



ΟΥΜΠΕΡ Α.Ε.

Χημική αντοχή των διαφόρων τύπων ελαστικού

1 = Κατάλληλο

2 = Μέτρια ανθεκτικό

3 = Δεν είναι κατάλληλο

- = Δεν υπάρχουν στοιχεία

Υλικό που μεταφέρεται	SBR	NR	EPDM	EPR	IIR	CR	NBR	CPE	CSM	FKM	PE-X	PE-UHMW	PFA-FEP
Acetaldehyde	3	2	2	1	2	2	3	2	3	3	1	1	1
Acetic Acid 10%	2	2	1	1	1	2	3	1	2	2	1	1	1
Acetic Acid 50%	3	3	2	1	2	2	3	1	2	2	1	1	1
Acetic Acid, glacial	3	3	2	1	2	3	3	2	3	3	1	1	1
Acetic Anhydride	3	3	2	2	2	3	3	1	2	3	1	1	1
Acetone	3	3	1	1	1	3	3	1	3	3	1	1	1
Acetone cyanohidrin	-	-	1	1	2	-	-	-	-	-	1	1	1
Acetophenone	-	-	2	1	2	-	-	2	-	-	1	1	1
Acetyl Acetone	3	3	1	1	2	3	3	2	3	3	1	1	1
Acetyl chloride	3	3	2	2	2	3	3	1	3	1	1	2	1
Acetylene	1	1	1	1	1	2	1	1	1	1	1	1	1
Acetylene dichloride	3	3	3	3	3	3	3	3	3	1	1	2	1
Acqua regia	-	-	-	-	-	-	-	2	-	2	3	3	1 – 2
Acrolein	3	3	2	2	2	-	-	-	2	1	1	2	1
Acrylonitrile	-	-	3	3	3	-	-	1	-	3	1	2	1
Adipic acid	2	-	2	1	2	2	-	-	-	-	1	1	1
Air 160 °C	3	3	2	1	2	2	3	2	3	3	3	3	1
Air 60°C	1	1	1	1	1	1	1	1	1	1	1	1	1
Allyl acetate	-	-	-	-	-	-	-	-	-	2	1	1	1
Allyl Alcohol	1	1	1	1	1	-	1	1	1	1	1	1	1
Allyl bromide	-	-	-	-	-	-	-	2	-	2	1	2	1
Allyl chloride	-	-	-	-	-	-	-	2	-	2	1	2	1
Aluminium acetate	2	2	1	1	2	2	3	1	2	-	1	1	1
Aluminium chloride	1	1	1	1	1	1	1	1	1	1	1	1	1
Aluminium fluoride	1	2	1	1	1	1	1	1	1	2	1	1	1
Aluminium hydroxide	2	1	-	1	1	1	-	1	2	2	1	1	1

Aluminium nitrate	1	1	1	1	1	1	1	1	1	1	1	1	1
Aluminium sulfate	1	1	1	1	1	1	1	1	1	1	1	1	1
Aminobenzene	-	-	-	-	-	-	-	2	-	-	1	2	1
Aminoethanol	2	2	1	1	1	-	2	1	2	-	1	1	1
Ammonia anhydrous	3	3	3	3	3	3	3	2	3	-	2	2	1 – 2
Ammonia sol. 10%	2	2	1	1	1	1	-	1	1	-	1	1	1
Ammonia sol. 50%	2	2	1	1	-	1	-	1	1	-	1	1	1
Ammonium chloride	1	1	1	1	1	1	1	1	1	2	1	1	1
Ammonium hidroxiide	2	2	2	1	-	1	-	1	2	3	1	1	1
Ammonium nitrate	2	2	1	1	1	1	1	1	1	-	1	1	1
Ammonium phosphate	1	1	1	1	1	1	1	1	1	-	1	1	1
Ammonium sulphate	1	1	1	1	1	1	1	1	1	-	1	1	1
Ammonium sulphite	1	1	1	1	1	-	-	1	1	-	1	1	1
Ammonium thiosulph.	1	1	1	1	1	-	-	1	1	-	1	1	1
Amyl acetate	3	3	3	3	2	2	-	-	-	-	1	1	1
Amyl acetone	3	3	3	3	3	3	-	-	-	-	1	1	1
Amyl alcohol	2	2	2	1	2	-	-	1	-	-	1	1	1
Amyl bromide	3	3	2	2	-	-	-	2	-	-	1	1	1
Amyl chloride	3	3	2	2	-	-	-	2	-	-	1	1	1
Amyl oleate	-	-	-	-	-	-	1	-	-	-	1	1	1
Amyl phenol	-	-	-	-	-	-	-	-	-	1	1	1	1
Amyl phthalate	-	-	2	1	2	-	-	-	-	2	1	1	1
Amylamine	2	2	2	1	1	-	-	2	-	-	1	1	1
Amylamine	2	2	-	1	2	-	-	-	3	-	1	1	1
Anethole	3	3	3	3	3	-	3	2	-	2	2	3	1
Aniline	3	3	2	1	2	-	-	2	-	2	1	1	1
Animal fats	3	3	3	3	1 – 2	2	1	1	2	1	1	1	1
Antimony pentachlorid	-	-	-	-	-	-	-	-	-	-	1	1	1
Aromatic tar	-	-	-	-	-	-	2	-	-	1	1	2	1
Arsenic acid	2	2	1	1	1	2	2	1	1	1	1	1	1
Ascorbic acid	-	-	-	1	-	-	-	1	-	-	1	1	1
Asphalt 130°C	-	-	-	-	-	-	3	-	-	2	3	3	1 – 2

Asphalt 80°C	-	-	-	-	-	-	1	-	-	1	3	2	1
ASTM FUEL A	3	3	3	3	3	3	1	1	2	1	1	1	1
ASTM FUEL B	3	3	3	3	3	3	1	2	2	1	1	1	1
ASTM FUEL C	3	3	3	3	3	3	1	3	3	1	2	2	1
ASTM OIL n°1	3	3	3	3	3	1	1	1	2	1	1	1	1
ASTM OIL n°2	3	3	3	3	3	2	1	1	2	1	1	1	1
ASTM OIL n°3	3	3	3	3	3	3	1	2	2	1	1	1	1
Banana oil	3	3	3	3	2	2	1	1	2	1	1	1	1
Barium carbonate	1	1	1	1	1	1	1	1	1	1	1	1	1
Barium chloride	1	1	1	1	1	1	1	1	1	1	1	1	1
Barium hydroxide	1	1	1	1	1	1	1	1	1	1	1	1	1
Barium sulfide	1	1	1	1	1	1	1	1	1	1	1	1	1
Beer	2	1	2	2	1	2	2	2	2	2	1	1	1
Beet sugar liquors	2	1	2	2	1	2	2	2	2	2	1	1	1
Benzal chloride	-	-	-	2	-	-	-	-	-	-	1	1	1
Benzaldehyde	3	3	2	1	2	-	3	-	-	-	1	1	1
Benzene	3	3	3	3	3	3	3	3	3	1	1	2	1
Benzene carboxylic ac.	-	-	-	-	-	-	-	2	-	1	1	1	1
Benzene sulfon ac.10%	-	-	-	-	-	-	-	-	-	1	1	1	1
Benzine petrol ether	3	3	3	3	3	3	1	2	3	1	1	1	1
Benzine petrol naphtha	3	3	3	3	3	3	1	2	3	1	1	1	1
Benzoic acid	3	3	3	3	3	3	-	1	2	1	1	1	1
Benzoic aldehyde	3	3	2	1	2	-	-	2	-	-	1	1	1
Benzotrichloride	-	-	-	-	-	-	-	-	-	-	2	3	1
Benzyl acetate	3	3	3	2	2	-	-	2	-	3	1	2	1
Benzyl alcohol	3	3	3	2	3	3	-	1	-	1	1	1	1
Benzyl chloride	-	-	-	2	-	-	-	-	-	2	1	2	1
Bichromate of soda	-	-	-	2	-	-	-	-	-	-	1	1	1
Black sulphate liquor	-	-	-	1	1	1	-	-	-	1	1	1	1
Bleach (2-12% chlorine)	-	-	-	2	-	-	-	-	-	2	1	2	1
Bordeaux mixture	-	-	1	1	1	-	-	1	1	1	1	1	1
Boric acid	1	-	1	1	1	1	-	1	1	1	1	1	1

Brine	1	1	1	1	1	1	-	1	1	1	1	1	1
Bromic acid	-	-	-	-	-	-	-	-	-	2	3	3	1 – 2
Bromine	3	3	3	3	3	3	3	3	3	2	3	3	1 – 2
Bromobenzene	3	3	3	3	3	3	3	3	3	2	3	3	1 – 2
Bromochloromethane	3	3	3	2	-	3	3	2	-	-	2	2	1
Bromoethane	3	3	3	-	-	-	3	2	-	-	-	-	1
Bromotoluene	3	3	3	3	3	3	3	3	3	2	-	-	1
Bunker oil	3	3	3	3	3	2	1	2	-	1	1	1	1
Butadiene	3	3	3	3	3	3	3	3	3	2	1	1	1
Butane	3	3	3	2	2	2	1	2	2	1	1	1	1
Butanoic acid	-	-	-	2	-	-	-	1	-	1	1	-	1
Butanol	1	1	1	1	1	1	1	1	1	1	1	1	1
Butanone	-	-	-	-	-	-	-	-	-	-	1	1	1
Butoxiethanol	-	-	-	1	-	-	-	1	-	-	1	-	1
Butyl acetate	3	3	-	2	2	-	-	2	-	3	1	1	1
Butyl acrylate	3	3	3	3	3	3	-	2	3	3	1	2	1
Butyl alcohol	1	1	1	1	1	1	1	1	1	1	1	1	1
Butyl aldehyde	-	-	2	1	2	-	-	-	-	-	1	1	1
Butyl amine	-	-	2	1	2	-	2	2	-	-	1	1	1
Butyl benzene	-	-	-	-	-	-	-	-	-	1	1	1	1
Butyl benzoate	-	-	-	2	-	-	-	-	-	1	1	-	1
Butyl bromide	3	3	3	3	3	3	3	3	3	2	2	-	1
Butyl butyrate	-	-	-	-	-	-	-	-	-	-	2	-	1
Butyl carbitol	3	3	2	1	-	-	-	-	3	1	1	1	1
Butyl cellosolve	3	3	2	1	2	2	3	1	2	3	1	1	1
Butyl chloride	3	3	3	-	-	3	3	3	-	2	2	-	1
Butyl ether	3	3	-	-	-	2	3	2	-	-	1	1	1
Butyl ether acetaldehy	-	-	-	1	2	-	-	-	-	-	1	-	1
Butyl ethil ether	3	3	-	2	-	-	3	-	3	-	1	-	1
Butyl glicol	-	-	2	1	-	-	-	-	-	-	1	1	1
Butyl oleate	3	3	-	2	2	-	3	-	-	1	1	-	1
Butyl Phenol	-	-	-	-	-	-	-	-	-	1	1	1	1

Butyl phthalate	3	3	-	2	2	-	-	-	-	2	1	1	1
Butyl stearate	3	3	3	3	3	3	2	2	3	3	1	1	1
Butylene	-	-	3	3	-	3	2	3	-	1	-	-	1
Butyraldehyde	3	3	2	1	2	-	3	-	-	3	1	1	1
Butyric acid	3	3	-	2	-	-	3	2	-	2	1	1	1
Butyric anhydride	-	-	-	-	-	-	-	-	2	-	1	-	1
Cadmium acetate	3	3	2	2	-	-	-	1	-	-	1	1	1
Calcium acetate	3	3	2	1	2	2	-	1	3	3	1	1	1
Calcium aluminate	1	1	1	1	-	1	-	1	1	1	1	1	1
Calcium Bichromate	-	-	2	1	2	-	-	1	1	-	1	-	1
Calcium bisulphite	1	1	1	1	1	1	1	1	1	1	1	1	1
Calcium carbonate	1	1	1	1	1	1	1	1	1	1	1	1	1
Calcium chloride	1	1	1	1	1	1	1	1	1	1	1	1	1
Calcium hydroxide	2	1	1	1	1	-	-	1	2	1	1	1	1
Calcium hypochlorite	3	3	2	1	2	-	3	1	-	-	1	1	1
Calcium nitrate	1	1	1	1	1	1	1	1	1	1	1	1	1
Calcium sulfide	1	1	1	1	1	1	-	1	1	1	1	1	1
Calcium sulphate	1	1	1	1	1	1	1	1	1	1	1	1	1
Caprylic acid	3	3	-	2	-	-	-	2	-	-	1	1	1
Carbamide	-	-	-	1	-	-	-	1	-	-	1	1	1
Carbitol	-	-	2	1	2	2	-	1	-	-	1	1	1
Carbolic acid phenol	-	-	-	2	2	-	-	1	-	1	1	1	1
Carbon dioxide	1	1	1	1	1	1	1	1	1	1	1	1	1
Carbon disulfide	3	3	3	3	-	-	-	-	-	1	2	2	2
Carbon tetrachloride	3	3	3	3	3	3	-	-	-	1	1	2	1
Carbon tetrafluoride	-	-	-	-	2	-	-	-	-	-	1	1	1
Carbonic acid	1	1	1	1	1	-	-	1	1	-	1	1	1
Castor oil	2	-	-	-	2	1	1	1	1	1	1	1	1
Caustic potash	2	1	1	1	1	2	2	1	-	-	1	1	1
Caustic soda	2	1	1	1	1	2	2	1	-	-	1	1	1
Cellosolve	-	-	2	1	1	-	2	-	-	-	1	1	1
Cellosolve acetate	3	3	-	2	2	-	-	-	-	-	1	1	1

Chlorinated solvents	3	3	3	3	-	3	3	-	-	1	1	1	1
Chlorine (dry)	3	3	3	3	3	3	3	3	3	1	2	2	1 – 2
Chlorine (wet)	3	3	3	3	3	3	3	3	3	1	2	2	1
Chlorine trifluoride	3	3	3	3	3	3	3	3	3	1	2	2	1
Chloroacetic acid	3	3	2	1	2	-	-	-	-	3	1	1	1
Chloroacetone	3	3	2	1	2	-	-	-	-	3	1	1	1
Chlorobenzene	3	3	3	3	3	3	3	3	-	1	1	1	1
Chlorobenzol	3	3	3	-	-	-	-	-	-	1	1	1	1
Chlorobromomethane	-	-	-	-	-	-	-	-	-	-	1	1	1
Chlorobutane	3	3	3	-	2	-	-	-	-	1	2	2	1
Chloroform	3	3	-	-	-	-	-	-	-	1	2	2	1
Chloropentane	3	3	3	3	3	3	-	-	-	1	1	1	1
Chlorosulfonic acid	3	3	3	3	3	3	3	3	3	3	2	3	1 – 2
Chlorotoluene	3	3	3	3	3	3	3	3	3	2	2	3	1 – 2
Chrome plating solutio	3	3	-	2	-	-	-	-	-	1	1	2	1
Chromic acid	3	3	-	2	-	3	3	2	-	1	1	1	1
Chromosulfuric acid	3	3	3	3	3	3	3	3	3	-	2	3	1
Citric acid	1	1	1	1	1	1	1	1	1	-	1	1	1
Coal oil	3	3	3	3	3	3	1	3	3	1	1	1	1
Coal tar	3	3	3	3	3	3	1	3	3	1	1	1	1
Coconut oil	3	3	3	3	2	3	1	-	-	-	1	1	1
Coke oven gas	3	3	3	3	3	3	2	3	-	1	1	1	1
Copper chloride	2	2	1	1	1	1	2	1	1	1	1	1	1
Copper cyanide	2	2	1	1	1	1	-	1	1	1	1	1	1
Copper hydrate	-	-	-	1	1	-	-	-	2	-	1	1	1
Copper hydroxide	-	-	2	1	1	-	-	1	2	-	1	1	1
Copper nitrate	1	2	1	1	1	1	-	1	1	1	1	1	1
Copper sulphate	1	2	1	1	1	1	-	1	1	1	1	1	1
Corn oil	3	3	3	3	1	2	1	-	-	1	1	1	1
Cottonseed oil	3	3	3	3	3	-	-	-	-	1	1	1	1
Creosote	3	3	3	3	3	-	2	-	-	1	1	1	1
Cresols	3	3	3	3	3	3	-	2	-	1	1	1	1

Cresylic acid	3	3	3	3	3	3	-	-	-	1	1	1	1
Crotonaldehyde	3	3	2	1	2	3	-	1	-	3	1	1	1
Crude oil	3	3	3	3	3	3	1	-	-	1	1	1	1
Cumene	3	3	3	3	3	3	2	3	3	1	1	1	1
Cupric carbonate	2	2	1	1	1	1	1	1	1	1	1	1	1
Cupric nitrate	1	2	1	1	1	1	1	1	1	1	1	1	1
Cupric sulphate	1	2	1	1	1	1	1	1	1	1	1	1	1
Cutting oil	3	3	3	3	-	2	1	-	-	1	1	1	1
Cyclohexane	3	3	3	3	-	-	1	1	-	-	1	1	1
Cyclohexanol	3	3	-	2	-	-	-	1	-	1	1	1	1
Cyclohexanone	3	3	3	2	3	3	3	2	3	3	1	1	1
Cyclopentane	3	3	3	3	3	3	-	3	3	1	1	1	1
Cyclopentanol	3	3	2	1	-	-	-	1	-	2	1	1	1
Cyclopentanone	3	3	-	2	-	-	-	2	-	3	1	1	1
Decahydronaphtalene	-	-	-	-	-	-	-	-	-	-	1	1	1
Decalin	3	3	3	3	3	3	3	3	3	1	1	1	1
Decanol	-	-	2	1	2	-	1	1	-	2	1	1	1
Decyl alcohol	1	1	1	1	1	-	-	1	-	-	1	1	1
Decyl aldehyde	-	-	2	1	1	-	-	-	-	2	1	1	1
Decyl butyl phthalate	3	3	-	1	1	-	2	-	-	2	1	1	1
Decyl carbinol	-	-	-	2	-	-	-	1	-	-	1	-	1
Denatured alcohol	1	1	1	1	1	1	-	1	1	2	1	1	1
Detergents (water)	2	2	1	1	1	2	1	-	-	1	1	1	1
Developer sol. (photo)	2	2	-	-	2	1	1	-	1	-	1	1	1
Diacetone alcohol	2	2	-	1	1	-	-	1	2	2	1	1	1
Diamyl naphtalene	3	3	-	-	2	-	-	-	-	2	1	1	1
Diamyl Phenol	3	3	3	3	3	3	-	-	-	1	1	1	1
Diamylamine	2	3	2	1	2	-	-	1	-	-	1	1	1
Diamylene	3	3	3	-	3	3	-	-	-	1	1	1	1
Dibenzyl ether	3	3	3	2	2	-	-	-	-	-	1	-	1
Dibromobenzene	3	3	3	3	3	3	3	3	-	1	1	1	1
Dibromoethane	3	3	3	3	3	3	3	3	3	-	1	1	1

Diisodecyl phthalate	3	3	2	1	1	-	3	-	-	3	1	1	1
Diisooctyl adipate	3	3	2	1	1	-	3	-	-	3	1	1	1
Diisooctyl phthalate	3	3	2	1	1	-	3	-	-	3	1	1	1
Diisopropyl amine	2	2	-	1	1	-	-	2	2	-	1	1	1
Dimethyl amine	2	2	2	1	1	-	2	2	-	-	1	1	1
Dimethyl benzene	3	3	3	3	3	3	3	3	3	1	1	1	1
Dimethyl carbinol	2	2	1	1	1	-	2	1	1	3	1	1	1
Dimethyl ether	3	3	-	2	-	-	-	1	-	3	1	1	1
Dimethyl formamide	-	-	-	2	2	-	-	2	-	-	1	1	1
Dimethyl ketone	3	3	-	1	-	-	-	1	-	3	1	1	1
Dimethyl phenol	3	3	3	3	3	3	3	3	3	1	-	-	1
Dimethyl phthalate	3	3	-	2	2	-	-	1	-	2	1	1	1
Dimethyl sul fate	3	3	-	3	3	-	-	1	-	-	1	1	1
Dimethyl sulfoxide	3	3	-	-	-	-	-	-	-	-	1	1	1
Dinitrobenzene	3	3	-	2	2	-	-	-	-	1	1	1	1
Dioctyl adipate	3	3	-	1	1	-	2	-	-	2	1	1	1
Dioctyl phthalate	3	3	-	1	1	-	-	-	-	2	1	1	1
Dioxane	3	3	2	2	2	-	3	2	-	3	1	1	1
Dioxolane	3	3	3	2	3	-	-	2	-	3	1	1	1
Dipentene	3	3	-	-	-	-	-	2	-	1	-	-	1
Diphenyl phthalate	3	3	-	1	-	-	-	-	-	-	1	1	1
Dipropylamine	2	2	2	1	1	-	2	1	2	-	1	1	1
Dipropylene glycol	1	1	1	1	1	-	1	1	1	1	1	1	1
Disodium phosphate	1	1	1	1	1	-	1	1	1	-	1	1	1
Divinyl benzene	3	3	3	3	3	3	3	3	3	1	1	1	1
Dodecyl benzene	3	3	3	3	3	3	3	3	3	1	1	1	1
Dowper	3	3	3	3	3	-	2	-	-	1	1	1	1
Dowtherm A and E	3	3	3	3	3	3	3	3	-	1	1	1	1
Dry cleaning fluids	-	-	-	-	-	-	2	-	-	1	-	-	1
Ethanol	1	1	1	1	1	1	1	1	1	2	1	1	1
Ethanol amine	2	2	1	1	1	2	2	1	3	3	1	1	1
Ethyl acetate	3	3	-	2	2	3	3	2	3	3	1	1	1

[illegible]

Ferrous acetate	3	3	2	1 – 2	1 – 2	-	-	-	3	3	1	1	1
Ferrous chloride	1	1	1	1	1	1	1	1	1	1	1	1	1
Ferrous hydroxide	1 – 2	1 – 2	1 – 2	1	1	-	-	-	2	2	1	1	1
Ferrous sulfate	1	1	1	1	1	1	1 – 2	1	1	1	1	1	1
Fluoboric acid	2	2	1	1	1	2	-	1	1	2	1	1	1 – 2
Fluorine gas	3	3	3	3	3	3	3	3	3	1 – 2	1	1	1 – 2
Fluorobenzene	-	-	-	-	-	-	-	-	-	-	1	1	1
Fluosilicic acid	2	2	1	1	1	-	-	1	1	-	1	1	1
Formaldehyde	2	2	-	1	1	3	3	1	1	2	1	1	1
Formalin	2	2	1	1	1	-	-	1	1	1	1	1	1
Formic acid	2	2	1	1	1	-	-	1	2	3	1	1	1
Freon 12	3	3	3	3	3	2	-	1	3	2	1	2	1
Freon 22	3	3	3	3	3	3	3	1	3	3	1	2	1
Freon SO2	-	-	-	1	-	2	-	-	-	-	1	1	1
Fuel B (ASTM)	3	3	3	3	3	2	1	3	3	1	1	1	1
Fuel C (ASTM)	3	3	3	3	3	3	1	3	3	1	1	1	1
Fuel oil	3	3	3	3	3	2	1	2	3	1	1	1	1
Furan	3	3	3	3	3	3	3	1	3	-	1	1	1
Furfural	3	3	3	-	2	3	3	1	-	3	1	1	1
Furfuryl alcohol	3	3	3	2	2	3	3	1	-	2	1	1	1
Gallic acid	-	-	2	2	2	3	3	1	3	3	1	1	1
Gas, coke	3	3	-	-	-	-	2	-	1	-	-	-	1
Gas, liquified petrol	3	3	3	3	3	3	2	-	-	-	1	1	1
Gasoline	3	3	3	3	3	-	1	2	3	1	1	1	1
Gluconic acid	3	3	-	2	-	-	3	1	2	-	1	1	1
Glucose	1	1	2	1	1	2	2	2	1	-	1	1	1
Glycerine	1	1	1	1	1	1	1	1	1	1	1	1	1
Glycil alcohol	-	-	-	1	-	-	-	1	-	-	1	1	1
Glycolic acid	-	-	-	2	-	-	-	1	-	-	1	1	1
Glycols	1	1	1	1	1	1	1	1	1	1	1	1	1
Grease	3	3	3	3	3	2	1	-	-	1	1	1	1
Green sulphate liquor	1	1	1	1	1	2	2	2	1	1	1	1	1

Halon 1211	-	-	-	-	-	1	1	-	-	-	-	1	1
Helium	1	1	1	1	1	1	1	1	1	1	1	1	1
Heptanal	3	3	-	1	1	-	-	2	3	-	1	1	1
Heptane	3	3	3	3	3	2	1	1	-	1	1	1	1
Heptane carboxyl.acid	3	3	-	2	-	-	-	1	2	-	1	1	1
Hexaldehyde	3	3	1	1	2	2	-	-	3	3	1	1	1
Hexane	3	3	3	3	3	-	1	2	3	1	1	1	1
Hexanol	1	1	1	1	1	-	1	1	1	2	1	1	1
Hexene	3	3	3	3	3	2	2	1	2	1	1	1	1
Hexyl alcohol	1	1	1	1	1	2	1	1	1	2	1	1	1
Hexyl methyl ketone	3	3	-	2	2	-	3	2	3	3	1	1	1
Hexylamine	2	2	-	-	1	-	2	2	3	-	1	1	1
Hexylene glycol	1	1	1	1	1	-	1	1	1	1	1	1	1
Hydraulic oil	3	3	3	3	3	-	1	1	2	1	1	1	1
Hydrazine	3	3	3	3	2	2	3	3	1	-	1	1	1
Hydrobromic acid	3	1	1	1	1	3	3	1	1	3	1	1	1
Hydrocl. ac.37%(cold)	3	2	1	1	2	-	-	1	2	1	1	1	1
Hydrocl. ac.37%(hot)	3	3	3	2	3	-	-	1	3	2	1	1	1
Hydrochloric acid 15%	3	1	1	1	1	-	-	1	1	1	1	1	1
Hydrocyanic acid	3	3	-	-	2	2	-	3	3	-	1	1	1
Hydrofluoric acid cold	3	3	3	2	1 – 2	-	-	1	1	-	1	1	1
Hydrofluoric acid hot	3	3	3	3	3	-	-	1	3	-	1	1	1
Hydrofluosilicic acid	3	3	2	1	1 – 2	3	-	1	1	-	1	1	1
Hydrogen dioxide 10%	3	3	-	2	2	-	-	1	2	1	1	1	1
Hydrogen gas	2	2	-	1	1	1	1	1	2	2	1	1	1
Hydrogen perox. >10%	3	3	-	3	3	-	-	1	3	1	1	1	1
Hydrogen perox. 10%	3	3	-	2	2	-	-	1	2	1	1	1	1
Hydrogen sulfide	3	3	2	1	2	-	3	2	3	3	1	1	1
Iodine	3	3	3	3	3	-	-	1	1	3	1	1	1
Iron acetate	3	3	2	1	2	-	-	-	-	3	1	1	1
Iron salts	1	1	1	1	1	1	1	1	1	1	1	1	1
Isoamyl acetate	3	3	2	1	2	-	-	-	-	3	1	1	1

Lime bleach	2	2	1	1	1	2	1	-	2	1	1	1	1
Lime sulfur	3	3	1	1	1	1	3	-	1	1	1	1	1
Linoleic acid	3	3	3	-	-	-	2	-	-	2	1	1	1
Linseed oil	3	3	-	2	2	-	1	1	-	1	1	1	1
Liquid Petroleum Gas	3	3	3	3	3	-	1	2	-	1	1	1	1
Lubricating oils	3	3	3	3	3	2	1	2	-	1	1	1	1
Lye solutions	2	2	1	1	1	-	-	1	1	2	1	1	1
M.E.K.	3	3	2	1	2	-	-	3	3	3	1	1	1
Magnesium acetate	3	3	-	2	2	-	-	1	-	-	1	1	1
Magnesium chloride	1	1	1	1	1	1	1	1	1	1	1	1	1
Magnesium hydrate	2	2	-	1	1	-	2	1	2	-	1	1	1
Magnesium hydroxide	2	2	1	1	1	2	2	1	2	2	1	1	1
Magnesium sulfate	1	1	1	1	1	1	1	1	1	-	1	1	1
Maleic acid	3	3	3	2	-	3	3	3	3	-	1	1	1
Maleic anhydride	3	3	3	2	3	3	3	3	3	3	1	1	1
Malic acid	3	2	-	2	-	-	-	2	2	1	1	1	1
Manganese sulphate	2	2	1	1	1	-	-	1	1	1	1	1	1
Manganese sulphite	2	2	1	1	1	-	-	1	1	1	1	1	1
Mercury	1	1	1	1	1	1	-	1	1	1	1	1	1
Mesityl oxide	3	3	2	2	-	-	-	2	-	-	1	1	1
Methallyl alcohol	1	1	1	1	1	-	1	1	1	3	1	1	1
Methanecarboxylic acid	3	3	3	-	-	2	-	1	-	-	1	1	1
Methanoic acid	3	3	-	2	-	-	-	1	-	-	1	1	1
Methanol	1	1	1	1	1	1	1	1	1	2	1	1	1
Methoxy ethanol	3	3	-	2	-	-	-	1	-	-	1	1	1
Methyl 1,2-pentanediol	3	3	-	-	-	-	-	1	-	-	1	1	1
Methyl acetate	3	3	2	1	2	-	-	1	3	3	1	1	1
Methyl acetone	3	3	2	1	2	-	-	1	3	3	1	1	1
Methyl alcohol	1	1	1	1	1	1	1	1	1	2	1	1	1
Methyl allyl acetate	3	3	-	2	-	-	-	-	-	3	1	1	1
Methyl allyl alcohol	-	-	-	2	-	-	-	1	-	-	1	1	1
Methyl allyl chloride	3	3	-	2	-	-	-	3	-	3	1	2	1

Methyl amyl acetate	3	3	-	2	-	-	-	3	-	3	1	2	1
Methyl amyl carbinol	1	1	1	1	1	-	-	1	1	3	1	1	1
Methyl benzene	3	3	3	3	3	3	3	3	3	1	2	2	1
Methyl bromide	3	3	3	3	3	3	3	3	3	1	2	2	1
Methyl butane	3	3	3	3	3	-	2	1	-	-	1	-	1
Methyl butanol	1	1	1	1	1	-	1	1	1	-	1	1	1
Methyl butyl ketone	3	3	2	1	2	-	-	-	-	3	1	1	1
Methyl carbitol	3	3	-	2	-	-	-	1	-	3	1	1	1
Methyl cellosolve	3	3	2	1	2	-	3	1	3	3	1	1	1
Methyl chloride	3	3	3	3	3	3	1 – 2	3	3	1 – 2	1 – 2	1 – 2	1 – 2
Methyl cyclohexane	3	3	3	3	3	3	1 – 2	3	3	1 – 2	1 – 2	1 – 2	1
Methyl ethyl ketone	3	3	2	1	2	-	-	3	3	3	1	1	1
Methyl hexanol	1	1	1	1	1	1	1	1	1	2	1	1	1
Methyl hexanone	3	3	2	1	1 – 2	3	3	3	3	3	1	1	1
Methyl isobut carbinol	2	2	1	1	1	-	-	1	3	3	1	1	1
Methyl isobutyl cheton	3	3	3	2	2	3	3	-	-	3	1	1	1
Methyl methacrylate	3	3	3	3	3	-	-	-	3	3	1	1	1
Methyl n amyl chetone	3	3	-	1 – 2	1 – 2	-	-	-	-	3	1	1	1
Methyl propyl ether	3	3	-	2	2	-	-	-	-	3	1	1	1
Methyl salicylate	3	3	-	1 – 2	1 – 2	-	-	-	-	3	1	1	1
Methyl ter butyl ether	3	3	-	2	2	-	-	-	-	3	1	1	1
Methylene bromide	3	3	3	3	3	3	3	3	3	-	2	2	1 – 2
Methylene bromide	3	3	3	3	3	3	3	3	3	1 – 2	1 – 2	1 – 2	1
Methylene chloride	3	3	3	3	3	3	3	3	3	1 – 2	1 – 2	1 – 2	1 – 2
Methylene chloride	3	3	3	3	3	3	3	3	3	-	2	2	1 – 2
Mineral spirits	3	3	3	-	-	2	1	-	-	-	1	1	1
Molten sulphur	2	2	2	1 – 2	2	-	3	1	2	-	-	-	1
Monobutyl ether	3	3	3	2	2	-	-	-	-	3	1	1	1
Monochloroacetic acid	3	2	-	2	-	-	3	1	3	3	1	1	1
Monochlorobenzene	3	3	3	3	3	3	3	3	3	1	1 – 2	1 – 2	1
Monochlorodifluormet	3	3	3	-	2	3	-	-	-	-	1 – 2	1 – 2	1
Monoethanol amine	2	1	1	1	1	-	2	-	2	3	1	1	1

Monoethyl amine	-	-	2	1 – 2	2	-	-	1	2	-	1	1	1
MTBE (ter butyl methyl Ether)	3	3	-	2	-	-	-	3	-	3	1	-	1
Muriatic acid	-	1	2	2	2	-	-	1	-	1	1	1	1
Naphta	3	3	3	3	3	3	1	2	-	1	1	1	1
Naphtalene	3	3	3	3	3	3	3	2	3	2	1	1	1
Naphtenic acid	3	3	3	3	3	3	2	2	3	1	1	1	1
Natural gas	3	3	3	3	3	3	1 – 2	-	2	1	1	1	1
Neohexane	3	3	3	3	3	3	1 – 2	2	-	1	1	1	1
Nickel acetate	2	2	-	1	2	-	2	-	-	3	1	1	1
Nickel chloride	1	1	1	1	1	2	1	1	1	1	1	1	1
Nickel nitrate	1	1	1	1	1	2	1	1	1	1	1	1	1
Nickel sulphate	1	1	1	1	1	1	1	1	1	1	1	1	1
Nitric acid ? fuming	3	3	3	3	3	3	-	-	3	1 – 2	3	3	1 – 2
Nitric acid 10%	3	3	2	1	1	-	-	-	1	1	1	1	1
Nitric acid 20%	3	3	3	1	2	-	-	-	2	1	1	1	1
Nitric acid 30%	3	3	3	2	2	-	-	-	3	1	1	1	1
Nitric acid 40%	3	3	3	2	3	3	-	-	3	1	1	1	1
Nitric acid 40-60%	3	3	3	3	3	3	-	-	3	2	2	2	1
Nitrobenzene	3	3	3	3	3	3	-	-	3	2	1	1	1
Nitrocellulose	-	-	-	-	-	-	-	-	-	-	1	1	1
Nitrogen gas	1	1	1	1	1	1	1	1	1	1	1	1	1
Nitromethane	3	2	2	1	1	-	-	-	3	-	1	1	1
Nitropropane	-	-	-	-	-	-	-	-	-	-	1	1	1
Nitrous oxide gas	1	1	1	1	1	-	-	1	1	-	1	1	1
Nonenes	3	3	3	3	3	-	1 – 2	-	-	1	1	1	1
Octadecanoic acid	3	3	3	3	3	-	1 – 2	2	-	-	1	1	1
Octane	3	3	3	3	3	-	1	-	-	1	1	1	1
Octanol	2	2	2	1	2	-	2	1	2	2	1	1	1
Octyl acetate	3	3	2	2	2	-	-	3	3	3	1	1	1
Octyl alcohol	2	2	2	1	2	-	-	1	-	2	1	1	1
Octyl aldehyde	3	3	-	1	2	-	-	1	3	3	1	1	1
Octyl amine	2	2	2	1	2	-	-	2	3	3	1	1	1

Octyl carbinol	1	1	1	1	1	-	1	1	1	2	1	1	1
Octylene glycol	1	1	1	1	1	-	1	1	1	-	1	1	1
Oil ? petroleum	3	3	3	3	3	1 – 2	1	-	1 – 2	1	1	1	1
Oleic acid	3	3	-	2	-	-	2	1	3	2	1	1	1
Oleum	3	3	3	3	3	3	3	3	3	2	3	3	1 – 2
Olive oil	3	3	-	2	1	1	1	2	3	1	1	1	1
Orthodichlorobenzene	3	3	3	3	3	3	3	3	3	1	1 – 2	1 – 2	1
Orthodichlorobenzol	3	3	3	3	3	3	3	3	3	1 – 2	1 – 2	1 – 2	1
Orthoxylene	3	3	3	3	3	3	3	3	3	1	1	1	1
Oxalic acid	3	3	1	1	1	3	3	1	3	3	1	1	1
Oxygen	2	2	1	1	1	-	2	1	1	1	1	1	1
Ozone	3	3	1	1	1 – 2	2	3	1	2	3	1	1	1
Paint	3	3	2	2	-	-	2	-	-	2	1	1	1
Palmitic acid	3	3	-	2	2	-	1	1	3	3	1	1	1
Papermakers alum	1	1	1	1	1	1	1	1	1	1	1	1	1
Paraffin	3	3	3	3	3	2	1	1	3	1	1	1	1
Paraldehyde	3	3	-	1 – 2	1 – 2	3	3	-	-	3	1	1	1
Paraxylene	3	3	3	3	3	3	3	3	3	1	1 – 2	1 – 2	1
Pelargonic acid	3	3	-	1	1	-	2	1	3	-	1	1	1
Pentachloroethene	3	3	3	3	3	3	3	3	3	1	1	1	1
Pentadione	3	3	-	2	-	-	-	2	3	3	1	1	1
Pentane	3	3	3	3	3	2	1	1	3	1	1	1	1
Pentanone	3	3	-	2	-	-	-	-	3	3	1	1	1
Pentasol	1	1	-	1	1	-	-	-	1	1	1	1	1
Perchloric acid	3	3	-	2	-	3	3	-	2	1	1	1	1
Perchloroethylene	3	3	3	3	3	3	3	3	3	1	1	1	1
Petroleum crude	3	3	3	3	3	3	1	1	3	1	1	1	1
Petroleum ether	3	3	3	3	3	3	1 – 2	1 – 2	3	1	1	1	1
Petroleum oils	3	3	3	3	3	-	1	-	3	1	1	1	1
Phenol	3	3	3	-	2	-	3	1	-	1	1	1	1
Phenolsulphonic acid	3	3	3	1 – 2	1 – 2	-	-	1 – 2	3	3	1	1	1
Phenyl chloride	3	3	3	3	3	3	3	3	3	1	1	1	1

Phenylamine	-	-	-	1 – 2	-	-	-	1 – 2	-	-	1 – 2	1 – 2	1
Phenylhydrazine	2	1 – 2	2	2	2	3	3	-	3	1	1 – 2	1 – 2	1
Phosphoric acid 10%	1	1	1	1	1	2	-	1	1	1	1	1	1
Phosphoric acid 10-85%	3	2	1	1	1	2	3	1	1	1	1	1	1
Picric acid (alcoholic)	2	2	2	-	1 – 2	-	-	2	1	3	1	1	1
Pine oil	3	3	3	3	3	3	3	1 – 2	3	1	1	1	1
Pinene	3	3	3	3	3	3	2	1	3	1	1	1	1
Polyethylene glycol	1	1	1	1	1	-	1	1	1	1	1	1	1
Polyol ester	3	3	3	3	-	-	1 – 2	-	-	1 – 2	1	1	1
Polypropylene glycol	1	1	1	1	1	-	1	1	1	1	1	1	1
Potassium acetate	3	3	1	1	2	2	2	1	3	3	1	1	1
Potassium bisulfate	1	1	1	1	1	1	-	1	1	-	1	1	1
Potassium busulfite	1	1	1	1	1	-	-	1	1	-	1	1	1
Potassium carbonate	1	1	1	1	1	1	1	1	1	-	1	1	1
Potassium chloride	1	1	1	1	1	1	1	1	1	-	1	1	1
Potassium chromate	-	-	-	1	1	-	-	1	2	1	1	1	1
Potassium cyanide	1	1	1	1	1	-	-	1	1	-	1	1	1
Potassium dichromate	-	-	-	1	1	-	-	1	2	1	1	1	1
Potassium hydroxide	2	2	1	1	1	3	3	1	2	3	1	1	1
Potassium nitrate	1	1	1	1	1	1	1	1	1	1	1	1	1
Potassium pmanganate	-	-	-	-	-	-	-	2	1	-	1	1	1
Potassium silicate	1	1	1	1	1	-	-	1	1	1	1	1	1
Propane	3	3	3	3	3	3	1	1	2	1	1	1	1
Propanediol	1	1	1	1	1	-	-	1	1	1	1	1	1
Propanol	1	1	1	1	1	-	-	1	1	2	1	1	1
Propanolamine	-	-	-	-	-	-	-	1	-	3	1	1	1
Propanone	-	-	-	1	2	-	-	1	-	3	1	1	1
Propenenitrile	-	-	-	-	-	-	-	1	-	-	-	-	1
Propionic acid	-	-	2	1	2	-	-	-	-	-	1	1	1
Propyl acetate	3	3	2	1 – 2	2	-	-	1 – 2	-	3	1	1	1
Propyl alcohol	1	1	1	1	1	-	2	1	1	-	1	1	1
Propyl aldehyde	3	3	2	1	2	-	-	1	-	3	1	1	1

Propyl benzene	3	3	3	3	3	-	1 – 2	-	-	1	1	1	1
Propyl chloride	3	3	3	3	3	3	3	-	-	2	1	1 – 2	1
Propyl ether	-	-	-	2	-	-	-	1	-	-	1	1 – 2	1
Propylene	3	3	3	3	3	3	3	1	-	1	1	-	1
Propylene dichloride	3	3	3	3	3	3	3	3	-	2	1	1 – 2	1
Propylene glycol	1	1	1	1	1	-	-	1	1	1	1	1	1
Red oil	3	3	3	3	3	2	1	1	2	1	1	1	1
Resorcinol	-	-	-	-	-	-	-	-	-	2	1	1 – 2	1
Richfield A, 100%	-	-	-	-	-	-	-	-	-	-	1	1	1
Richfield D, 33%	-	-	-	-	-	-	-	-	-	-	1	1	1
Sea water	1	1	1	1	1	1	1	1	1	1	1	1	1
Sewage	2	2	3	3	2	1	1	1	1	-	1	1	1
Silicate esters	-	-	-	-	-	1	2	1	-	-	1	1	1
Silicate of soda	1	1	1	1	1	-	-	1	1	-	1	1	1
Silicone grease	1	1	1	1	1	1	1	1	1	-	1	1	1
Silicone oil	1	1	1	1	1	1	1	1	1	-	1	1	1
Silver nitrate	1	1	1	1	1	1	2	1	1	1	1	1	1
Skydrol 500B	-	-	-	1	2	3	-	2	3	3	1	1	1
Soap solutions	2	2	2	1	1	2	1	1	1	1	1	1	1
Soda ash	1	1	1	1	1	1	1	1	1	1	1	1	1
Soda lime	2	2	2	1	1	-	-	1	2	2	1	1	1
Soda, caustic	2	2	2	1	1	-	-	1	2	2	1	1	1
Sodium acetate	3	3	3	1	2	-	-	1	3	3	1	1	1
Sodium aluminate	1	1	1	1	1	1	-	1	1	-	1	1	1
Sodium bicarbonate	1	1	1	1	1	1	1	1	1	1	1	1	1
Sodium bisulphate	2	2	2	1	1	-	1	1	1	-	1	1	1
Sodium bisulphite	2	2	2	1	1	-	1	1	1	-	1	1	1
Sodium borate	1	1	1	1	1	1	1	1	1	1	1	1	1
Sodium chloride	1	1	1	1	1	1	1	1	1	1	1	1	1
Sodium cyanide	3	3	3	1	1	3	3	1	1	-	1	1	1
Sodium dichromate	3	3	3	1	1	-	-	1	2	3	1	1	1
Sodium Hypochlorite	3	3	3	2	2	-	-	1	2	2	1	1	1

Sodium metaphosphate	2	2	2	1	1	2	2	1	2	-	1	1	1
Sodium nitrate	1	1	1	1	1	-	-	1	1	1	1	1	1
Sodium perborate	2	2	2	1	1	2	2	1	1	-	1	1	1
Sodium peroxide	2	2	2	1	1	-	-	-	2	-	1	1	1
Sodium Silicate	1	1	1	1	1	1	-	1	1	-	1	1	1
Sodium Thiosulfate	1	1	1	1	1	1	-	1	1	1	1	1	1
Soybean oil	3	3	3	2	1	2	1	-	2	1	1	1	1
Stannic chloride	1	1	1	1	1	-	-	1	1	-	1	1	1
Steam, max 176°C	3	3	1	1	1 – 2	3	3	-	-	3	3	3	1
Stearic acid	3	3	2	1	2	2	2	1	3	3	1	1	1
Stoddarts solvent	3	3	3	3	3	-	1	1	3	1	1	1	1
Styrene	3	3	3	3	3	3	3	3	3	2	2	2	1
Sulphamic acid	2	2	1	1	1	2	2	1	2	3	1	1	1
Sulphonic acid	3	3	3	3	3	3	3	2	2	-	1	1	1
Sulphur	3	3	3	1 – 2	1 – 2	-	-	1 – 2	1 – 2	2	1	1	1
Sulphur dioxide	3	3	2	2	-	-	-	-	2	-	1	1	1
Sulphur trioxide	3	3	3	3	-	-	-	-	-	-	3	3	1
Sulphuric acid 25%	3	2	1	1	1	2	-	1	1	1	1	1	1
Sulphuric acid 50%	3	3	1	1	1	-	-	1	1	1	1	1	1
Sulphuric acid 75%	3	3	2	1	2	-	-	1	1	1	1	1	1
Sulphuric acid 96%	3	3	3	2	3	-	-	2	2	-	1 – 2	1	1
Sulphuric acid 98%	3	3	3	3	3	-	-	3	3	-	2	2	1
Sulphuric acid –fuming	3	3	3	3	3	3	3	3	3	3	3	3	1
Sulphurous acid 10%	2	2	1	1	1	-	-	1	1	-	1	1	1
Sulphurous acid 85%	3	3	1	1	1	-	-	1	1	-	1	1	1
Sulphydic acid (H2S)	3	3	2	1	1	-	3	1	1	-	1	1	1
Tall oil	3	3	3	3	3	2	1	-	3	1	1	1	1
Tallow	3	3	3	3	3	-	1	-	3	-	1	1	1
Tannic acid	2	2	1	1	1	-	-	1	1	-	1	1	1
Tar	3	3	3	3	3	1 – 2	2	-	-	1	3	2	1
Tartaric acid	3	3	2	1	1	2	2	1	1	-	1	1	1
Tertiary butyl alcohol	2	2	1	1	1	-	1	1	1	1	1	1	1

Tertiary butyl mercapt	3	3	3	3	3	-	-	-	-	1	-	-	1
Tetrachlorobenzene	3	3	3	3	3	3	3	3	3	1 – 2	2	1 – 2	1
Tetrachloroetane	3	3	3	3	3	3	3	3	3	1	2	2	1
Tetrachloroethylene	3	3	3	3	3	3	3	3	3	1	1 – 2	1	1
Tetrachloromethane	3	3	3	3	3	3	3	3	3	1	1	1	1
Tetrachloronaphtalene	3	3	3	3	3	3	3	3	3	1 – 2	1	1	1
Tetrahydrofuran	3	3	3	3	3	3	3	3	3	-	1 – 2	1	1
Tin chloride	2	2	2	1	1	-	2	-	1	-	1	1	1
Toluene	3	3	3	3	3	-	3	-	-	1	1 – 2	1 – 2	1
Toluidine	3	3	3	3	3	-	3	-	-	2	2	1	1
Toluol	3	3	3	3	3	-	3	-	3	1	1	1	1
Transformer oil	3	3	3	3	3	2	1	1	-	1	1	1	1
Tributyl amine	2	2	-	2	2	2	2	1	3	-	1	1	1
Trichloroacetic acid	3	3	2	1	2	-	-	-	3	3	1	1	1
Trichlorobenzene	3	3	3	3	3	3	3	3	3	2	2	2	1
Trichloroethane	3	3	3	3	3	3	3	3	3	1 – 2	1 – 2	1 – 2	1
Trichloroethylene	3	3	3	3	3	3	3	3	3	1 – 2	2	2	1
Trichloropropane	3	3	3	3	3	3	3	3	3	2	1	1	1
Tricresyl phosphate	3	3	-	2	2	-	-	1 – 2	3	3	1	1	1
Triethanolamine	3	2	2	1 – 2	1 – 2	2	3	1	2	3	1	1	1
Triethylamine	3	3	2	2	2	-	-	1	-	3	1	1	1
Triethylene glycol	1	1	1	1	1	-	-	1	1	1	1	1	1
Trimethylamine	3	3	-	-	-	-	-	1	-	3	1	1	1
Trinitrotoluene	3	3	3	3	3	3	3	-	-	2	2	1 – 2	1
Trioctyl phosphate	3	3	-	2	2	-	-	1	-	-	1	1	1
Tung oil	3	3	3	3	3	2	1	1 – 2	2	1	1	1	1
Turpentine	3	3	3	3	3	3	3	2	-	1	1	1	1
Urea	2	2	2	1	2	2	2	1	1	-	1	1	1
Vegetable oils	3	3	3	1 – 2	1	-	1	1	2	1	1	1	1
Vinegar	2	2	1	1	1	-	3	2	2	3	1	1	1
Vinyl acetate	3	3	-	2	2	-	-	1	3	3	1	1	1
Vinyl benzene	3	3	3	3	3	3	3	3	3	2	1 – 2	1	1

[illegible]