Chemical Resistance

1 = excellent resistance
2 = good resistance
3 = medium resistance
x = none-resistant

	PUR-Ester	PUR-Ether	Silicone	Hypalon*	Viton*	PVC	PE	PTFE	Neopren*	Kapton*	TPV	PE-EL
accumulator acid (sulfuric acid 30%)	x	2	x	1	1	1	1	1	2	1	1	
acetaldehyde	3	2	2	3	2	x	2 to 3	1	3	1	1	1
acetamide	x	x	2	2	1 to 2	x	1	1	1		1	1
acetic acid 10%	3	2	2	1	2	3	1	1	1	1	1	1
acetic acid 100% (conc.)	x	x	2 to 3	3	x	x	x	1	x	1	1	1
acetic acid 25%	x	3	2 to 3	1 to 2	2	x	1	1	1 to 2	1	1	1
acetic acid 3%	2	1	1	1	2	1	1	1	1	1	1	1
acetic acid 50%	x	x	2 to 3	2	2	x	3	1	2 to 3	1	1	1
acetic acid anhydride 50%	x	x	1	1	x	x	3	1	2	1	1	
acetic acid ethyl ester (ethyl acetate)	x	x	2	x	x	x	2	1	3	1	1	1
acetone	3	x	2	2 to 3	x	3	1 to 2	1	3	1	1	1
acetyl salicylic acid (aspirin)					1	1	1					1
acetylacetone	3	x	x		x	x	x	1		1	1	x
acetylene gas	2-3	2-3	2	2	1	1	3	1	2	1	1	1
acids s. spec. designation, aplicable in general	x	3	2	2-3	1-2	1-2	2	1	3	1	1-2	
acrylic acid ethyl ester (ethyl acrylate)	x	x	2	1	x	x	x	1	x	1	1	x
acrylonitrile	x	x	2	3	2	x	1	1	3	1	1	1
adipic acid (hexane diacid)	3	1 to 3	x	1	1	1	1	1	2	1		
adipic acid diethyl ester				1	x	x		1		1	1	
adipose (animal grease)	1	1	3	1 to 2	1	2	2 to 3	1	3	1	2	1
air, atmospheric, oil-free, to +°C	85	80	175	120	200	70	90	200		200	125	1
air, oil-saturated, to +°C	85	80	175	120	200	70	90	200		200	125	1
alcohols s. specific designations, applicable in general)	2-3	2-3	1-2	1-2	1-2	1-2	1-2	1	2	1	2	1
aliphatics s. gasoline low aromatic,												
applicable in general	1-2	2	3-x	3	1	2-3	3-x	1	3	1	2-x	1
aldehyds s. specific designations, applicable in general)	3	3	2-3	2-3	2-x	3	1-2	1	3	1	2	
allyl alcohol (propenol)	3	3	x	1 to 3	3	3	1	1			1	1
allyl chloride (3-chloropropene)	x	x	1		x	x	x	1		1		x
alum (potassium aluminium sulphate)	2	1	1 to 2	1	1	1	1	1	2	3	1	1
aluminium acetate, aqu. (basic aluminium acetate)	x	3	x	1	x	1	1	1	1	1	1	1
aluminium chloride, aqu.	3	1 to 2	2	1 to 2	1	1	1 to 2	1	1	1	1	1
aluminium fluoride	3	3	2	1	1	1	1	1	1	1	1	1
aluminium hydroxide	3	2	1	1	1	1	1	1	1	1	1	1
aluminium nitrate, aqu.	3	2	2	1	1	2	1	1	1	1	1	1
aluminium phosphates, aqu.	2	1	1	1	1	1	1	1	1	1	1	1
aluminium sulphate aqu.	3	2	1	1	1	1	1	1	1	1	1	1
amines s. specific designations, applicable in general	x	x	3	3	2-3	x	2-3	1	2-x	1	2	
amino acetic acid (glycine)	x	x	2 to 3	2 to 3	1	1		1			1	
ammonia nitrate, aqu.	3	2	1	3	3	2	1	1	2	1	1	1
ammonia, aqu. 25% (ammonia water)	x	x	1	3	1	1	1	1	2	x	1	1
ammonia, gaseaus 20°C	x	3	1	2	1	1	1	1	1	1	1	1
ammonia, liquid 100%	x	x	3	2	x	3	2	1	1	1	1	1
ammonium acetate, aqu.	x	x	3-x	1	x	1	2	1			1	1
ammonium carbonate, aqu.	x	x	2 to 3	1	1	1	1	1	1	1	1	1
ammonium chloride, aqu. 3%	3	1	1	2	1	1	1	1	1	1	1	1
ammonium diphosphate, aqu.	3	1	1 to 2	1	1	1	1	1	1	1	1	1
ammonium fluoride, aqu.	x	x		1	1 to 2	1 to 3	1	1			1	1
ammonium hydroxide, aqu. (ammonia, aqu.)	x	x	1	3	1	1	1	1	2	x	1	
ammonium metaphosphate	2	1	1	1	1	1	1	1	1	1	1	2
ammonium nitrite	1	1	2	1	1	2		1	1	1	1	1
ammonium persulphate, aqu.	3	2	2 to 3	2	1	1	1	1	2	1	1	
ammonium phosphate, aqu.	3	1	1	2	1	2	1	1	1	1	1	2
ammonium sulphate	2	1	1	1	1	1	1	1	1	1	1	1
ammonium thiocyanate	3	2	1		1	1	1	1		1	1	1
ammonium-urea-solution (liquid nitrogen fertiliser)	x	x				2	2	1				

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	PUR-Ester	PUR-Ether	Silicone	Hypalon®	Viton®	PVC	PE	PTFE	Neopren®	Kapton®	TPV	PE-EL
amyl acetate1) (acetic acid pentyl ester, banana oil)	x	x	3	x	x	x	2	1	3	1	1	1
amyl alcohols (pentanols)	3	3	3	1	2	1	1 to 2	1	1	1	1	1
amyl borate	x	x	x	1	1			1	1	1	1	
amyl chloride	x	x	3	x	2	x	x	1	x	1	2	x
aniline (aminobenzene)	x	x	2	3	1 to 2	2 to 3	2 to 3	1	x	1	1	2
aniline dyes	x	x	2 to 3	2 to 3	1	1	3	1	2	1	1	
aniline hydrochloride	x	x	x	x	x	x	2 to 3	1	x			1
animal fats (oils and greases, adipose)	1	1	3	1 to 2	1	2	2 to 3	1	3	1	2	1
anise seed oil						x	3-x	1	x			1
anol (cyclohexanol)	3	x	2 to 3	1 to 2	1	x	1	1	2	1	2	1
anone (cyclohexanone)	3	x	x	x	x	x	2 to 3	1	x	1	2 to 3	1
anthraquinone sulfonic acid, aqu.	x	x	x	1	1	1	1	1			1	1
antichlorine (sodium thiosulfate)	3	2	1	1	1	1	1	1	1	1	1	
antifreeeze s. precise chem. Designation												
antimony chloride 50%	3	2	x	1	1	1	1	1	1	1	1	1
antimony chloride, anhydrous	x	x	3	1	1 to 2	1	1	1			1	1
apple acid, aqu.1) (apple juice)	x	3	1	1	1	1	1	1	1	1	1	1
aqua fortis (nitric acid 50%)	x	x	x	3	1 to 2	2 to 3	2 to 3	1	x	1	1 to 2	
aqua regia (nitrohydrochloric acid)	x	x	3	3	2	2 bis 3	2	1	3	1	3	
Arctones = ICI Freontypes, ask for our detailed advice												
argon gas	1	1	1	1	1	1	1	1	1	1	1	1
aromatics s. benzene, toluene, xylenen and												1
homologues, applicable in general	3-x	3-x	x	3-x	1-2	x	x	1	3	1	3-x	
arsenic acid	3-x	3-x	1	1	1	1	1	1	1	1	1	1
ascorbic acid (Vitamine C)	2-3	1			1	1	1					
asphalt (pitch)	2	2	2	2	1	2	1	1	2	1	2 to 3	1
ASTM fuel A (Isooctane, free of aromatics)	1	1	x	1	1	3-x		1	1		x	
ASTM fuel B	x	x	x	x	1	3-x		1	x		x	
ASTM fuel C	x	x	x	x	1	3-x		1	x		x	
ATS-brake fluid	x	x	3	1	1	1	1	1			2 to 3	1
avgas, aviation gasoline (kerosene)	1	1-2	x	2	1	3	2	1	2	1	x	1
bacon fat1)	1	1	2	3	1		1	1	x	1	1	
baking soda (sodium bicarbonate, aqu.)	x	2	1	1	1	1	1	1	1	2	1	
barium chloride, aqu.	2	1	1	1	1	1	1	1	1	1	1	1
barium hydroxide	3-x	2	1	1	1	1	1	1	1	1	1	1
barium sulphate (barite)	1	1	1	1	1	1 to 2	1	1	1	1	1	1
barium sulphide	2	2	1	1	1	1	1 to 2	1	1	1	1	1
barm (yeast), aqu.	x	1	1	1	1	1	1	1			1	1
bases (lyes) s. exact designation, applicable in general	x	2	2	1	2	1	1 to 2	1	1 to 2	1	1 to 2	
beer1)	2	1	1	1	1	1	1	1	1	1	1	1
benzaldehyde (oil of bitter almonds, benzoic aldehyde)	3	3	2 to 3	x	2 to 3	3	2	1	x	1	2	1
benzene s.also gasoline	x	x	x	3-x	2-3	3-x	3-x	1	x	1	x	1
benzoic acid, aqu.	x	x	3-x	x	1	1	1	1	x	1	1	1
benzyl alcohol	x	x	1	2 to 3	1	3	3	1	3	1	2	1
benzyl benzoate	x	x	1	1	1			1	x	1	2	
benzyl chloride	x	x	2	x	1	x	2 to 3	1	x	1	x	2
bicarb, bicarbonate of soda (sodium bicarbonate)	x	2	1	1	1	1	1	1	1	2	1	
bio-gas clean	2	3	3-x	2-3	1	2	1	1	2-3	1		
bio-gas (marsh-gas)	ask for detailed advisory and give exact chem. Designation											1
biphenyl (diphenyl)	x	x	x	3	1	x	2	1	x	1	3	2
biphenyls, polychlorinated (pyranols, transformer oils)	2	2	x	x	1	3	3	1	2-3	1	x	3
bis (2-hydroxyethyl)ether	3	3	2	2	1	3	1-2	1	1	1	1	
bismuth carbonate	1	1	1		1	1	1	1	1	1	1	1
bisulphite lye containing SO2					1	1	1	1	1	1	1	1

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bitter-salt (magnesium sulphate)	1	1	1	1	1	1	1	1	1	1	1	1
bitumen 20°C (s. also hot bitumen)	2	2	3	3	1	x	1	1	x	1	2 to 3	1
black lye (cellulose extraction)	x	x	x	1	1			1				
Blanc-fixe (barium sulphate)	1	1	1	1	1	1	1	1	1	1	1	1
bleaching lye (Javelle-lye, potassium hypochlorite)	3	2	2	2 to 3	1	1	3	1	2 to 3	3	1 to 2	3
blood						1	1	1				1
bone oil	1	1	2 to 3	x	1	2		1	x		x	
borax (sodium borate)	1	1	2	2	1	1	1	1	1	2	1	1
boric acid, aqu.	3	1	1	1	1	1	1	1	x	1	1	1
brake fluid, ATS-	x	x	3	1	1	1	1	1			2 to 3	1
brake fluid, gycol-ether-based	x	x								1	1	
brandy, all kinds*¹	2	1	1	1	1	1	1	1	1	1	1	1
brine (table or common salt solution)*¹	3	1	1	1	1	1	1	1	1	1	1	1
bromine	x	x	x	x	1	3	x	1	x	1	3	x
bromine water	x	x	x	2 to 3	1	x	x	1	x	1	3	x
bromobenzene	x	x	x	x	1	x	x	1	x	1	x	1
butadiene	2	1 to 2	x	2	2	3	2 to 3	1	2	1	2	2
butan diols (butylene glycols)	1	1		1	2	3	1	1			1 to 2	1
butane diacid	x	3	3	1	1	1	1	1			1	
butane gas	1	1	3-x	2	1	2	3-x	1	2	1	2	3
butane, liquid	1	1	3	1	1	2	1	1	1	1	2	1
butanol (butyl alcohol)	3	3	2	1	2 to 3	1	1 to 2	1	1	1	1	1
butanone (methyl ethyl ketone MEK)	x	x	x	x	x	x	2	1	3	1	1	1
butine diol	1	1		2	3			1				
butter milk*¹	1	1	1	1	1	1	1	1	2 to 3	1	1	1
butter*¹	1	2	2	2	1	2	1	1	2	1	2	1
butyl acetate (acetic acid butyl ester)	x	x	3	3	x	x	3-x	1	x	1	2	1
butyl benzoate	1	1	x	x	1			1	x	1	2	
butyl carbitol	x	x	2 to 3	2	1			1	3	1	2	
butyl ether	x	3	3		x	1	1	1	2 to 3	1	2	
butyl glycol	3	3	2		1	x	1	1	x	1	2	1
butyl oleate	x	x	1	x	1			1	x	1	2	
butyl phenols	x	x		x	3	x	1 to 2	1				1
butyl stearate	1	1	1	2 to 3	1	1	x	1	x	1	2	x
butylamine	2 to 3	2 to 3	2 to 3	x	x	x	3	1	3	1	1	3
butylene, liquid (butene)	2 to 3	2 to 3	2 to 3	3	1	1	x	1	x	1	1	2
butyraldehyde	x	x	3	3	x		1	1	3	1	1	1
butyric acid, aqu.*¹	x	x	3	2 to 3	2	2	x	1	x	1	1	1
calcinated soda (sodium carbonate anhydrous)	2	2	1	1	1	1	1	1	1	2	1	
calcium acetate	2	2	2	2	x		1	1	2	1	1	1
calcium bisulfate, aqu.	3	1	3	1	1	1	1	1	1	1	1	1
calcium bisulfite, aqu.	3	2	1	1	1	2	1	1	1	1	1	1
calcium carbonate	1	1	1	1	1	1	1	1	1	1	1	1
calcium chloride, aqu.	3	1	1	1	1	1	1	1	1	1	1	1
calcium hydroxide, aqu. (slaked lime)	3	2	1	1	1	2	1	1	1	1	1	1
calcium hypochlorite, aqu.	x	x	2 to 3	1 to 2	1	1	1	1	3	1	1 to 2	1
calcium nitrate	1	1	2	1	1	1	1	1	1	1	1	1
calcium oxide = calcinated lime	1	1	1	1	1	1	1	1	1	1	1	1
calcium phosphate, aqu.	2	2	1	1	1		1	1			1	1
calcium sulfate (gypsum), aqu.	3	1	1	1	1	1 to 2	1 bis 2	1	2	1	1	1
calcium sulfide	2	1	2	1	1			1	1	1	1	
camphor (camphor oil)	x	x		3-x	3-x		3	1				1
cane sugar (sugar), aqu.	3	1	1	1	1	1	1	1	1	1	1	
carbamide, urea, aqu.	x	x	x	1	1	2	1	1			1	
carbitol (diethylene glycol monoethyl ether)	x	x	2	2	2	3	1	1	3	1	1	
carbolic acid (phenol)	3-x	3-x	3	2 to 3	1	x	x	1	3	1	2 to 3	1
carbolineum, aqu.	x	x	x	1	1	3	1	1	1	1		
carbon bisulfide	3	2	x	x	1	2 to 3	x	1	x	1	2	

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carbon dioxide solid (dried ice -80°C) resistant, but elstomers and plastomers become stiff to brittle												1
carbon dioxide, gaseous, wet and dry	1	1	1	1	1	1	1	1	1	1	1	1
carbon monoxide	1	1	1	2 to 3	1	1	1	1	2	1	1	
carbon tetrachloride (tetrachloromethan)	x	3	x	x	1	x	x	1	x	1	x	
carbonic acid s. carbon dioxide												
Caro`s acid (peroxymonosulphuric acid)				2-3		1	x		x	1		x
castor oil, ricinus oil*¹	1	1	1	1	1		2 to 3	1	2	1		1
caustic lime (calcium oxide)	1	1	1	1	1	1	1	1	1	1	1	
caustic potash s. potassium hydroxide												
caustic soda s. sodium hydroxide												
cellulose acetate (acetyl cellulose)	2	1	1				1	1	1	1	1	1
cellulube (hydraulic oil, phosphate ester based)	x	x	2 to3	x	1	x	x	1	x	1	1	
ceolithe	x	x	1	x	1			1	1		1	
chile salpetre (sodium nitrate)	2	1	3	1	1	1	1	1	2	1	1	1
china wood oil (wood oil)	3	2	3	3	1	3	2	1	x	1	2	2
chloral hydrat (trichloroaldehyde hydrat)	x	x		2	3	x	1	1	2	2		
chloramine	2	2		1	1						1	
chloric acid, aqu.				1	x	1	1	1	1	1	1	1
chlorinated hydrocarbons s. specific designations,												x
applicable in general	x	x	x	x	2	x	x	1	x	1	x	
chlorinated lime (calcium hypochlorite)	x	x	2 to 3	1 to 2	1	1	1	1	3	1	1 to 2	1
chlorinated water 3%	x	3	2 to 3	3	1	1	2	1	x	1	1 to 2	2
chlorine dioxid	x	x	3	1	1	2 to 3	x	1	1	1		x
chlorine, dry	x	x	x	2-3	1	3-x	x	1	3-x	1	2-3	x
chlorine, wet	x	x	x	2-3	1	x	x	1	x	1	2-3	x
chloroacetic acid (monochloroacetic acid)	x	x	x	2	x	2	x	1	3	1	2	1
chlorobenzene (monochlor benzene)	x	x	x	x	1	x	3	1	x	1	x	1
chlorobiphenyl (clophen)	x	x	2	x	1	x	1	1	x	1	3	
chlorobromomethan	x	3	x	x	1	x	2	1	x	1	3	2
chlorocalcium (calcium chloride)	3	1	1	1	1	1	1	1	1	1	1	1
chloroethanol (ethylen chlorhydrine)	x	x	x	2	x	x	3	1	x	x	2	
chloroethyl (ethyl chloride)	x	x	x	x	1-2	3-x	3-x	1	3	1	2-3	1
chloroform (trichloromethane)	x	x	x	x	1	x	x	1	x	1	x	3
chloromethane (methyl chloride)	x	x	x	x	2	x	3	1	x	1	2	3
chloroprene (chlorinated butadiene)	x	x	x	2	1	x	3	1	x	1	3	3
chlorosulfonic acid	x	x	x	x	x	x	x	1	x	1	1 to 2	
chlorothene (trichloroethane)	x	x	x	x	1	3	x	1	x	1	2	
chromic acid 10%	x	3	3	2 to 3	2	1	3	1	3	1	1	3
chromic acid 25%	x	x	x	2 to 3	1	2	x	1	x	1	1	x
chromic acid 50%	x	x	x	2 to 3	1	x	x	1	x	1	2	x
chromium trioxid s. chromic acid												
citric acid aqu.*¹	3	1	1	1	1	1	1	1	1	1	1	
clophen (chlorobiphenyl)	x	x	2	x	1	x	1	1	x	1	3	
coal tar (s. also hot tar, creosote)	3	3	x	x	1	2 to 3	2 to 3	1	3	1	2	
coconut grease and oil*¹	2	2	1	3	1	1	1	1	2	1	2	1
cod-liver oil*¹	1	1	2	2	1	1	1	1	2	1	2	1
common salt (sodium chloride)	3	2	1	1	1	1	1	1	1	3	1	1
compressed air, oil-saturated, to +°C	85	80	175	120	200	70	90	200		200	125	
copper acetate	x	x	x	2	x		1	1	2	1		1
copper chloride, aqu.	3	1	1	2	1	1	1	1	2	1	1*	1
copper cyanide	3	1	1	1	1	1	1	1	1	1	1*	1
copper fluoride	x	x	3	1	1		1	1			1	1
copper hydroxid	1	1	1				1	1		1	1*	1
copper nitrate, aqu.	x	3	1	1	1	2	2	1	1	1	1*	1
copper sulphate, aqu. (blue vitriol)	2	1	1	2	1	1	1	1	1	1	1*	1
corn oil*¹	1	1	1	2	2	2	1	1	2	1	2 to 3	

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corn sugar (glucose, dextrose, grape sugar)*¹	2	1	1	1	1	1	1	1	1	1	1	
cottonseed oil*¹	1	1	1 to2	1 to 2	1	1 to 2	1	1	2 to 3	1	2	1
cow suet	1	1	3	1 to 2	1	2	2 to 3	1	3	1	2	
creosote	3	3	x	x	1	2-3	2-3	1	3	1	2	2
cresols, cresylic acids	x	x	x	x	1	x	2 to 3	1	3	1	2	2
crotonaldehyde (2-butenal)	3-x	2 to 3		1	1	x	1	1	1		1	1
crude oil, high aromatic	2	2	x	2	1	3	3	1	3	1		
cumene (isopropylbenzene)	3	3-x	x	x	1	x	x	1	x	1	x	x
cupric hydroxide (mountain blue)	1	1	1				1	1		1	1*	1
cyankali (potassium cyanide)	3	2	1	1	2	1	1	1	1 to 2	3	1	1
cyclohexane (hexahydrobenzene)	2	2	x	x	1	x	2	1	x	1	3-x	1
cyclohexanol (hexaline)	3	x	2 to 3	1 to 2	1	x	1	1	2	1	2	1
cyclohexanone	3	x	x	x	x	x	2 to 3	1	x	1	2 to 3	1
cyclohexylamine	x	x	x	3-x	x	1		1			x	
decalin (decahydronaphthalene)	1	1	x	x	1	1	2	1	x	1	x	
detergents, synth. 20°C	3	2	1	1	1	1	1	1	2	1	1	
dextrose (glucose, corn sugar, grape sugar)*¹	2	1	1	1	1	1	1	1	1	1	1	1
diacetone alcohol	3	2	2	2	x	x	1	1	3	1	1	1
dibenzyl ether	2 to 3	2 to 3	2	x	1	x		1	x	1	3	
dibutyl amine	x	x	3	x	x		x	1	x	1	2	x
dibutyl phthalate	x	3	2	3-x	2	3	2	1	x	1	2	
dibutyl sebacate	x	x	2	x	2	3	1	1	x	1	2	1
dichlorobenzene	x	x	x	x	2 to 3	x	3	1	x	1	3	1
dichloroethane	x	x	x	x	2-3	x	2-3	1	x		3	1
dichloroethylene (dichloroethene)	x	x	x	x	2	x	x	1	x	1	3	x
dichloro-isopropyl ether	2	2	x	x	3		3	1	x	1	2	x
dichloromethane (methylen chloride)	x	x	x	x	2	x	x	1	x	1	3	3
diesel oil	1	2	3	3	1	3	2	1	x	1	3	1
diethanolamine			2 to 3				1	1		1	2	1
diethyl ether (ether)	2	2	x	3-x	3-x	3	x	1	3	1	2	1
diethyl sebacate			2	x	2			1	x	1	2	1
diethylamine	x	3	2	3	2	x	3-x	1	2	1	1	1
diethylbenzene	x	x	x	x	1	1	x	1	x	1	x	1
diethylene glycol monoethyl ether (carbitol)	x	x	2	2	2	3	1	1	3	1	1	1
diethylene glycol (diglycol)	3	3	2	2	1	3	1 to 2	1	1	1	1	1
diglycolic acid, aqu.	x	x	3	2	1	2	1	1			1	1
dilutions for paints and lacqers determine composition												
dimethyl ether (methyl ether)	2	2		3	3	x	2	1	x	1	1	2
dimethyl formamide (DMF)	x	3	2 to 3	3	3	x	1	1	x	1	1	1
dimethyl heptanone (diisobutyl keton)	x	x			x			1				
dimethyl phthalate	3	3	3	x	2	3		1	x	1	2	
dimethyl sulfoxide (DMSO)	x	x	x		x	x	2	1	2-3		1	
dimethylamine			2	x	x	x	3	1	x	1	1	3
dimethylaniline (xylidine)	x	x	2 to 3	3	1	x		1	x	1	2	x
dioctyl phthalate (DOP)	2 to 3	2 to 3	3	x	1 to 2	3	2	1	x	1	2	1
dioctyl sebacate	2	2	3	x	2			1	x	1	2	1
dioxane (diethylene dioxid)	x	x	x	x	x	x	1	1	x	1	2	1
dipentene (limonene)	x	x	x	3	1			1	2		x	
diphenyl	x	x	x	3	1	x	2	1	x	1	3	2
diphenyl oxid (diphenyl ether)	x	x	2	x	2 to 3	x	2 to 3	1	x	1	2	1
dipropylene glycol			2	1	1		1	1	1	1	1	1
dodecyl alcohol (lauryl alcohol)			2 to 3		1		2	1	1	1	3	1
DOWTHERM A (glycole)	x	3-x	x	2 bis 3				1	2 to 3		x	
drilling oil: determine chem. composition												
Eau de Javelle (potassium hypochlorite)	3	2	2	2 to 3	1	1	3	1	2 bis 3	3	1 bis 2	
epichlorohydrin, liquid	x	x	x	x	x	x	1	1	x	1	1	1
epsom salt (magnesium sulphate)	1	1	1	1	1	1	1	1	1	1	1	1

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	PUR-Ester	PUR-Ether	Silicone	Hypalon®	Viton®	PVC	PE	PTFE	Neopren®	Kapton®	TPV	PE-EL
esters s. specific designations, applicable in general	2	2	x	3-x	3-x	2-3	2-3	1	2	1	2	
ethane (gas)	2	2	3	2 to 3	1	1	1	1	2	1	2	
ethanol (ethyl alcohol)	2	2	2	1	1	2-3	1-2	1	1	1	1	1
ethanolamine (2-aminoethanol)	x	x	2 to 3	2 to 3	3	3	1	1	2 to 3	1		
ethene (ethylene)	1	1	2	x	1	1	1	1	2 to 3	1	2	1
ethers s. specific designations, applicable in general	2	2	x	3-x	3-x	2-3	2-3	1	2	1	2	
ether (ethyl ether, diethyl ether)	2	2	x	3-x	3-x	3	x	1	3	1	2	1
etheric oils1)	2	2	x	3	1	x	x	1	x	1	2	1
ethyl acetate	x	x	2	x	x	x	2	1	3	1	1	1
ethyl acrylate (acryl acid ethyl ester)	x	x	2	1	x	x	x	1	x	1	1	1
ethyl alcohol (denatured = spirits)*¹	2	2	2	1	2 to 3	1 to 3	1	1	1	1	1	1
ethyl benzene	x	x	x	x	2	x	x	1	x	1	x	1
ethyl bromide (bromomethane)	2	2	x	x	1	x	2	1	x	1	2 to 3	2
ethyl chloride (chloroethane)	x	x	x	x	1 to 2	3-x	x	1	3	1	2 to 3	1
ethyl dichloride (dichloroethylene)	x	x	x	x	2	x	x	1	x	1	3	x
ethyl ether (ether)	2	2	x	3-x	3-x	3	x	1	3	1	2	1
ethyl glycol acetate	x	x			x		1	1		1	2	
ethyl mercaptan	x	x	3	2	x			1	x	1	2	
ethylene chloride (dichloroethylene)	x	x	x	x	2	x	x	1	x	1	3	1
ethylene chlorhydrine (chloroethanol)	x	x	x	2	x	x	3	1	x	x	2	1
ethylene diamine	x	x	2	2	2	x	1	1	2	1	1	1
ethylene (gas) (ethene)	1	1	2	x	1	1	1	1	2 to 3	1	2	1
ethylene glycol (glycol, ethane-1,2-diol)	2 to 3	2 to 3	1	1	1	1	1	1	1	1	1	1
ethylene oxid (1,2-epoxy methane), liquid	x	x	3-x	x	x	x	2 to 3	1	x	1	1	2
fats in general s. oils and greases	x	x	x	x	x	x	1-2	1	x	1		
fatty acids, with >7 C-atoms, in general	2	1	3	2 to 3	1	1	3	1	3	1	2	2
fatty acids, with 1-7 C-atoms, in general	3-x	2 to 3	3	2 to 3	1	1	3	1	3	1	2	2
fatty alcohols (longchain, aliphatic alcohols)	3	2	2	2	2	2	1	1			3	1
fermented fruit juice*¹	3	1	1	1	1	1	1	1	1	1	1	1
ferric chloride (ferri), aqu.	2 to 3	2	2	2	1	1	1	1	1	1	1	1
ferric sulphate, ferric vitriol, aqu.	2 to 3	2	2	1	1	1	1	1	1	1	2	1
fertilizing salt, aqu.	x	3		1	1	1	1	1			1	1
fish-liver oil*¹	2	2	1	3	1	2	1	1	1		2	1
fluohydric acid s. hydroflouric acid												
fluorine, liquid	x	x	x		2	2 to 3	x	1	x	1	x	1
fluorobenzene	x	x	x	x	1			1	x	1	x	
fluoroboric acid 65%		x	x	1 to 2	2	1	1	1	2	1	x	1
fluorosilicic acid, aqu.	x	x	2 to 3	1 to 2	1	2 to 3	2	1	2	1	1	
formaldehyd (methanal)	2 to 3	2 to 3	1 to 2	1 to 2	2 to 3	2	1	1	2	1	1	1
formaline (30-40% aqu. formaldehyd solution												
with 8 -12 % methyl alcohol additive)	3	2	2	2	1	1	1	1	2	1	1	
formamide	x	x		1	2 to 3	x	1	1			1	1
formic acid:												
0,03	2	1	1	1	2	1	1	1	1		1	1
0,1	3	2	2	1 to 2	3	1 to 2	1	1	1		2	1
1	x	x	x	x	x	2 to 3	1	1	1	2-x		1
Freons and Frigenes ask for detailed advisory												
frost protection agents s. exact chem. designation												
fruit juices*¹	3	1	1	1	1	1	1	1	1	1	1	1
fruit pulp*¹	3	1	1	1	1	1	1	1	1	1	1	1
fuel s. gasoline												
fuming sulphuric acid: (oleum)	x	x	x	x	1	x	x	1	x	1	x	x
fungi (microbes)	x	1	3	1	1	1	2 to 3	1			2 to 3	2
furan	x	x	x	x	x	1	x	1	x	x		x
furfural alcohol (furfurol)	x	x	2	3	3	1	x	1	3	x	2	1
gallic acid	3	3	2 to 3	2	1	1 to 2	1	1 to 2	2 to 3	1	2	
gasoline in general (s. specific designations)	1-2	1-2	3-x	2-x	1	3-x		1	1-2		x	1

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Chemical Resistance

1 = excellent resistance
2 = good resistance
3 = medium resistance
x = none-resistant

	PUR-Ester	PUR-Ether	Silicone	Hypa-lon®	Viton®	PVC	PE	PTFE	Neopren®	Kapton®	TPV	PE-EL
gasoline, lead-free	1	1	x	2-3	1	2-3	1	1	2-3		2-3	
gasoline, super	2-3	2-3	x	2-3	1	1	1	1	2-3		2-3	
gasoline, ASTM fuel A (Isoctan, free of aromatics)	1	1	x	1	1	3-x		1	1		x	
gasoline, ASTM fuel B	x	x	x	x	1	3-x		1	x		x	
gasoline, ASTM fuel C	x	x	x	x	1	3-x		1	x		x	
gasoline, diesel, heating oil	1	1	3	2	1	3-x	2	1	x	1	x	1
gasoline, aviation (kerosene)	1	1 to 2	x	2	1	3	2	1	2	1	x	1
gasoline, high aromatic	3	2 to 3	x	2 to 3	1	2 to 3	2 bis 3	2	1	1	x	
gasoline, low aromatic	2	2	x	x	1	3	x	1	1	1	x	
gasoline, test- (heavy g., white spirit,												
mineral turpentine)	1-2	1-2	x	x	1	3	1-2	1			x	
gasoline/benzene (50/50)	3	3	x	x	2	3		1			x	
gasoline/benzene (60/40)	2	2	x	x	2	3		1			x	
gasoline/benzene (70/30)	2	2	3	x	1	3		1			x	
gasoline/benzene (80/20)	2	3	3	x	1	3	3	1			x	3
gasoline/benzene/ethanol (50/30/20)	3	3	x	3-x	x	3		1			3-x	
gelatins, aqu.1)	3	1	1	1	1	1	1	1	1	1	1	1
glacial acetic acid (acetic acid pure)	x	x	2 to 3	3	x	x	x	1	x	1	1	1
Glauber's salt (sodium sulphate)	3	1	1	1	1	1	1	1	1	1	1	1
glucose (dextrose, corn sugar, grape sugar)*¹	2	1	1	1	1	1	1	1	1	1	1	1
glue, animal	2	2	1	1	1	1	1	1	1	1	1	
glycerine (glycerine, propane-1,2,3-triol)	1	1	1	1	1	1	1	1	1	1	1	1
glycine (amino acetic acid), aqu. 10%	x	x	2 to 3	2 to 3	1	1		1			1	
glycols determine exact designation, applicable												
in general	2	2	1-2	1	1	2	1	1	2	1	1	
glycolic acid (hydroxy acetic acid), 30%	x	3-x	1	1	1	1	1	1			1	1
grape juice unfermented*¹	3	1	1	1	1	1	1	1	1	1	1	1
grape sugar (glucose, corn sugar, dextrose)*¹	2	1	1	1	1	1	1	1	1	1	1	1
greases in general, s. oils and greases	x	x	x	x	x	x	1-2	1	x	1		
gypsum (calcium sulphate)	3	1	1	1	1	1 to 2	1 bis 2	1	2	1	1	
halogenes (look at: fluorine, chlorine, bromine, iodine)												
halogenatated hydrocarbons s. spec. design. applicable in general	x	x	x	x	1-2	x	x	1	x	1	3	
heavy gasoline (white spirit or mineral turpentine)	1 to 2	1 to 2	x	x	1	3	1 to 2	1			x	
helium	1	1	1	1	1	1	1	1	1	1	1	1
heptane	2	2	x	2	1	2 to 3	2 to 3	1	2 to 3	1	x	1
hexahydrobenzene (cyclohexane)	2	2	x	x	1	x	2	1	x	1	3-x	
hexaldehyde	2	3	3	2	x		1	1	2	1	2	1
hexaline (cyclohexanol)	3	x	2 to 3	1 to 2	1	x	1	1	2	1	2	
hexane (n-hexane)	2	2	x	1 to 2	1	1 to 2	3	1	1 to 2	1	x	1
hexanol (hexyl alcohol)	3	x	2 to 3	2	2	2	1	1	1	1	2	1
hexane-triol	x	x	1	1	1	1	1	1			1	
hexene	1	1	x	3	1		1	1	2			1
hot air s. air												
hot bitumen to °C	x	x	x	x	180	x	x	200	x	200	x	
hydraulic oils and -liquids:												
-glycol based	1	1 to 2	2					1		1	1	1
-mineral oil based	1	1	3	2	1	3	3	1	2	1	3	3
-phosphate ester based (pydraul)	x	x	2 to 3	x	1	x	x	1	x	1	1	1
hydrazines (diamides)	x	x	3	2	2 to 3	1	1	1	2 to 3	1	1	1
hydrazine hydrate, aqu.	x	x	3	1	1	1	1	1	2	1	1	1
hydrobromic acid	x	3	3	1	1	2 to 3	1 bis 2	1	1	1	1	1
hydrocarbons aliphatic general (s.a. spec. desig-nation.)	1-2	2	3-x	3	1	2-3	3-x	1	3	1	2-x	
hydrocarbons aromatic general (s.a. spec. desig-nation.)	3-x	3-x	x	3-x	1-2	x	x	1	3	1	3-x	

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	PUR-Ester	PUR-Ether	Silicone	Hypalon®	Viton®	PVC	PE	PTFE	Neopren®	Kapton®	TPV	PE-EL
hydrocarbons halogenated general (s.a. spec. designation.)	x	x	x	x	1-2	x	x	1	x	1	3	
hydrochloric acid 15%	3	2	3	1 to 2	1	1	1	1	3	1	1	
hydrochloric acid 38% (conc.)	x	x	3	1 to 2	1	2	1 to 2	1	3	1	1	
hydrochloric acid, (hydrochlorous) gaseous	3	2	1	1 to 2	1	1	1	1	2	1	1	
hydrocyanic acid s. prussic acid												1
hydrofluoric acid 10%	x	2	2 to 3	1	1 to 2	1 to 2	1 to 2	1	2	1	1	1
hydrofluoric acid 30%	x	2	3	1 to 2	1 to 2	2	1 to 2	1	3	1	2	1
hydrofluoric acid 75%	x	3	x	2	2	3	3	1	x	1	3	x
hydrofluoricsilicic acid, aqu.	x	x	2 to 3	1 to 2	2 to 3	2 to 3	2	1	2	1	1	
hydrogen (gaseous)	1	1	3	1	1	1	1	1	1	1	1	1
hydrogen cyanide s. prussic acid												1
hydrogen peroxide 10%	x	2	1	2	1 to 2	1	2	1	x	1	1 to 2	1
hydrogen peroxide 30%	x	2	1 to 2	2	1	2	2 to 3	1	x	1	2 to 3	1
hydrogen sulphide, dry	x	3	2 to 3	1 to 2	1	x	1	1	2 to 3	1	1	1
hydrogen sulfide, wet	x	3-x	1	1 to 2	1	x	1	1	2 to 3	1	1	1
hydroquinone, aqu.	x	x	3	2 to 3	2	2	1	1	3		3	1
hydroxylamine sulphate, aqu.	x	x	1	1	1	1		1			1	
ink	1	1	1	1	1	3	1	1			1	1
iodine tincture (5-10% alcohol iodine solution)	x	x	x	2	1	2 to 3	2 bis 3	1	3	1	1	2
isobutanol (isobutyl alcohol)	3	x	1	1	1	1	1	1	1	1	2	1
isooctane	2	2	3	2	1	1	3	1	3	1	x	1
isooctanol (isooctyl alcohol)	3	3	2	2	1	1	1	1	3	1	2	1
isophoron	3-x	3-x	3-x	x	x			1	x	1	3	
isopropanol (isopropyl alcohol)	2	3	1	1	1	2	1	1	2	1	1	1
isopropyl acetate	3	3	3	x	x	3	2 to 3	1	x	1	1	1
isopropyl benzene (cumen)	3	3-x	x	x	1	x	x	1	x	1	x	x
isopropyl chloride	3	3	x	x	1			1	x	1	2	
isopropyl ether	2	2	x	3	3	2 to 3	2 bis 3	1	x	1	2	1
Javelle lye (potassium hypochlorite)	3	2	2	2 to 3	1	1	3	1	2 to 3	3	1 to 2	n.a.
jet fuel DP1-IPS			x	x	1	2 to 3	x	1	2 to 3	1		
kerosene	2	1	3	2 to 3	1	1	3	1	2	1	x	1
ketones s. specific designations, applicable in general	3-x	x	2-x	x	x	x	2-3	1	3-x	1	2-3	1
lacquers, composition must always be determined												
lactic acid*[1]	x	2	2	2	1	3	2	1	3	1		1
lanolin (wool grease)	1	1	3	3	1	2	1 to 2	1	3	1	2	1
lard (oils, animal)	1	1	3	1 to 2	1	2	2 to 3	1	3	1	2	1
laughing-gas (nitrous oxide)	1	1	1	1	1	1	1	1	1	1	1	1
lauryl alcohol (dodecyl alcohol)			2 to 3		1		2	1	1	1	3	
lavender oil*[1]	x	x	x	2 to 3	1			1	2 to 3			
lead acetate, aqu.	3	1	1	1	1	1	1	1	2	1	1	1
lead arsenate, aqu.	3	1	1			1	1	1	1	1	1	1
lead nitrate	2	1	2	1	1	1	1	1	1	1	1	1
lead sulfate	1	1	1	1	1	1	1	1	1	1	1	1
lignite tar oil (s.a. coal tar)	3	3	x	x	1	2 to 3	2 to 3	1	3	1	2	2
lime, quick (calcium oxide)	1	1	1	1	1	1	1	1	1	1	1	
lime, slaked (calcium hydroxide)	3	2	1	1	1	2	1	1	1	1	1	
limestone (calcium carbonate)	1	1	1	1	1	1	1	1	1	1	1	
limonene 90% (citric oil)	2	2	x			x	2-3	1			2	
linseed oil*[1]	1	2	1	2	1	2	2	1	2	1	2 to 3	1
liquiefied petroleum gases (LPG) s. chem. identification of the gases												
lithium chloride, aqu.	x	x	1	1	1	x	1	1	1		1	1
lubricants and greases s. mineral oils, attend additives												
lyes s. exact designation, applicable in general	2-x	2	1-2	1-2	2	1-2	1-2	1	2	2	1	1

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	PUR-Ester	PUR-Ether	Silicone	Hypalon®	Viton®	PVC	PE	PTFE	Neopren®	Kapton®	TPV	PE-EL
machine oil, s. oils, mineral												
magnesium chloride, aqu.	3	1	1	1 to 2	1	1 to 2	1	1	1 to 2	1	1	1
magnesium hydroxide	3	1	1	1	1	1	1	1	1	1	1	1
magnesium silicate (talc)	1	1	1	1	1	1	1	1	1	1	1	1
magnesium sulfates	1	1	1	1	1	1	1	1	1	1	1	1
magnesium sulfite, aqu.	3	1	1	1	1	1	1	1	1	1	1	1
maize oil1)	2	2	2	1	1	2	2	1	1			1
maleic acid, aqu.	x	x		x	1	1	2	1	3-x	1	1	1
maleic anhydride				x	3				x		2	
manure	x	1	1	1	1	1	1	1	1	1	1	
margarine-greases and oils*¹	1	1	3	1 to 2	1	2	37714	1	2	1	2	1
marsh gas (mine damp, methane)	2	3	3-x	2-3	1	1-2	1	1	2-3	1	2	1
mash*¹	3	1	1	1	1	1	1	1	1	1	1	1
MEK (methyl ethyl ketone)	x	x	x	x	x	x	2	1	3	1	1	1
melamine			3		1	x		1	x			
menthol	3	3	x	1	1		1	1			1 to 2	1
mercury	1	1	1	1	1	2	1	1	1 to 2	1	1	1
mercuric chloride (sublimate)	1	1	1	1 to 2	1	2	1	1	1 bis 2	1	1	1
mercurious nitrate	2	1	1		1	1	1	1		1	1	1
mesityl oxide	x	x	x	x	x	x	3	1	x	1	3	3
methane (gas)	2	3	3-x	2 to 3	1	1 to 2	1	1	2 to 3	1	2	1
methanol (methyl alcohol)	2	3	1	1	2	1	1	1	1	1	1	1
methyl acetate (acetic acid methyl ester)	x	x	x	x	x	x	2	1	2	1	1	1
methyl acrylate	x	x	x	x	x	x		1	2			
methyl alcohol	2	3	1	1	2	1	1	1	1	1	1	1
methyl bromid (bromomethane)	x	x	x	3	2	x	3	1	x		x	3
methyl chloride (chloromethane)	x	x	x	x	2	x	3	1	x	1	2	3
methyl chloroform (trichloroethane)	x	x	x	x	1	3	x	1	x	1	2	1
methyl ethyl ketone (MEK)	x	x	x	x	x	x	2	1	3	1	1	1
methyl glycol (methylcellosolve)	x	x	x	3	x	x	2	1	2 to 3	1	1	
methyl glycol acetate	x	x	x		x			1	x	1	1	
methyl isobutyl keton	x	x	3	x	x	x	2 to 3	1	x	1	2	2
methyl oxiran (propylene oxide)	x	x	x	x	x		2	1	x	1	1	
methyl phthalate (dimethyl phthalate)				x	2			1	x	1	2	
methylamine, aqu.	x	x	x	1	2 to 3	3	1	1	2	1	1	1
methylated spirits (ethanol denaturated)	2	2	2	1	1	2-3	1-2	1	1	1	1	
methylen chloride (dichloromethane)	x	x	x	x	2	x	x	1	x	1	3	3
microbes	x	1	3	1	1	1	2 to 3	1			2 to 3	2
milk of lime (lime water) s. calcium hydroxide,												1
aqu.milk*¹	3	2	1	1	1	1	1	1	1	1	1	1
mineral oil s. oils, mineral												
mixed acid II (sulphuric acid/phosphoric acid/ water)	x	x		1	1	1	3	1	2	1	2	1
mixed acid I (sulphuric acid/nitric acid/water)	x	x	x	x	x	x	x	1	1 to 2	1	3	1
molasses*¹	1	1	1	1	1	1	1	1	1	1	1	1
monochloroacetic acid	x	x	x	2	x	2	x	1	3	1	2	1
monochlorobenzene	x	x	x	x	1	x	3	1	x	1	x	
monochloromethane (methyl chloride)	x	x	x	x	2	x	3	1	x	1	2	
mono ethylene glycol	1											
monostyrol (styrol, styren, monomeric)	x	3	x	x	2	x	x	1	x	1	x	
morpholine	x	x	x	2	2	x	1	1	3		1	1
motor oil s. oil and greases, clarify mineral additives												
mountain blue (cupric hydroxide)	1	1	1				1	1		1	1*	1
must fermented (fermented fruit juice)	3	1	1	1	1	1	1	1	1	1	1	
must, unfermented*¹	3	1	1	1	1	1	1	1	1	1	1	1
mustard	1	1		1	x	1 to 2	1	1	1			1
myristyl alcohol, myristic alcohol (tetradecanol)	1	1	2	1	1	1		1	1	1	2	

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	PUR-Ester	PUR-Ether	Silicone	Hypa-lon®	Viton®	PVC	PE	PTFE	Neopren®	Kapton®	TPV	PE-EL
naphtha	2	2	3	x	1	2 to 3	2 to 3	1	3	1	3-x	1
naphthalene (stone oil)	2	2	3	2-3	1	x	x	1	x	1		1
natron (sodium bicarbonate)	x	2	1	1	1	1	1	1	1	2	1	
natural gas, wet	2	1-2	2-3	1	1	1	2	1	1	1	2	1
natural gas, dry	1	1	2-3	1	1	1	1	1	1	1	2	1
n-hexane	2	2	x	1 to 2	1	1 to 2	3	1	1 to 2	1	x	
nickel acetate	3	2	2	x	x		1	1	2		2	1
nickel chloride, aqu.	3	2	1 to2	1 to 2	1	1	1	1	2	1	2	1
nickel sulphate, aqu.	2 to 3	2	1	1	1	1	1	1	1	1	1	1
nitratine (nitrate of sodium)	2	1	3	1	1	1	1	1	2	1	1	1
nitrating acid (mixed acid I)	x	x	x	x	x	x	x	1	x	1	3	
nitric acid 10%	3	3	3	1 to 2	1	1	2	1	2	1	1	1
nitric acid 25%	x	x	x	2	1 to 2	1	2 to 3	1	3	1	1	1
nitric acid 50% (aqua fortis)	x	x	x	3	1 to 2	2 to 3	2 to 3	1	x	1	1 to 2	2
nitric acid 60%	x	x	x	3-x	2	2 to 3	x	1	x	1	3-x	
nitric dilution	2	2	x	1		x	2 to 3	1	1		2 to 3	
nitro-benzene	x	x	x	x	2	x	3	1	x	1	1	1
nitrogen	1	1	1	1	1	1	1	1	1	1	1	1
nitrogen oxides (nitrouse gases)	x	x	x	3	3	x	1	1	x		x	1
nitro-glycerin	x	x	x	1	1	2	2	1			x	1
nitrohydrochloric acid (aqua regia)	x	x	3	3	2	2 to 3	2	1	3	1	3	
nitro-methane	x	x	x	2 to 3	x	2 to 3	1	1	3			1
nitro-propane	x	x	x	x	x			1	x	1	1	
nitro-toluole	x	x		x	3	x	1	1	x	1	x	
nitrous fumes (nitrogen oxides)	x	x	x	3	3	x	1	1	x		x	1
nitrous oxide (laughing gas)	1	1	1	1	1	1	1	1	1	1	1	
N-methylpyrrolidone (NMP)	3	3			3	3		1				
nonyl alcohol (nonanol)	x	x	2	2	1		2	1	3	1	2	1
octane	1	1	x	x	1		1	1	x	1	x	1
octanol = octyl alcohol	x	x	2	1	1	x	1	1	1	1	2	1
oils and greases												
-animal1)	1	1	3	1 to 2	1	2	2 to 3	1	3	1	2	1
-ASTM-oil Nr. 1 20°C	1	1	2	1	1	2	2	1	1	1	3	
-ASTM-oil Nr. 2 20°C	1	2	3	2	2	2	3	1	1	1	x	
-ASTM-oil Nr. 3	3	3	x	2 to 3	1			1	1		x	
-ASTM-oil Nr. 3 20°C	1	2	3	2	2	2	3	1	x	1	x	
-crude oil, high aromatic	2	2	x	2	1	3	3	1	3	1		
-diesel oil	2	2	3	3	1	3	2	1	x	1	3	
-heating oil	2	2	3	3	1	3	2	1	x	1	3	
-hydraulic oils and -liquids:												
-glycol based	1	1 to 2	2					1		1	1	
-mineral oil based	1	1	3	2	1	3	3	1	2	1	3	
-phosphate ester based (pydraul)	x	x	2 to 3	x	1	x	x	1	x	1	1	
-mineral, without additives, at 20°C	1	1	2 to 3	2 to 3	1	2	2	1	x	1	2 to 3	
-mineral, without additives, to °C	65	60	x	150	200	x	30	200		200	100	
-silicon based	1	1	2 bis 3	1	1	1	1	1	2 to 3	1	1	
-transformer oils (pyranols)	2	2	x	x	1	3	3	1	2 to 3	1	x	
-vegetable)1)	1-2	1-2	2-3	2	1	2	2-3	1	2-3	1	2	
oil of bitter almonds (benzaldehyde)	3	3	2 to 3	x	2 to 3	3	2	1	x	1	2	1
oleic acid, olein	1	1	x	3-x	2	2	2 to 3	1	x	1	2	
oleum (fuming sulfuric acid)	x	x	x	x	1	x	x	1	x	1	x	x
oleum vapours	x	x	x	3	3	3	x	1	x	1	x	x
olive oil1)	1	1	2	1 to2	1	1	1	1	2	1	2	1
oxalic acid, aqu.	x	x	2	2	1	2	1	1	3	1	1	1
oxidant s. specific designations, applicable in general	2-3	2-3	2-3	2	1	2	2-3	1	3	1	1	
oxirane (ethylene oxide)	x	x	3-x	x	x	x	2 to 3	1	x	1	1	2
oxygen pure to +°C	80	80	175	120	200	70	70	200		200	100	

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	PUR-Ester	PUR-Ether	Silicone	Hypalon®	Viton®	PVC	PE	PTFE	Neopren®	Kapton®	TPV	PE-EL
ozone atmospherical concentrations)	1-2	2-3	1	1	1	2	3	1	2-3	1	1	x
ozone 100%	3	3-x	1	2-3	1	3	x	1	x	1	2	x
palm oil, palm pip oil*1	1	2	1	3	1	1 to 2	1 to 2	1	x	1	2	1
palmitic acid	1	1	3	3	2	2	1	1	3	1	1	1
paraffin, paraffin oils	1	2	2	3	1 to 2	1 to 2	2 to 3	1	2 to 3	1	2	1
paraformaldehyde	2	1	1		2		1	1	2	1	1	1
pectine	1	1		1	1	1		1			1	
pentachlorophenol	x	x	3				1 to 2	1		1	2	
pentane	3	x	x	2	1	1	x	1	2	1	3	x
pentanols (amyl alcohols)	3	3	3	1	2	1	1 to 2	1	1	1	1	1
peracetic acid (mixture, cold desinfection)						3-x	2	1			2-3	
perborate (sodium borate)	1	1	2	2	1	1	1	1	1	2	1	
perchloric acid, aqu.	x	x	x	1 to 2	1	2 to 3	2	1	2	1	1	2
perchloroethylen (tetrachloroethylen)	x	x	x	x	1	3	x	1	x	1	x	
perhydrol s. hydrogen peroxide												
permanganate (potassium permanganate) 10 %ig	3	1	1	1	1	1	1	1	2	2	1	1
peroxomonosulphuric acid				2 to 3		1	x		x	1		
petrol s. gasoline												
petroleum, without additives, at 20°C	1	1	2 to 3	2 to 3	1	2	2	1	3	1	2 to 3	
petroleum, without additives, to °C	65	60	x	150	200	x	30	200		200	100	
petroleum spirit (white spirit, solvent naphta)	1 to 2	1 to 2	x	x	1	3	1 to 2	1			x	
phenol (carbolic acid), aqu.	3-x	3-x	3	2 to 3	1	x	x	1	3	1	2 to 3	1
phenyl ether (diphenyl oxide)	x	x	2	x	2 to 3	x	2 to 3	1	x	1	2	1
phenylbenzene (biphenyl)	x	x	x	x	1	x		1	x		1	
phorone (diisopropylidene aceton)	x	x	x	x	x			1	x		1	
phosphoric acid 3%	2 to 3	2	2	2	1	1	1	1	1	1	1	1
phosphoric acid 50%	3	2	3	2	1	1	2	1	2	1	1	1
phosphoric acid 85%	x	x	3	2	1	1	2	1	3	1	1	
phosphoric alumina (aluminium phosphates, aqu.)	2	1	1	1	1	1	1	1	1	1	1	
phosphorus oxychloride	x	x	x	3	1	x	2 to 3	1	3	1	1	x
photo-emulsions, in general (s. exact chem. designation)	x	x	2	1	2	1 to 2	1	1	1 to 2	1	1	
phthalic acid			2	1	x	2	1	1	1		1	
phthalic acid anhydride, aqu.				1	x	3	1	1	1	1	1	
phthalic acid ester (phthalates)	x	3	x	1	1	1	1	1			2 to 3	1
picric acid	2 to 3	2 to 3	3	2	1 to 2	2 to 3	1	1	2	1	1	1
pigs fat (oils, animal)	1	1	3	1 to 2	1	2	2 to 3	1	3	1	2	1
pine oil1)	1	1	x	x	1	3	3	1	x	1		
polychlorinated biphenyls (pyranols, transformer oils)	2	2	x	x	1	3	3	1	2 to 3	1	x	
potash (potassium carbonate)	3	2	1	1	1	1	1	1	1	3	1	
potassium acetate, aqu.	x	x	x	x	2 to 3	1	1	1	2 to 3	1	1	
potassium aluminium sulfate (alum)	2	1	1 to 2	1	1	1	1	1	2	3	1	1
potassium bicarbonate (potassium hydrogen												
carbonate)	2	2	1	1	1	1	1	1	1	3	1	1
potassium bichromate (potassium dichromate)	3	2	2	1 to 2	1	1	1	1	1	3	1	
potassium bisulfate, aqu.	x	3-x	2	1	1		1	1			1	1
potassium borate, aqu.	3	1	1	1	1	1	1	1	1	3	1	1
potassium bromate, aqu. 10%	x	x	2 to 3	1	1	1	1	1			1	1
potassium bromide, aqu.	2 to 3	1	1	1	1	1	1	1	1	3	1	1
potassium carbonate (potash)	3	2	1	1	1	1	1	1	1	3	1	1
potassium chlorate, aqu.	3	2	2	1	1	1	1	1	1	3	1	1
potassium chloride, aqu.	2	1	1	1	1	1	1	1	1	3	1	1
potassium chromate, aqu., 40%	x	x	2 to 3	1	1	1 to 2	1	1	1		1	1
potassium cyanide (cyankali), aqu.	3	2	1	1	2	1	1	1	1 to 2	3	1	1
potassium dichromate, aqu.	3	2	2	1 to 2	1	1	1	1	1	3	1	1
potassium hydroxide (caustic potash,-lye) 10%	2 to 3	2	3	1 to 2	1	2	1	1	1	3	1	

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	PUR-Ester	PUR-Ether	Silicone	Hypalon®	Viton®	PVC	PE	PTFE	Neopren®	Kapton®	TPV	PE-EL
potassium hydroxide (caustic potash,-lye) 50%	x	3	x	1 to 2	2 to 3	2 bis 3	1	1	1	x	1	
potassium hypochlorite (Javelle)	3	2	2	2 to 3	1	1	3	1	2 to 3	3	1 to 2	3
potassium iodide, aqu.	3	2	2	1	1	1 to 2	1 to 2	1	1	2	1	1
potassium nitrate, aqu.	2 to 3	1	1	1	1	1	1	1	1	3	1	1
potassium perchlorate, aqu.	x	x	2	1	1	1		1			1	
potassium permanganate 10%, aqu.	3	1	1	1	1	1	1	1	2	2	1	1
potassium peroxy disulfate (potassium persulfate)	x	3-x	3-x	1	1	2	1	1			1	1
potassium phosphate (mono and dibasic)	1	1	x	1	1		1	1	1	3	1	1
potassium sulfate	1	1	1	1	1	1	1	1	1	3	1	1
potassium sulfite	1	1	1	1	1	1	1	1	1	3	1	1
propane gas	1	1	x	2 to 3	1	1	2	1	1	1	1	
propane, liquid	1	1	3	3	1	1	x	1	2 to 3	1	1	x
propanol (propyl alcohol)	2	3	1 to 2	1 to 2	1	1 to 2	1	1	1 to 2	1	1	
propargyl alcohol, aqu. 7%	x	x	2	2	1		1	1	1		2	1
propionic acid (propane acid)	x	x	x	3	1	1	1	1	x	1	1	1
propyl acetates (acetic acid propyl esters)	x	x	x	x	x		2	1	x	1	1	2
propyl alcohol (propanol)	2	3	1 to 2	1 to 2	1	1 to 2	1	1	1 to 2	1	1	
propylamine	x	x	x	x	x			1	x	1	1	
propylene (propene)	x	x	x	x	1	2		1	x	1	1	
propylene dichloride			x				x	1		1	2	x
propylene glycols (propandiols)	x	x	1	1	1	3	1 to 2	1	2 to 3	1	1	1
propylene oxide (methyloxiran)	x	x	x	x	x		2 to 3	1	x	1	1	2
prussic acid 20%	3	2	2 to 3	1 to 2	1 to 2	1 to 2	1	1	2 to 3	1	1	1
prussic acid 98% (conc.)	3	2	2 to 3	1 to 2	1 to 2	1 to 2	1	1	2 to 3	1	1 to 2	1
pydraul (hydraulic liquids phosphate ester based)	x	x	2 to 3	x	1	x	x	1	x	1	1	
pyranols (oils, transformer oils)	2	2	x	x	1	3	3	1	2 to 3	1	x	
pyrantone (diacetone alcohol)	3	2	2	2	x	x	1	1	3	1	1	
pyridine	x	x	x	3	3	x	1	1	x	1	2 to 3	1
pyrrol	x	x	2	3	3			1	3		1	
quick lime (calcium oxide)	1	1	1	1	1	1	1	1	1	1	1	1
radiation, radioactive	2	2	x	1		3	x	x	1		2	x
radiation, UV-	2	2	2	1	1	2	3	1			x	3
radioactive radiation: aplicable in general	2	3	x	x	x	x	3	x	x	x	1 to 2	x
rapeseed oil1)	2	2	x	2 to 3	1		x	1	2 to 3	1	2	x
raw sugar sap	x	3	1	1	1	1	1	1	2	1	1	1
redoil (aniline)	x	x	2	3	1 to 2	2 to 3	2 to 3	1	x	1	1	
ricinus oil, castor oil1)	1	1	1	1	1		2 to 3	1	2	1		1
rock salt	3	2	1	1	1	1	1	1	1	3	1	2
saccharose (sugar) aqu.	3	1	1	1	1	1	1	1	1	1	1	
sal ammoniac (ammonium chloride) aqu. 3%	3	1	1	2	1	1	1	1	1	1	1	1
salicylic acid (spiric acid), aqu.	2	1	1	1	1	2	1	1	2	1	1	1
salmiac (ammonium chloride)	3	1	1	2	1	1	1	1	1	1	1	1
salpetre (pottasium nitrate)	2 to 3	1	1	1	1	1	1	1	1	3	1	1
salt (table or common salt, sodium chloride)	3	2	1	1	1	1	1	1	1	3	1	1
salted water (brine, sea water)	3	2	1	1	1	1	1	1	1-2	1	1	1
sangajol = turpentine oil substitue, mineral	1 to 2	1 to 2	x	x	1	3	1 to 2	1			x	
seawater	3	2	1	1	1	1	1	1	1-2	1	1	1
sebacic acid ester	x	x		x	3-x	x		1			2	1
sewage	x	aks for advice	2	1	1	1	1	1	1	1	2	1
silicon dioxide (silicic acid, chert, silica)	1	1	1	1	1	1	1	1	1	1	1	
silicon oils and -greases	1	1	3	1	1	1	1	1	2-3	1	1	1
silver nitrate, aqu.	1	1	1	1	1	2	1	1	1 to 2		1	1
skydrol (hydraulic liquids, phosphate ester based)	x	x	2 to 3	x	1	x	x	1	x	1	1	
slaked lime (calcium hydroxide, aqu.)	3	2	1	1	1	2	1	1	1	1	1	1
soapsuds, -solution, detergents)	x	2	1	1	1	1	1	1	1	1	1	

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soda ash (sodium carbonate anhydrous)	2	2	1	1	1	2	1	1	1	2	1	1
soda lye s. sodium hydroxide												
soda salpetre (sodium nitrate)	2	1	3	1	1	1	1	1	2	1	1	1
soda, calcinated (sodium carbonate anhydrous)	2	2	1	1	1	1	1	1	1	2	1	1
soda, crystallised (sodium carbonate aqu.)	x	2-3	1	1	1	2	1	1	1	2	1	1
sodium bicarbonate (sodium-hydrogencarbonate), aqu.	x	2	1	1	1	1	1	1	1	2	1	
sodium bisulfate (sodium-hydrogensulfate)	x	x	1	1	1	1	1	1	1	2	1	
sodium bisulfite (sodium-hydrogensulfite), aqu.	x	x	1	1	1	1	1	1	1	2	1	
sodium borate (borax)	1	1	1 to 2	1 to 2	1	1	1	1	1	2	1	
sodium bromide				1 to 2	1	1 to 2	1	1	1		1	1
sodium carbonate (soda) aqu.	x	2-3	1	1	1	2	1	1	1	2	1	1
sodium chlorate, aqu.	3	2	1	1	1	1	1	1	1	3	1	
sodium chloride (muriate of soda, common or table salt)1)	3	2	1	1	1	1	1	1	1	3	1	1
sodium chlorite				1	1	3	2 to 3	1			2	2
sodium cyanide	3	3	1	1	1	1	1	1	1	3	1	1
sodium dichromate	3	3	2	1	1		1	1	1	3	1	1
sodium fluoride	3	2	2	1	1	1	1	1	1	3	1	1
sodium fluoroaluminate 10%	3	2 to 3	2		1	1	1	1	1	3	1	
sodium hydroxide (sod lye) 25%, 100°C	x	x	x	3	x	x	x	1	x	3	1	
sodium hydroxide (sod lye) 25%, 20°C	x	2	2	1	3	1	x	1	2	2	1	
sodium hypochlorite 10%	3	2	2	1	1	1	2	1	2 to 3	1	2 to 3	1
sodium hypochlorite 30%	x	3	3	1	2 to 3	1	2	1	1	1	x	
sodium metaphosphate	1	1	1	2	1	1	1	1	2	1	1	1
sodium nitrate, aqu.	2	1	3	1	1	1	1	1	2	1	1	1
sodium nitrite	2	1	1	1	1	1	1	1	1	1	1	1
sodium perborate	x	x	2	2	1	2	1	1	2	1	1	1
sodium percarbonate (bleaching agent)			2-3		1		1	1			1	
sodium peroxide	3	2	3	2	1 to 2	2	1	1	2 to 3	1	1	
sodium phosphate (s. also trisodium phosphate)	2	2	x	2	1	1	1	1	2	1	1	1
sodium silicate, aqu.	x	3	1	1	1	1	1	1	1	1	1	1
sodium sulfide, aqu.	2	2		1	x	1	1	1	1	1	1	1
sodium sulfate (Glauber`s salt), aqu.	3	1	1	1	1	1	1	1	1	1	1	1
sodium sulfite, aqu.	2	1	1	1	1	1	1	1	1	1	1	1
sodium thiosulfate (antichlorine)	3	2	1	1	1	1	1	1	1	1	1	1
solvent naphta (petroleum spirit, white spirit)	1 to 2	1 to 2	x	x	1	3	1 to 2	1			x	
solvents s. specific designations												
soyabean oil*¹	2	2	1	2 to 3	1	1	1 to 2	1	2 to 3	1	2	1
spindle oil (oils, mineral)												
spirits (ethanol, denaturated)	2	2	2	1	1	2-3	1-2	1	1	1	1	
spirits of ammonia (ammonia 25% in water)	x	x	1	3	1	1	1	1	2	x	1	
spruce needle oil	2	2	2	x	1 to 2	x	2	1				1
staining solution (20% nitric acid 4% hydrofluoric acid)	x	x		1				1	x		x	
starch syrup*¹	2	2	1	1	1	1	1	1	1	1	1	1
starch, aqu.*¹	1	1	1	1	1	1	1	1	2	1	1	1
steam of water to°C	x	x	120	100	150	x	x	200		200	135	90
stearin (stearic acid)	3	2	1 to 2	2 to 3	2	1 to 2	1 to 2	1	2	1	1	1
stone oil (naphthalene, liquid paraffine)	2	2	3	3	1	x	2 to 3	1	x	1		
styrene, monomer	x	3	x	x	2	x	x	1	x	1	x	
sublimate (mercury chloride)	1	1	1	1 to 2	1	2	1	1	1 to 2	1	1	
sugar aqu. *¹ (s. also raw sugar juice)	3	1	1	1	1	1	1	1	1	1	1	1
sulfonic acids, in general	x	x	1	1	2	1		1			2 to 3	1
sulfur dioxide s. sulfurous acid												
sulfur trioxide (sulfuric acid anhydride)	3	2	2 to 3	3	1	1	1	1	x	1	1	3
sulfur, molten, 90°C	3	2	1	1	1	x	x	1	2	1	2 to 3	
sulfuric acid 10%	3	2	3	1	1	1	1	1	2	1	1	1
sulfuric acid 30%	x	2	x	1	1	1	1	1	2	1	1	1

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*¹) as foodstuff, please order food-grade quality versions
*²) please ask for our detailed consultation
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	PUR-Ester	PUR-Ether	Silicone	Hypalon®	Viton®	PVC	PE	PTFE	Neopren®	Kapton®	TPV	PE-EL
sulfuric acid 50%	x	2	x	1	1	1	1	1	2	1	1	1
sulfuric acid 75%	x	x	x	1 to 2	1	2	2	1	2 to 3	1	1	2
sulfuric acid 90%	x	x	x	2	1	x	3	1	3	1	1	2
sulfuric acid conc.(oleum, fuming sulfuric acid)	x	x	x	3-x	1	x	3	1	x	1	x	2
sulfuric ether s. ether												
sulfurous acid 10%, moist	3	2	2	1 to 2	2	2	1	1	3	1	1	1
sulfurous acid 75%, moist	x	x	3	2 to 3	2	2 to 3	2	1	3	1	1	2
table salt (sodium chloride)	3	2	1	1	1	1	1	1	1	3	1	1
talc (magnesium silicate)	1	1	1	1	1	1	1	1	1	1	1	1
tallow	1	1	1	1	1	1	1	1	1	1	2	1
tannic acid (tannin)	2 to 3	2	2	1 to 2	1 to 2	1	1	1	1 to 2	1	1	1
tar (s. also hot tar)	x	x	2	x	1	2	2	1	3	1	x	1
tartaric acid, aqu.*[1]	3	1	1	1	1	1	1	1	1 to 2	1		1
tensides (washing or cleaning agents, synth.)	3	2	1	1	1	1	1	1	2	1	1	
test gasoline = white spirit	1 to 2	1 to 2	x	x	1	3	1 to 2	1			x	1
tetrachlorocarbon (tetrachloromethane,												
tetra, carbon tetra chloride)	3	3	x	x	1	x	x	1	x	1	x	
tetrachloroethans	x	x	x	x	2	3	x	1	x		x	1
tetrachloroethylene (perchloroethylene)	3	3	x	x	1	x	2 to 3	1	x	1	x	1
tetrahydrofurane (THF)	3	3	x	x	x	x	3	1	x	1	2	1
tetraline = tetrahydronaphthalene	x	x	x	x	1	1	3	1	x	1	x	1
thionyl chloride	x	x	x	x	3	x	x	1	x		x	x
thiophene	x	x	x	x	x	x	1	1			x	1
tin-II-chloride, aqu.	3	1	1	2	1	1	1	1	1	1	1	1
toluol	x	x	x	x	1	x	3-x	1	x	1	x	1
tooth pasts						1	1	1				
town gas, coal gas, illuminated gas (natural gas see later)		3	3	3	1	1	1	1	x	1	2	1
train-oil	1	1	2	2	1	1	1	1	2	1	2	
transformer oils	2	2	x	x	1	3	3	1	2 to 3	1	x	1
tributyl phosphate (TBP)	x	x	x	x	x	x	1	1	x	1	1	1
trichloro acetic acid (TCA)	x	x	x	x	3	2	1 to 2	1	x		3	1
trichloroethane (methylchloroform)	x	x	x	x	1	3	x	1	x	1	2	1
trichloroethylene (ethylene trichloride)	x	x	x	x	1 to 2	x	x	1	x	1	2	1
trichloromethane (chloroform)	x	x	x	x	1	x	x	1	x	1	x	3
tricresyl phosphate	x	x	3	x	1 to 2	x	3	1	3	1	1	3
triethanolamine	x	x	1	2 to 3	1	x	1	1	2	1	1	1
triethylamine	2	2	x		x	2	1	1	2	1	1	1
triethylene glycol (triglycol)	2	2	2	1	1			1			1	
trioctyl phosphate	x	x	3	x	x	x	1	1	x	1	1	1
trisodium phosphate	3	3	1	1	1	1	1	1	1	1	1	1
tung oil	3	2	3	3	1	3	2	1	x	1	2	
turpentine (-oil)	3	x	x	x	1	x	x	1	x	1	3-x	1
turpentine, surrogate, mineral	1 to 2	1 to 2	x	x	1	3	1 to 2	1			x	
urine	3	1	1	1	1	1	1	1	1	1	1	1
varnish	3	2	x	x	1	x	1	1	x		x	
vaseline s. oils u. greases, mineral												1
vegetable oils	1-2	1-2	2-3	2	1	2	2-3	1	2-3	1	2	1
vinegar1)	x	3	1	1	1	2	1	1	2	1	1	1
vinyl acetate (acetic acid vinyl ester)	x	x	x	1	2	x	1	1	x	1	1	1
vinyl chloride (chloroethene), monomer	x	x	x	x	1	x	x	1	x	1	2	x
vitamin C	2-3	1			1	1	1					
vitriol oil (oleum)	x	x	x	x	1	x	x	1	x	1	x	x
vitriol blue (copper sulfate)	2	1	1	2	1	1	1	1	1	1	1*	
washing agent synth. (detergent) 20°C	3	2	1	1	1	1	1	1	2	1	1	
water:	3	2	1	1	1	1	1	1	1	1	1	1

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Chemical Resistance

1 = excellent resistance
2 = good resistance
3 = medium resistance
x = none-resistant

	PUR-Ester	PUR-Ether	Silicone	Hypalon®	Viton®	PVC	PE	PTFE	Neopren®	Kapton®	TPV	PE-EL
-aqua regia	x	x	3	3	2	2 to 3	2	1	3	1	3	
-condensed, distilled, desalinated or demineralised does not effect polymers but polymers effect water												
-drinking- or mineral water, without additives*1 to°C	25	60	120	100	150	70	80	200		200	100	
-mineral water CO2 saturated*1	3	1	1	1	1	1	1	1	1	1	1	
-seawater	x	2	1	1	1	1	1	1	1	1	1	1
weathering	2	1	1	1	1	1	2	1	1	1	1 bis 2	
white spirit (petroleum spirit, solvent naphta)	1 to 2	1 to 2	x	x	1	3	1 to 2	1			x	1
wines red and white*1	3	1	1	1	1	1	2	1	2 to 3	1	1	1
wood oil	3	2	3	3	1	3	2	1	x	1	2	2
wool grease (lanoline)	1	1	3	3	1	2	2	1	3	1	2	1
xylamon (wood protection)	3	3	x	x	2			1			x	
xylene	x	x	x	x	1 to 2	x	2 to 3	1	x	1	x	1
xylidine (dimethyl aniline)	x	x	1	1	1			1	1		3	
zinc acetate, aqu.	x	x	x	x	x		1	1	x	1	1	1
zinc chloride, aqu.	2 to 3	2	1	1	1 to 2	1	1	1	1	1	1	1
zinc sulphate, aqu.	2 to 3	2	1	1	1	1	1	1	1	1	1	1

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