

# Bottletop dispenser LLG-uniTOPDISPENS 2

## Chemical Resistance

### Chemicals from A to Z

The following list includes most frequently used chemicals. It provides useful information for the safe and adequate use of LLG-uniTOPDISPENS 2. 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 - blockage or possible coating peeling

(do not let dry plunger/barrel together).

2 = Swell of plunger protection layer, possible peeling.

3 = Acid vapours (better resistance with lower concentration).

Do not leave instrument on bottle.

4 = Risk of damage, softening or discoloration of external parts through vapours.

Do not leave instrument on bottle.

5 = Chemical degradation of glass parts (plunger/barrel).

# List of Reagents

## Chemicals A - Z

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

# List of Reagents

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

# List of Reagents

Chemicals A - Z	
<b>E</b>	
Ethanol	A
Ethanolamine	B/4
Ether	B/4
Ethyl acetate	B/4
Ethylbenzene	B/4
Ethylene chloride	B/4
Ethylene diamine	A
Ethylene glycol	A
<b>F</b>	
Fluoroacetic acid	B /4
Formaldehyde (Formalin)	A
Formamide	A
Formic acid	A
<b>G</b>	
Gamma-butyrolactone	A
Gasoline	B/4
Glycerin <40%	A
Glycolic acid 50%	A
<b>H</b>	
Heating oil (Diesel oil)	A
Heptane	A
Hexane	A
Hexanoic acid	A
Hexanol	A
Hydriodic acid	B/4
Hydrobromic acid	A
Hydrochloric acid 20% (HCl)	A
Hydrochloric acid 37% (HCl)	B/3
Hydrofluoric acid (HF)	C/5
Hydrogen peroxide	A
<b>I</b>	
Iodine	A
Iodine bromide	C/4
Iodine chloride	C/4
Isoamyl alcohol	A
Isobutanol	A
Isooctane	A
Isopropanol	A
Isopropyl ether	B/4
Iso-propylamine	B/4
<b>L</b>	
Lactic acid	A
<b>M</b>	
2-Methoxyethanol	A
Methanol	A
Methoxybenzene (Anisol)	B/4
Methyl benzoate	B/4
Methyl chloride (Chloromethane)	B/4
Methyl formate	A

# List of Reagents

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

## List of Reagents

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