

Chemical resistance of Socorex[®] microdispensers

Acura[™] manual 865

Microdispensers are intended for rapid dispensing of various chemicals. They meet requirements assuring safety of the laboratory staff and their work. Compatibility for special applications such as trace material analysis, etc. has to be checked by the user.

Materials

Special attention is given to component materials (see charts below). All parts of the Acura[™] 865 microdispenser in contact with the liquid are made of robust materials providing for long instrument life.

Parts	Acura [™] 865	
Valve body	PVDF	
Valve seat	Saphire glass	
Valve ball	Synthetic ruby	
Valve springs	Platinum Iridium	
Valve cap	PVDF	
Barrel assembly	PVDF	
Plunger	Stainless steel DIN 316L (50 µL)	PVDF (200µL - 1000µL)
Plunger sleeve	PTFE	
Plunger O-ring	FPM	

Chemicals from A to Z

The following list includes most frequently used chemicals. It provides useful information for the safe and adequate use of Acura[™] manual 865 microdispensers. However, safety precautions and recommendations in operating instructions must be followed carefully.

Code explanations

A = Good resistance

B = Acceptable with limitations

C = Not recommended

1 = Possible crystallisation – valve and plunger blockage (do not let dry - rinse after each usage).

2 = Chemical degradation of parts in contact with liquid (FPM seal). Rinse after each usage

3 = Limited dosing cycles – progressive plunger slow down or blockage. Rinse after each usage

4 = Vapours may damage handle, soften, discolour of external parts or corrode inner metal parts.

Chemicals A - Z	Acura™ 865
A	
Acetaldehyde (Ethanal)	C/2
Acetic acid 96%	B/2
Acetic acid 100% (glacial)	B/2/3
Acetic anhydride	C/2
Acetone (Propanone)	C/2/3
Acetonitrile (MECN)	B/2
Acetophenone	C/2
Acetyl Chloride	C/2
Acetylacetone	C/2
Acrylic acid	C/2
Acrylonitrile	B/2/3
Adipic acid	B/1
Allyl alcohol	B/2
Aluminum chloride	C/1/4
Amino acids	B1/4
Ammonia 20%	C/2
Ammonia 20-30%	C/2
Ammonium chloride	C/1/4
Ammonium fluoride	C/1/4
Ammonium molybdate	B/1
Ammonium sulfate	C/1/2
Amyl alcohol (Pentanol)	A
Amyl chloride (Chloropentane)	B/4
Aniline	B/2
Ascorbic acid	B/1
n-Amyl acetate	C/2
B	
Barium chloride	B/1/4
Benzaldehyde	C/2
Benzene	C/3
Benzine	A
Benzoyl chloride	C/4
Benzyl alcohol	B/2/4
Benzyl chloride	C/4
Bis(2-ethylhexyl) phthalate	C/2/4
Boric acid 10%	B/1/4
Bromine	B/2/3
Bromobenzene	B/3/4
Bromonaphtalene	B/4
Butanediol	B/1/2
Butanol	B/2/3
Butanone (MEK)	C/2
Butyl acetate	C/2
Butyl methyl ether	C/2
Butylamine	C/2
Butyric acid	B/2

Chemicals A - Z	Acura™ 865
C	
Calcium carbonate	C/1
Calcium chloride	B/1/4
Calcium hydroxide	B/1/4
Calcium hypochlorite	B/1/2/4
Carbon disulfide	B/2/3/4
Carbon tetrachloride	C/3
Chlorine dioxide	C/2/4
Chloronaphthalene	B/2/3/4
Chloroacetaldehyde 45%	C/1/2/4
Chloroacetic acid	C/1/2/4
Chloroacetone	C/2/4
Chlorobenzene	B/2
Chlorobutane	B/4
Chloroethanol	B/2
Chloroform	C/2/4
Chlorosulfuric acid	C/4
Chlorosulfuric acid 100%	C/4
Chromic acid 100%	B/4
Chromosulfuric acid 100%	B/4
Citric acid	A/1
Copper fluoride	C/1/4
Copper sulfate	B/1/4
Cresol	B/2
Cumene (Isopropylbenzene)	B/4
Cyanoacrylate	C/1/2/4
Cyclohexane	B/2/3
Cyclohexanone	C/2
Cyclopentane	B/4
D	
1,2-Diethylbenzene	A
1,4-Dioxane (Diethylene dioxide)	C/2
1-Decanol	B/2
Decane	A
Di-(2-ethylhexyl) peroxydicarbonate	B/2/4
Dibenzyl ether	C/2/4
Dichloroacetic acid	C/2/4
Dichlorobenzene	B/4
Dichloroethane	B/4
Dichloroethylene	B/4
Diesel oil (Heating oil)	B/3
Diethanolamine	B/2/4
Diethylamine	C/2
Diethylene glycol	B/4
Diethylether	C/2
Dimethyl sulfoxide (DMSO)	B/1/2/4
Dimethylaniline	C/2/4
Dimethylformamide (DMF)	C/2/4
Diphenyl ether	B/1/2/3/4

Chemicals A - Z	Acura™ 865
E	
Ethanol	B/2/4
Ethanolamine	C/2
Ether	C/2/3
Ethyl acetate	C/2/3/4
Ethylbenzene	B/2/3
Ethylene chloride	B/2/3/4
Ethylene diamine	C/2
Ethylene glycol	B/4
F	
Fluoroacetic acid	C/2/4
Formaldehyde (Formalin)	A
Formamide	B/2/4
Formic acid	C/2/4
G	
Gamma-butyrolactone	C/2/4
Gasoline	C/3
Glycerin <40%	A
Glycolic acid 50%	B/1/2/4
H	
Heating oil (Diesel oil)	A
Heptane	B/3
Hexane	B/3
Hexanoic acid	B/1
Hexanol	A
Hydriodic acid	B/4
Hydrobromic acid	C/4
Hydrochloric acid 20% (HCl)	C/4
Hydrochloric acid 37% (HCl)	C/4
Hydrofluoric acid (HF)	C/4
Hydrogen peroxide	B/3/4
I	
Iodine	B/1/2/3/4
Iodine bromide	C/2/4
Iodine chloride	C/2/4
Isoamyl alcohol	A
Isobutanol	A
Isooctane	B/3
Isopropanol	A
Isopropyl ether	C/2/3/4
Isopropylamine	B/2/4
L	
Lactic acid	C/1/4
M	
2-Methoxyethanol	B/2/4
Methanol	C/2/4
Methoxybenzene (Anisol)	C/2/4
Methyl benzoate	C/1/4
Methyl chloride (Chloromethane)	C/3/4
Methyl formate	C/2/4
Methyl iodide (Iodomethane)	B/4

Chemicals A - Z	Acura™ 865
M	
Methyl methacrylate (MMA)	C/2/4
Methyl propyl ketone (2-Pentanone)	C/2/3/4
Methyl tert-butyl ether (MTBE)	B/2/4
Methylene chloride (Dichloromethane) (DCM)	C/3/4
Methylpentanone	C/2/4
N	
N-Butylamine	C/2/4
Nitric acid 100%	B/2/4
Nitric acid 30-70%	B/2/4
Nitric acid dil. <30%	B/2/4
Nitro-hydrochloric acid (Aqua regia)	C/4
Nitrobenzene	B/2/3/4
Nitromethane	C/2/4
N-methyl-2-pyrrolidone (NMP)	B/4
O	
Octane	B/3
Octanol	A
Oil (engine oil)	A
Oil (vegetable, animal)	B/2
Oil of turpentine	B/2
Oleic acid	B/1/2/3/4
Oxalic acid	B/1/4
P	
Pentane	B/3/4
Peracetic acid	B/4
Perchloric acid 100%	B/4
Perchloric acid diluted	B/4
Perchloroethylene	C/3
Petroleum	B/3
Petroleum ether / spirit	C/3
Phenol	B/2/3/4
Phenylethanol	A
Phenylhydrazine	B/1/4
Phosphoric acid 100%	B/3/4
Phosphoric acid 85%	B/3/4
Piperidine	C/2
Potassium chloride	C/1/4
Potassium dichromate	B/1/2
Potassium hydroxide	B/1/2
Potassium iodide	B/1/4
Potassium permanganate	C/1/2/4
Potassium peroxydisulfate (persulfate)	B/1/2
Potassium sulfate	B/1
Propionic acid (Propanoic acid)	B/4
Propylene glycol (Propane-1,2-diol)	A
Propylene oxide	C/2/4
Pyric acid (Trinitrophenol)	B/2/4
Pyridine	C/2/4

Chemicals A - Z	Acura™ 865
P	
Pyruvic acid	B/2/4
R	
Resorcin	B/1/2/4
S	
Salicylaldehyde	B/2/4
Silver acetate	C/1
Silver nitrate	C/1
Sodium acetate	C/1/2
Sodium chloride (kitchen salt)	B/1/4
Sodium dichromate	C/1/2/4
Sodium fluoride	C/1/4
Sodium hydroxide 30%	C/1/2
Sodium hypochlorite	C/1/2/4
Sodium thiosulfate	B/1/4
Sulfonitric acid 100%	B/2/4
Sulfur dioxide	B/2/4
Sulfuric acid 98%	B/3/4
T	
Trichlorotrifluoroethane	B/4
Tartaric acid	B/1/4
Tetrachlorethylene	B/2/4
Tetrahydrofuran (THF)	C/2/4
Tetramethylammonium hydroxide	C/1/2/4
Toluene	C/2/3/4
Trichlorethylene	C/3
Trichloroacetic acid	C/1/2/4
Trichlorobenzene	B/2/4
Trichloroethane	C/3
Trichloromethane (Chloroform)	B/2/4
Triethanolamine	C/2
Triethylene glycol	B/2/4
Trifluoroacetic anhydride (TFAA)	C/2/4
Trifluoromethane (Fluoroform)	B/4
U	
Urea	C/1/4
X	
Xylene	C/2/3/4
Z	
Zinc chloride 10%	C/1/4
Zinc sulfate 10%	C/1/4

The above guidelines have been carefully reviewed prior to publication. Should you require information on chemicals not listed or contribute to some comments, please feel free to contact us.