OCEANZ PA11

Overview of the chemical resistance of PA11 based 3D printed parts

Medium		20°C	40°C	60°C	90°C
Inorganic bases					
Ammonium hydroxide	*concentrated*	G	G	G	G
Ammonia	*Liquid or gas*	G	G		
Lime-wash		G	G	G	
Potassium hydroxide	*50%*	G	L	P	P
Sodium hydroxide	*5%*	G	G	L	
Sodium hydroxide	*10%*	G	L	L	
Sodium hydroxide	*50%*	G	L	P	P
Inorganic acids					
Chromic acid	*10%*	P	P	P	P
Hydrochloric acid	*1%*	G	L	P	P
Hydrochloric acid	*10%*	G	L	P	P
Nitric acid	*All concentrations*	P	P	P	P
Phosphoric acid	*50%*	G	L	P	P
Sulphuric acid	*1%*	G	L	L	P
Sulphuric acid	*10%*	G	L	P	P
Sulphuric trioxide		L	P	P	P
Inorganic salts					
Alum		G	G	G	
Aluminium sulphate		G	G	G	G
Ammonium nitrate		G	G	G	
Ammonium sulphate		G	G	L	
Chlorides	*Barium, calcium, saturated sodium*	G	G	G	G
Calcium arsenate		G	G	G	
Calcium sulphate		G	G	L	
Copper sulphate		G	G	G	G
Diammonium phosphate		G	G	L	
Magnesium chloride		G	G	G	G
Potassium ferrocyanide		G	G	G	
Potassium nitrate		G[1]	G[1]	P	P
Potassium sulphate		G	G	G	G
Sodium carbonate		G	G	L	P
Sodium silicate		G	G	G	
Sodium sulphate		G	L	L	
Trisodium phosphate		G	G	G	G
Other inorganic products					
Agricultural sprays		G	G		
Bleach solution		L	P	P	P
Bromine / Chlorine / Fluorine		P	P	P	P
Hydrogen		G	G	G	G
Hydrogen peroxide	*20 volumes*	G	L		
Mercury		G	G	G	G
Oxygen		G	G	L	P
Ozone		L	P	P	P

Potassium permangate	*5%*	P	P		
Sea water		G	G	G	
Soda water		G	G	G	G
Sulphur		G	G		
Hydrocarbons					
Acetylene		G	G	G	G
Alcanes	*Methane, propane, butane, hexane*	G	G	G	
Benzene		G	G[2]	L	
Cyclohexane		G	G	L	
Decalin		G	G	L	
HFA		G			
Naphthalene		G	G	G	L
Styrene / Tuolene / Xylene		G	G[3]	L	L
Various products					
Beer, cider, wine		G			
Fruit juices, milk		G			
Mustard, vinegar		G			
Petrol	*Crude petroleum, high-octane, kerosene (paraffin), normal petrol, solvent naphta, town gas*	G	G	G[3]	
Greases		G	G	G	G
Oils		G	G	G	G
D.D.T. or lindane	*Solutions or emulsions*	G	G		
Soap	*Solution*	G			
Stearin		G	G	G	
Turpentine		G	G	G[3]	
Organic acids and anhydrides					
Acetic acid		L	P	P	P
Acetic anhydride		L	P	P	P
Citric acid		G	G	L	P
Formic acid		P	P	P	P
Lactic acid		G	G	G	L
Oleic / Stearic acid		G	G	G	L
Oxalic acid		G	G	L	P
Picric acid		L	P	P	P
Tartaric acid	*Saturated solution*	G	G	G	L
Uric acid		G	G	G	L
Various organic compounds					
Anethole		G			
Carbon disulphide		G[3]			
Diacetone alcohol		G	G[3]	L	
Dimethyl formamide		G	G	L	
Ethylene chlorhydrin		P	P		
Ethylene oxide		G	G	L	P
Furfurol		G	G[3]	L	P
Glucose		G	G	G	G
Tetraethyl lead		G			
Tetrahydrofurane		G	G	L	
Phenols		P	P	P	P
Organic bases					
Aniline	*Pure*	L	P	P	P
Diethanolamine	*20%*	G	G[3]	G[3]	L
Pyridine	*Pure*	L	P	P	P

Urea		G	G	L	L
Salts, esters, ethers					
Acetate esters	*Amyl, butyl, methyl*	G	G	G	L
Phosphate esters	*Dioctyl, tributyl, tricesyl*	G	G	G	L
Diethyl ether		G			
Dioctylphtalate		G	G	G	L
Fatty acid esters		G	G	G	G
Methyl sulphate		G	L		
Alcohols					
Benzyl alcohol		L	P	P	P
Butanol		G[3]	L	P	P
Ethanol	*Pure*	G[3]	G[3]	L	
Glycerin	*Pure*	G	G	L	P
Glycol		G	G	G	P
Methanol	*Pure*	G[3]	L	P	
Chlorinated solvents					
Carbon tetrachloride		P	P		
Methyl bromide		G	P		
Methyl chloride		G	P		
Perchloroethylene		G	G	L	
Trichloroethane		L	P		
Trichloroethylene		G	L		
Adehydes and ketones					
Aldehydes	*Acetaldehyde / benzaldehyde / formaldehyde*	G	L	P	
Acetone	*Pure*	G	G	L	P
Cyclohexanone		G	L	P	
Methylethylketone	*MEK*	G	G	L	P
Methylisobutylketone	*MBK*	G	G	L	P

Condition after 18 months contact:

- *G: Good* *L: Limited* *P: Poor*
- *1: Slight yellowing* *2: Yellowing* *3: Swelling action*

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