10			-	○	-	○	○	○	-	-	-	-	-	○	○	○	○	○	○	-	○	-			
231	Magnesium Chloride	<chem>MgCl2</chem>	sat.			-	○	-	○	○	○	-	-	-	-	-	○	○	○	○	○	○	-	○	-			
232	Magnesium Nitrate	<chem>Mg(NO3)2</chem>	25	1.21		②	②	○	○	②	○	-	-	②	○	○	○	-	-	③	-	○	○	②	②	-		
233	Magnesium Sulfate	<chem>MgSO4</chem>	10			○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	-	○	○	-			
234	Magnesium Sulfate	<chem>MgSO4</chem>	sat.	1.28		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	-	○	○	-			
235	Maleic Acid	<chem>(CHCOOH)2</chem>	35			○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	-			
236	Maleic Acid	<chem>(CHCOOH)2</chem>	sat.			○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	-			
237	Malic Acid	<chem>(HO2C)CH2CHOH</chem>	50			○	○	○	○	○	○	○	-	-	○	○	○	○	○	○	○	○	○	-	○	-		
238	Manganese(II)Chloride	<chem>MnCl2</chem>	20	1.19		-	○	-	○	○	○	-	-	-	-	○	○	○	○	-	○	-	○	-	-			
239	Mercuric(I) Nitrate	<chem>Hg3(NO3)2</chem>	sat.			○	○	○	○	○	○	-	-	○	○	○	○	○	○	⑥	⑥	-	○	○	-	○	-	
240	Mercuric(II) Cyanide	<chem>Hg(CN)2</chem>	pure			○	○	○	○	○	○	-	-	○	○	○	○	○	○	-	○	○	○	-	○	-		
241	Methanol	<chem>CH3OH</chem>	pure	0.79	T1	Ex	-	-	-	-	-	-	-	-	②	○	○	○	-	-	-	○	○	-	-	○	②	-
242	Methyl Acetate	<chem>CH3CO2CH3</chem>	100	0.93	T1	Ex	-	-	-	-	-	-	-	-	⑥	○	○	○	-	-	-	○	○	-	-	③	-	
243	Methyl Benzene	<chem>C6H5CH3</chem>	100	0.87	T1	Ex	-	-	-	-	-	-	-	-	○	○	○	○	-	-	-	○	○	-	-	○	○	-
244	Methyl Cyanide	<chem>CH3CN</chem>		0.78	T1	Ex	-	-	-	-	-	-	-	-	⑥	○	○	○	-	-	-	○	○	-	-	③	-	
245	Methyl Ethyl Ketone	<chem>CH3COCH2CH3</chem>	100	0.81	T1	Ex	-	-	-	-	-	-	-	-	②	○	○	○	-	-	-	○	○	-	-	○	②	-
246	Methyl Glycol	<chem>CH3OCH2CH2OH</chem>		0.98	T3	Ex	-	-	-	-	-	-	-	-	○	○	○	○	-	-	-	○	○	-	-	○	○	-
247	Methyl Isobutyl Ketone	<chem>CH3CH(CH3)CH2COCH3</chem>		0.8	T1	Ex	-	-	-	-	-	-	-	-	②	○	○	○	-	-	-	○	○	-	-	②	-	
248	Methyl Pentanone	<chem>CH3CH(CH3)CH2COCH3</chem>		0.8	T1	Ex	-	-	-	-	-	-	-	-	②	○	○	○	-	-	-	○	○	-	-	②	-	
249	Methylene Chloride	<chem>CH2Cl2</chem>	100	1.33	T1		-	-	-	-	-	-	-	-	⑥	○	○	○	-	-	-	○	○	-	-	③	-	
250	Milk	Mixture				○	○	-	-	○	-	-	○	-	○	○	○	○	-	○	○	○	-	○	-			
251	Mineral Oils	Mixture				-	-	-	-	○	○	○	○	○	○	○	○	○	-	○	○	○	-	○	-			
252	Mineral Water	<chem>H2O</chem>				○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○			



Lutz-Chemical Resistance Table

- = Resistant
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- ② = Special seal EPDM
- ③ = Special seal FPM-FEP
- ④ = Special bearing Rulon
- ⑤ = Measuring chamber for Nitric Acid
- ⑥ = On demand

No.	Medium	Formula	% Concentration	Spec. gravity	Temperature Class (EN)	Use only Lutz Silver Star ME16, MD1xL/ND2xL with stainless steel or Hastelloy C pump tubes.	Lutz Pump Tubes					Lutz Flow Meters					Nozzles										
							PP		PVDF	Alu	SS	HC	TR	ST	SL	LM	UN	VA									
							MMS-PP SS RE 88 PP, MP-PP	MMS-PP HC	MSL-PP 41 SS B2-SL-PP	MSL-PP 41 HC	MMS-PVDF, B200 MMS-PVDF	MSL-PVDF	MMS-Alu	MSL-Alu	MMS-SS B70V-SR-PTEF MS MSL-SS	RE 88 SS MP-SS	SL-HC	TR3-PP	TR3-PVDF	PP/SAN/BaFe	PPO/PPS	PPS/LCP/BaFe	SS/PPS	Nozzle Alu/NBR			
253	Nail Polish Remover	<chem>CH3COCH3</chem>	10		T1	Ex	-	-	-	-	-	-	-	②	○	○	○	-	-	○	○	○	-	○	②	-	
254	Nail Polish Remover	<chem>CH3COCH3</chem>	pure	0.79	T1	Ex	-	-	-	-	-	-	-	②	○	○	○	-	-	○	○	○	-	○	②	-	
255	Naphtha	Mixture			T3	Ex	-	-	-	-	-	-	-	○	○	○	○	-	-	○	○	○	-	○	○	-	
256	Naphthalene	<chem>C10H8</chem>		1.15	T1	Ex	-	-	-	-	-	-	-	○	○	○	○	-	-	○	○	○	-	○	○	-	
257	Naphthenic Acid	Mixture		100	0.9		○	○	○	○	○	○	-	-	○	○	○	○	○	○	○	○	○	○	-		
258	Nickel Chloride	<chem>NiCl2</chem>	20	1.22			-	○	-	○	○	○	-	-	-	-	-	-	○	-	○	-	○	○	-		
259	Nickel Nitrate	<chem>Ni(NO3)26H2O</chem>	35	1.38			○	○	○	○	○	○	-	-	○	○	○	○	○	○	-	○	○	○	-		
260	Nickel Sulfate	<chem>NiSO4</chem>	10	1.21			○	○	○	○	○	○	-	-	○	○	○	○	○	○	-	○	○	○	-		
261	Nicotine	<chem>C10H14N2</chem>		1.01	T3	Ex	-	-	-	-	-	-	-	○	○	○	○	-	-	-	○	○	-	-	○	-	
262	Nitric Acid	<chem>HNO3</chem>	10	1.05			○	○	○	○	○	○	-	-	○	○	○	○	○	○	-	○	○	○	-		
263	Nitric Acid	<chem>HNO3</chem>	30	1.18			-	-	-	-	○	○	-	-	○	○	○	○	-	○	-	○	-	○	-		
264	Nitric Acid	<chem>HNO3</chem>	50	1.31			-	-	-	-	-	○	-	-	④	⑥	○	-	-	⑤	-	-	○	-	○	-	
265	Nitric Acid	<chem>HNO3</chem>	65	1.41			-	-	-	-	-	○	-	-	④	⑥	○	-	-	⑤	-	-	○	-	○	-	
266	Nitric Acid	<chem>HNO3</chem>		1.5			-	-	-	-	-	○	-	-	-	-	-	-	-	-	-	-	○	-	-		
267	Nitrobenzene	<chem>C6H5NO2</chem>	pure	1.21	T1		-	-	-	-	-	○	○	○	○	○	○	-	-	○	○	○	-	○	○	-	
268	Nitrotoluene	<chem>C7H7NO2</chem>	pure				-	-	○	○	-	○	-	○	⑥	○	-	○	-	-	-	○	○	○	③	③	③
269	Octane	<chem>C8H18</chem>	pure	0.7	T3	Ex	-	-	-	-	-	-	-	○	○	○	○	-	-	-	○	○	○	-	○	○	-
270	Oleic Acid	<chem>C18H34O2</chem>	pure	0.9	T2		-	-	-	-	○	○	○	○	○	○	○	-	○	-	○	-	○	○	-		
271	Oleum	<chem>H2SO4/SO3</chem>					-	-	-	-	○	○	-	-	○	○	○	○	-	○	-	-	○	-	○	-	
272	Oxalic Acid	<chem>(COOH)2</chem>	10				○	○	○	○	○	○	-	-	○	○	○	○	○	○	-	○	○	○	-		
273	Oxalic Acid	<chem>(COOH)2</chem>	sat.	1.65			-	○	-	○	○	○	-	-	-	-	-	○	○	-	-	○	-	○	-		
274	Paraffin Oil	Mixture	pure				○	○	○	○	○	○	-	○	-	○	-	○	○	○	○	○	○	○	○	○	
275	Peanut Oil	Mixture					○	○	○	-	○	-	○	-	○	-	○	○	○	-	○	○	○	○	○	○	
276	Pentanol-1	<chem>CH3(CH2)3CH2OH</chem>	pure	0.82	T3	Ex	-	-	-	-	-	-	-	②	○	○	○	-	-	-	○	○	○	-	○	②	-
277	Pentyl Acetate	<chem>CH3(CH2)3CH2COOCH3</chem>	pure	0.88	T2	Ex	-	-	-	-	-	-	-	⑥	○	○	○	-	-	-	○	○	-	-	③	-	
278	Perchloric Acid	<chem>HClO4</chem>	20				-	○	-	○	○	○	-	-	-	-	○	○	-	⑥	-	⑥	-	○	○	-	
279	Perchloric Acid	<chem>HClO4</chem>	50				-	-	-	-	○	○	-	-	-	-	○	-	○	-	⑥	-	⑥	-	○	-	-
280	Perchloric Acid	<chem>HClO4</chem>	70				-	-	-	-	○	○	-	-	-	-	○	-	○	-	⑥	-	⑥	-	○	-	-



Lutz-Chemical Resistance Table

- = Resistant
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- ③ = Special seal FPM-FEP
- ④ = Spec
- ⑤ = Mea
- ⑥ = On

No.	Medium	Formula	% CO	Spec	Temp	Use o MDIX Haste	MMS RE 88	MMS	MSL-	B2 SI MSL-	MMS	MSL-	MMS	MSL-	MMS	B70V	B2-SI MSL-	RE 88 MP-S	SI-HC	TR3-F	TR3-H	PPO/ ⑥	PPO/ ⑥	PPS/I	SS/PP Nozz	Nozz	Nozz	Nozz
281	Perchloric Acid	HClO ₄		sat.	1.55		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
282	Perchloroethylene	C ₂ Cl ₄		pure			-	-	-	-	O	O	-	-	O	O	O	O	O	O	-	-	O	O	O	O		
283	Petrol	C ₅ H ₁₂ -C ₁₂ H ₂₆		pure	0.73	T3	Ex	-	-	-	-	-	-	O	O	O	O	O	-	-	-	O	O	O	O	O		
284	Petroleum	Mixture		pure	0.83	T3	Ex	-	-	-	-	-	-	O	O	O	O	O	-	-	-	O	O	O	O	O		
285	Petroleum Ether	Mixture		pure	0.69	T3	Ex	-	-	-	-	-	-	O	O	O	O	O	-	-	-	O	O	O	O	O		
286	Phenol	C ₆ H ₅ OH	50		T1		-	-	-	-	O	O	O	O	O	O	O	O	-	-	-	O	O	O	O	O		
287	Phenol	C ₆ H ₅ OH	90	1.07	T1		-	-	-	-	O	O	O	O	O	O	O	O	-	-	-	O	O	O	O	O		
288	Phosphoric Acid	H ₃ PO ₄	30	1.18			O	O	O	O	O	O	-	O	O	O	O	O	O	O	-	O	O	O	O	O		
289	Phosphoric Acid	H ₃ PO ₄	50				O	O	O	O	O	O	-	-	O	O	O	O	O	O	-	O	O	O	O	O		
290	Phosphoric Acid	H ₃ PO ₄	85				O	O	O	O	O	O	-	-	O	O	O	O	O	O	-	O	O	O	O	O		
291	Phosphoric Acid	H ₃ PO ₄	95	1.66			-	-	-	-	O	O	-	-	O	O	O	O	O	-	O	-	O	-	-	O		
292	Phosphorous Oxichloride	POCl ₃	pure	1.57			O	O	O	O	O	O	-	-	O	O	O	O	O	O	-	⑥	-	⑥	O	O	O	
293	Phosphorous Trichloride	PCl ₃	pure	1.57			O	O	O	O	O	O	-	-	O	O	O	O	O	O	-	⑥	-	⑥	O	O	O	
294	Photographic Developer	Mixture					O	O	O	O	O	O	O	O	O	O	O	O	O	O	-	O	-	O	O	O	O	
295	Phthalic Acid	C ₈ H ₆ O ₄	50				②	②	O	O	②	O	②	O	②	O	O	O	O	-	-	-	③	-	⑥	O	O	
296	Phthalic Acid	C ₈ H ₆ O ₄	sat.	1.59			②	②	O	O	②	O	②	O	②	O	O	O	O	-	-	-	③	-	⑥	O	O	
297	Picric Acid	(NO ₂) ₃ C ₆ H ₂ OH	50				-	-	-	-	O	O	-	-	O	O	O	O	O	-	O	-	⑥	-	⑥	O	O	
298	Pine Oil	Mixture					-	-	-	-	-	-	-	O	⑥	O	O	O	-	-	-	O	O	O	O	O	③	
299	Potassium Bromate	KBrO ₃	sat.				-	-	-	-	-	-	-	-	-	-	-	-	-	-	O	-	-	O	O	-		
300	Potassium Bromide	KBr	10	1.37			O	O	O	O	O	O	O	-	-	O	O	O	O	O	O	-	O	-	O	O	O	
301	Potassium Bromide	KBr	sat.				O	O	O	O	O	O	O	-	-	O	O	O	O	O	O	-	O	O	O	O		
302	Potassium Carbonate	K ₂ CO ₃	sat.				-	O	-	O	O	O	O	-	-	-	-	O	O	O	-	O	-	-	O	O	-	
303	Potassium Chlorate	K ₂ ClO ₃	50				O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	-	O	O	O	O		
304	Potassium Chloride	KCl	10				-	O	-	O	O	O	O	-	-	-	-	O	O	O	-	O	-	-	O	O	-	
305	Potassium Chloride	KCl	sat.	1.17			-	O	-	O	O	O	O	-	-	-	-	O	O	O	-	O	-	-	O	O	-	
306	Potassium Chromate	K ₂ CrO ₄	40				O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	-	O	O	O	O		
307	Potassium Cyanide	KCN	50				O	O	O	O	O	O	O	-	-	O	O	O	O	O	O	-	O	O	O	O		
308	Potassium Cyanide	KCN	sat.	1.31			O	O	O	O	O	O	O	-	-	O	O	O	O	O	O	-	③	-	-	O	O	



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No.	Medium	Formula	% Concentration	Spec. gravity	Temperature Class (EN)	Lutz Pump Tubes								Lutz Flow Meters					Nozzles								
						PP		PVDF	Alu	SS		HC	TR	ST	SL	LM	UN	VA									
						MMS-PP SS RE 88 PP, MP-PP	MMS-PP HC	MSL-PP 41 SS	B2 SL-PP MSL-PP 41 HC	MMS-PVDF, B200 MMS-PVDF	MSL-PVDF	MMS-Alu	MSL-Alu	MMS-SS B70V-SR-PTEE MS MSL-SS	RE 88 SS MP-SS	SL-HC	TR3-PP	TR3-PVDF	PP0/SAN/BaFe	PP0/PPS	PPS/LCP/BaFe	SS/PPS	Nozzle Alu/NBR				
309	Potassium Dichromate	K ₂ Cr ₂ O ₇	40			○	○	○	○	○	○	-	-	○	○	○	○	-	-	○	○	-	○	-			
310	Potassium Disulfate	K ₂ S ₂ O ₇		0.92		○	○	○	○	○	○	-	-	○	○	○	○	○	-	○	○	-	○	-			
311	Potassium Ferricyanide	K ₃ Fe(CN) ₆	10			○	○	○	○	○	○	○	○	○	○	○	○	○	-	⑥	○	○	○	-			
312	Potassium Ferricyanide	K ₃ Fe(CN) ₆	20	1.11		○	○	○	○	○	○	○	○	○	○	○	○	○	-	⑥	○	○	○	-			
313	Potassium Ferricyanide	K ₃ Fe(CN) ₆	sat.			○	○	○	○	○	○	○	○	○	○	○	○	○	-	⑥	○	○	○	-			
314	Potassium Ferrocyanide	K ₄ Fe(CN) ₆	10			○	○	○	○	○	○	○	○	○	○	○	○	○	-	⑥	○	○	○	-			
315	Potassium Ferrocyanide	K ₄ Fe(CN) ₆	16	1.11		○	○	○	○	○	○	○	○	○	○	○	○	○	-	⑥	○	○	○	-			
316	Potassium Ferrocyanide	K ₄ Fe(CN) ₆	sat.			○	○	○	○	○	○	○	○	○	○	○	○	○	-	⑥	○	○	○	-			
317	Potassium Hydroxide	KOH	20	1.19		②	②	○	○	②	○	-	-	②	○	○	○	-	-	③	-	-	○	②	-		
318	Potassium Hydroxide	KOH	30	1.29		②	②	○	○	②	○	-	-	②	○	○	○	-	-	③	-	-	○	②	-		
319	Potassium Hydroxide	KOH	60	1.63		②	②	○	○	②	○	-	-	②	○	○	○	-	-	③	-	-	○	②	-		
320	Potassium Hypochlorite	KOCl				-	○	-	○	○	○	-	-	-	-	○	○	○	-	⑥	-	-	-	○	-		
321	Potassium Iodide	KI	50	1.55		○	○	○	○	○	○	-	-	○	○	○	○	○	-	⑥	○	○	○	-	○	-	
322	Potassium Iodide	KI	sat.			○	○	○	○	○	○	-	-	○	○	○	○	○	-	⑥	○	○	○	-	○	-	
323	Potassium Nitrate	KNO ₃	10			○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	-	
324	Potassium Nitrate	KNO ₃	24	1.17		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	-	
325	Potassium Oxalate	K ₂ C ₂ O ₄ ·H ₂ O				○	○	○	○	○	○	-	-	○	○	○	○	○	○	⑥	⑥	⑥	⑥	○	-	○	-
326	Potassium Permanganate	KMnO ₄	6	1.04		○	○	○	○	○	○	○	○	○	○	○	○	○	-	⑥	○	○	○	○	○	○	-
327	Potassium Permanganate	KMnO ₄	18			○	○	○	○	○	○	○	○	○	○	○	○	○	-	⑥	○	○	○	○	○	○	-
328	Potassium Sulfate	K ₂ SO ₄	10	1.08		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	-
329	Propanol	C ₃ H ₇ OH	100	0.8	T2	Ex	-	-	-	-	-	-	-	○	○	○	○	-	-	-	○	○	-	-	○	○	-
330	Propionic Acid	CH ₃ CH ₂ COOH	50		T1	Ex	-	-	-	-	-	-	-	○	○	○	○	-	-	-	○	○	-	-	-	○	-
331	Propionic Acid	CH ₃ CH ₂ COOH	pure	0.99	T1	Ex	-	-	-	-	-	-	-	○	○	○	○	-	-	-	⑥	○	-	-	-	○	-
332	Propylene Glycol	C ₃ H ₆ (OH) ₂	pure	1.04	T2		○	○	○	○	○	○	○	○	○	○	○	○	-	○	○	○	○	○	○	-	
333	Propylene Oxide	C ₃ H ₆ O	pure	0.83	T2	Ex	-	-	-	-	-	-	-	②	○	○	○	-	-	-	○	○	-	-	-	②	-
334	Pyridine	N(CH) ₄ CH	pure	0.99	T1	Ex	-	-	-	-	-	-	-	②	○	○	○	-	-	-	○	-	-	○	②	-	-
335	Pyrogallol	C ₆ H ₃ (OH) ₃	10			○	○	○	○	○	○	○	○	○	○	○	○	○	-	⑥	-	⑥	○	○	○	-	
336	Salad Oil	Mixture				○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	-

Use only Lutz Silver Star ME 16,
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- = Resistant
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No.	Medium	Formula	% Concentration	Spec. gravity	Temperature Class (EN)	Lutz Pump Tubes								Lutz Flow Meters						Nozzles		
						PP		PVDF	Alu	SS		HC	TR	ST	SL	LM	UN	VA				
						MMS-PP SS RE 88 PP, MP-PP	MMS-PP HC	MSL-PP 41 SS	B2-SL-PP MSL-PP 41 HC	MMS-PVDF, B200 MMS-PVDF	MSL-PVDF	MMS-Alu	MSL-Alu	MMS-SS B70V-SR-PTEE MS MSL-SS	RE 88 SS MP-SS	SL-HC	TR3-PP	TR3-PVDF	PP0/SAN/BaFe	PP0/PPS	PPS/LCP/BaFe	PPS/LCP
337	Salycilic Acid	C ₆ H ₄ OHC ₆ COOH	50	1.48		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
338	Sea Water	H ₂ O				-	<input type="radio"/>	-	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
339	Silicic Acid	Si(OH) ₄	pure			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
340	Silicone Oil	(R ₂ SiO)x	pure			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
341	Silver Nitrate	AgNO ₃	8	1.07		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
342	Soap Solution	Mixture				<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
343	Sodium Acetate	CH ₃ COONa	10			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
344	Sodium Aluminate	Na ₂ Al ₂ O ₄				<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
345	Sodium Benzoate	C ₆ H ₅ NaO ₂	36			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
346	Sodium Benzoate	C ₆ H ₅ NaO ₂	sat.			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
347	Sodium Bicarbonate	NaHCO ₃	10	1.07		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
348	Sodium Carbonate	Na ₂ CO ₃	25	1.27		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
349	Sodium Chlorate	NaClO ₃	25	1.23		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
350	Sodium Chloride	NaCl	20			-	<input type="radio"/>	-	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
351	Sodium Dichromate	Na ₂ Cr ₂ O ₇	10			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
352	Sodium Fluoride	NaF	4	1.04		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
353	Sodium Hydrogen Sulphate	NaHSO ₄	50	1.16		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
354	Sodium Hydrogen Sulphite	NaHSO ₃				<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
355	Sodium Hydroxide	NaOH	10	1.16		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
356	Sodium Hydroxide	NaOH	30	1.33		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
357	Sodium Hydroxide	NaOH	50	1.53		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
358	Sodium Hypochlorite	NaClO	10			-	-	-	-	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
359	Sodium Hypochlorite	NaClO	12.5			-	-	-	-	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
360	Sodium Hypochlorite	NaClO	20			-	-	-	-	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
361	Sodium Nitrate	NaNO ₃	45	1.37		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
362	Sodium Nitrite	NaNO ₂	50			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
363	Sodium Perchlorate	NaClO ₄	25	1.18		-	-	<input type="radio"/>	<input type="radio"/>	-	<input type="radio"/>	-	-	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
364	Sodium Phosphate	Na ₃ PO ₄	10			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



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No.	Medium	Formula	% Concentration	Spec. gravity	Temperature Class (EN)	Use only Lutz Silver Star ME16, MD1xL/ND2xL with stainless steel or Hastelloy C pump tubes.	Lutz Pump Tubes					Lutz Flow Meters					Nozzles												
							PP		PVDF	Alu	SS	HC	TR	ST	SL	LM	UN	VA											
							MMS-PP SS RE 88 PP, MP-PP	MMS-PP HC	MSL-PP 41 SS	B2 SL-PP MSL-PP 41 HC	MMS-PVDF, B200 MMS-PVDF	MSL-PVDF	MMS-Alu	MSL-Alu	MMS-SS B70V-SR-PTEE MS MSL-SS	RE 88 SS MP-SS	SL-HC	TR3-PP	TR3-PVDF	PP0/SAN/BaFe	PP0/PPS	PPS/LCP/BaFe	SS/PPS	Nozzle Alu/NBR					
365	Sodium Silicate	$2\text{Na}_2\text{O}\text{SiO}_2$	20	1.24			○	○	○	○	○	○	-	-	○	○	○	-	⑥	○	○	○	-	○	-				
366	Sodium Sulfate	Na_2SO_4	50	1.46			○	○	○	○	○	○	○	○	○	○	○	-	○	○	○	○	○	○					
367	Sodium Sulfide	NaS	16	1.16			○	○	○	○	○	○	-	-	○	○	○	-	⑥	-	○	○	○	-	○	-			
368	Sodium Sulfite	Na_2SO_3	sat.	1.18			○	○	○	○	○	○	-	-	○	○	○	-	○	-	○	○	○	-	○	-			
369	Sodium Thiosulfate	$\text{Na}_2\text{S}_2\text{O}_3$	40				○	○	○	○	○	○	○	○	○	○	○	-	○	-	○	○	○	○	○	-			
370	Solvent Naphtha	Mixture		0.72	T3	Ex	-	-	-	-	-	-	-	-	○	○	○	-	-	-	○	○	○	-	-	○	-		
371	Spindle Oil	Mixture	pure				○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○			
372	Stearic Acid	$(\text{CH}_3(\text{CH}_2)_{16}\text{CO}_2\text{H})$	100	0.94			○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○			
373	Styrol	$\text{C}_6\text{H}_5-\text{CH}=\text{CH}_2$	pure	0.91	T1	Ex	-	-	-	-	-	-	-	-	○	○	○	-	-	-	○	○	○	-	-	○	-		
374	Succinic Acid	$\text{C}_4\text{H}_6\text{O}_4$	50	1.06			○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	-			
375	Sulphite Liquor	$\text{Ca}(\text{HSO}_3)_2$	10				○	○	○	○	○	○	-	-	○	○	○	○	-	○	-	⑥	○	○	-	○	-		
376	Sulphite Liquor	$\text{Ca}(\text{HSO}_3)_2$	sat.				○	○	○	○	○	○	-	-	○	○	○	○	-	○	-	⑥	○	○	-	○	-		
377	Sulphur Chloride	S_2Cl_2	10	1.69	T2		-	-	-	-	○	○	-	-	-	-	○	-	○	-	⑥	-	⑥	-	-	○	-		
378	Sulphur Ether	$(\text{C}_2\text{H}_5)_2\text{O}$	pure	0.71	T4	Ex	-	-	-	-	-	-	-	-	⑥	○	○	-	-	-	○	○	-	-	○	○	③	-	
379	Sulphuric Acid	H_2SO_4	40	1.3			-	○	-	○	○	○	-	-	-	-	○	○	-	○	-	○	-	-	○	○	-		
380	Sulphuric Acid	H_2SO_4	80	1.66			-	○	-	○	○	○	-	-	-	-	○	○	○	-	○	-	○	-	-	○	○	-	
381	Sulphuric Acid	H_2SO_4	90	1.73			○	○	○	○	○	○	-	-	○	○	○	○	○	-	-	○	○	-	○	○	-		
382	Sulphuric Acid	H_2SO_4	98	1.84			-	-	-	-	○	○	-	-	○	○	○	○	-	○	-	-	-	○	-	○	-		
383	Sulphurous Acid	H_2SO_3	50				○	○	○	○	○	○	-	-	○	○	○	○	○	-	○	-	-	○	○	-	○	-	
384	Table Salt	NaCl	25				-	○	-	○	○	○	-	-	-	-	○	○	-	○	-	○	-	○	○	-	-		
385	Tannic Acid	$\text{H}_{76}\text{H}_{52}\text{O}_{46}$	50				○	○	○	○	○	○	-	-	○	○	○	○	○	-	-	○	○	○	-	○	-		
386	Tanning Extracts. vegetable	Mixture					○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	-		
387	Tartaric Acid	$\text{C}_4\text{H}_6\text{O}_6$	sat.	1.76	T2		○	○	○	○	○	○	-	-	○	○	○	○	○	○	○	○	○	○	-	○	-		
388	Tetrachloroethane	$\text{Cl}_2\text{CHCHCl}_2$	pure	1.6			-	-	-	-	-	○	-	-	⑥	○	○	○	-	○	-	-	-	○	○	-	③	-	
389	Tetrachloromethane	CCl_4	pure	1.59			-	-	-	-	○	○	-	-	○	○	○	○	-	○	-	-	-	○	○	-	○	-	
390	Tetrahydrofuran	$\text{C}_4\text{H}_8\text{O}$	pure	0.89	T3	Ex	-	-	-	-	-	-	-	-	⑥	○	○	○	-	-	-	-	○	○	-	-	-	③	-
391	Tetralin	$\text{C}_{10}\text{H}_{12}$	100	0.97	T2		-	-	-	-	-	-	-	-	○	○	○	○	-	-	-	○	○	-	-	○	○	-	
392	Thionyl Chloride	SOCl_2	pure	1.66			-	-	-	-	-	-	-	-	○	○	○	○	-	-	○	-	⑥	○	-	-	-	○	-



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No.	Medium	Formula	% Concentration	Spec. gravity	Temperature Class (EN)	Use only Lutz Silver Star ME I 6, MDIx/ND2xL with stainless steel or Hastelloy C pump tubes.	Lutz Pump Tubes					Lutz Flow Meters					Nozzles															
							PP		PVDF	Alu	SS	HC	TR	ST	SL	LM	UN	VA														
							MMS-PP SS RE 88 PP, MP-PP	MMS-PP HC	MSL-PP 41 SS	B2-SL-PP MSL-PP 41 HC	MMS-PVDF, B200 MMS-PVDF	MSL-PVDF	MMS-Alu	MSL-Alu	MMS-SS B70V-SR-PTEE MS MSL-SS	RE 88 SS MP-SS	SL-HC	TR3-PP	TR3-PVDF	PP0/SAN/BaFe	PP0/PPS	PPS/LCP/BaFe	SS/PPS	Nozzle Alu/NBR								
393	Thiophene	C ₄ H ₄ S	pure	1.06	T2	Ex	-	-	-	-	-	-	-	-	⑥	○	○	○	-	-	-	○	○	-	-	③	-					
394	Tin(II)Chloride	SnCl ₂	20	1.17			-	○	-	○	○	○	-	-	-	-	-	○	○	-	○	○	-	○	-	-	-	-				
395	Toluene	C ₇ H ₈	100	0.87	T1	Ex	-	-	-	-	-	-	-	-	○	○	○	○	-	-	-	○	○	-	○	○	-	-	-			
396	Transformer Oil	Mixture	pure				-	-	-	-	-	-	○	○	○	○	○	○	-	-	○	○	○	○	○	-	○	○				
397	Tributyl Phosphate	(C ₄ H ₉) ₃ PO ₄	pure	0.98			②	②	○	○	②	○	②	○	②	○	○	○	-	-	-	○	○	○	○	○	②	②	○	②		
398	Trichloroacetic Acid	CCl ₃ COOH	50				-	-	-	○	-	○	-	-	-	-	-	○	-	-	-	③	-	○	-	③	③	-	-	-	-	
399	Trichloroacetic Acid	CCl ₃ COOH	pure	1.62			-	-	-	○	-	○	-	-	-	-	-	○	-	-	-	③	-	○	-	③	③	-	-	-	-	
400	Trichlorobenzene	C ₆ H ₃ Cl ₃		1.69	T2		-	-	-	-	-	-	-	○	○	○	○	-	-	-	○	○	○	○	-	-	○	-	-	○		
401	Trichloroethane	C ₂ HCl ₃	pure	1.48			-	-	-	-	○	○	-	-	○	○	○	○	-	○	-	-	○	○	-	○	-	○	-	○		
402	Trichloroethylene	C ₂ HCl ₃	50		T2		-	-	-	-	○	○	-	-	○	○	○	○	-	○	-	-	○	○	-	○	-	○	-	○		
403	Trichloroethylene	C ₂ HCl ₃	pure	1.46	T2		-	-	-	-	○	○	○	○	○	○	○	○	-	○	-	-	○	○	○	-	○	○	○	-		
404	Trichlorofluoromethane	CFCl ₃	pure	1.32			-	-	-	-	-	-	-	⑥	○	○	○	○	-	-	-	③	-	○	○	-	-	③	-	-	③	
405	Trichloromethane	CHCl ₃	100	1.48			-	-	-	-	-	○	-	-	⑥	○	○	○	-	-	-	-	○	○	-	③	-	③	-	-	③	
406	Tricresyl Phosphate	(CH ₃ C ₆ H ₄ O) ₃ PO	pure	1.13			-	-	○	○	-	○	-	○	⑥	○	○	○	-	-	-	○	○	○	○	③	③	○	③	③	-	
407	Triethylamine	(CH ₃ CH ₂) ₃ N	pure	0.73		Ex	-	-	-	-	-	-	-	○	○	○	○	○	-	-	-	○	○	○	-	-	○	○	-	○	○	
408	Turpentine Oil	Mixture		0.86			-	-	-	-	-	○	○	○	○	○	○	○	-	-	-	○	○	○	-	-	○	○	-	○	○	
409	Urea	H ₂ NCONH ₂	10				○	○	○	○	○	○	-	-	○	○	○	○	○	○	○	○	○	-	○	○	○	-	○	-	○	
410	Urea	H ₂ NCONH ₂	33				○	○	○	○	○	○	-	-	○	○	○	○	○	○	○	○	○	-	○	○	○	-	○	-	○	
411	Urine	Mixture					○	○	○	○	○	○	-	-	○	○	○	○	○	○	○	○	○	-	○	○	○	-	○	-	○	
412	Vinegar	CH ₃ COOH					○	○	○	○	○	○	-	-	○	○	○	○	○	○	○	○	○	-	○	○	○	-	○	-	○	
413	Vinyl Acetate	CH ₂ - CHOOCCH ₃	pure	0.93	T2	Ex	-	-	-	-	-	-	-	⑥	○	○	○	-	-	-	○	○	-	-	-	○	-	-	③	-		
414	Vinylidene Chloride	CH ₂ = CCl ₂	pure	1.25	T1	Ex	-	-	-	-	-	-	-	-	○	○	○	○	-	-	-	○	○	-	-	-	○	-	-	○	-	
415	Water	H ₂ O		1			○	○	○	○	○	○	-	-	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	-	○	
416	Water Glass	Me ₂ OnSiO ₂	20	1.24			○	○	○	○	○	○	-	-	○	○	○	○	○	○	○	○	○	-	⑥	○	○	-	○	-	○	
417	Xylene	C ₆ H ₄ (CH ₃) ₂	pure	0.86	T1	Ex	-	-	-	-	-	-	-	-	○	○	○	○	-	-	-	○	○	-	-	○	○	-	○	○	-	○
418	Zinc Chloride	ZnCl ₂	20	1.19			○	○	○	○	○	○	-	-	○	○	○	○	○	○	○	○	○	-	○	○	○	-	○	-	○	
419	Zinc Chloride	ZnCl ₂	75	2.07			○	○	○	○	○	○	-	-	○	○	○	○	○	○	○	○	○	-	○	○	○	-	○	-	○	
420	Zinc Salts	Mixture					○	○	○	○	○	○	-	-	○	○	○	○	○	○	○	○	-	○	○	○	-	○	-	○	-	○



Lutz-Chemical Resistance Table

- = Resistant
- = Non-resistant
- ② = Special seal EPDM
- ③ = Special seal FPM-FEP
- ④ = Spec
- ⑤ = Mea
- ⑥ = On

- ④ = Special bearing Rulon
- ⑤ = Measuring chamber for Nitric Acid
- ⑥ = On demand



Questionnaire for specific application information

Copy - fill in - fax back to (770) 923-0334

We would like to furnish you with information about the pump best suited for your application. This requires a knowledge of the system in which the pump is to operate. If you will answer the following questions, we will be able to give you a specific recommendation.

Company _____

Address _____

City _____ State _____ Zip _____

Phone Number _____ Fax Number _____

Contact Name _____

Pump planning made easy!

1. Fluid to be pumped: _____

2. Capacity required: _____ U.S.G.P.M. Total head _____ ft.

3. Pumped fluid temperature: _____ °F Specific gravity _____

4. Viscosity: _____ cps

5. Transferring from: _____ 55 Gallon drum _____ Carboy _____ Vat _____ Tote

Description: _____

6. Other pertinent data: _____

7. Preferred materials of construction: Length of Pump Tube:

Polypropylene 27 inches (carboys)

316 Stainless Steel 39 inches (55 gallon)

Kynar 47 inches (vats/reactors))

Hastelloy C 63 inches (PP only)

Aluminum _____ inches Special Length

8. Motor characteristics required:

volts cycles phase

9. Enclosure: Open Drip Proof (Available with Speed Control)

TEFC

Explosion Proof-U.L. Listed, Class I

Groups C & D, Class II, Group G Motor

Air Operated Motor

10. Other characteristics: _____



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