

## ALP Series

### Fluid Compatibility Guide

PRELIMINARY

#### ■ POLYSULFONE

Whilst the following list may be used as a guide and gives common industrial fluids that are typically acceptable, we recommend that before use you check that the fluid you wish to use this device in is compatible with Polysulfone. Refer also to the chapter Test Process.

Acetic acid – Glacial	Glycerol
Acetic acid – 10%	Heptane
Ammonia – 88	Hydrochloric acid – 10%
Ammonium Hydroxide – 10%	Hydrochloric acid conc.
Ammonium Chloride – 10%	Hydrogen Peroxide
Aviation spirit	Isopropanol
Benzene	Iso-Octane
Benzoic acid	Kerosene
Bleach	Linseed oil
Brine	Magnesium Sulphate
Butane	Methanol
Calcium Nitrate	Motor oil
Calcium Hypochlorite	Nitric acid 10%
Carbon Tetrachloride	Oils - Vegetable
Chromic acid	Oxalic acid
Copper Sulphate	Petroleum Ether
Creosote	Potassium Hydroxide – 10%
Cyclohexane	Potassium Hydroxide – 50%
Cyclohexanol	Silicone fluids
Detergent solutions	Silver Nitrate
Diesel fuel	Soap solution
Diethylamine	Sodium Chloride
Diethyl Ether	Sodium Hydroxide – 10%
Dioctyl Phthalate	Sodium Hydroxide – 50%
Edible fats & oils	Sulphuric acid – 10%
Ethanol – 50%	Transformer oil
Ethyl Alcohol	Turpentine
Ethylene Glycol	Varnish
Ferric Chloride	Water
Formaldehyde	White Spirit
Formic acid	

#### ■ TROGAMID®

Whilst the following list may be used as a guide and gives common industrial fluids that are typically acceptable, we recommend that before use you check that the fluid you wish to use this device in is compatible with Trogamid® (EU food-contact grade). Refer also to the chapter Test Process.

Acetone	1,2-propane diol
Benzene	Regular gas
Break Free (lubricating oil)	Test fuel (M15)
Carbon tetrachloride	Toluene
Econa PG32 (Hydraulic fluid)	Xylene
Ethanol	
Ethyl acetate	
Eucalyptus oil	
Formaldehyde solution	
Glycerine (DAB6)	
Heating oil	
Isopropanol	
Methanol	
Mountain pine oil	
Petroleum ether	
Potassium hydroxide (25 w/w-%)	
Potassium hydroxide (50 w/w-%)	
Premium gasoline	

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#### ■ TEST PROCESS

The chemical compatibility lists are not exhaustive and customers often want to use the switches with liquids that have not been approved before. In this case, a compatibility test should be performed using a sensor made with the material (Polysulfone, Trogamid®) you wish to use.

The test is simple and is performed as follows:

1. Submerge the sensor tip and threads in the liquid of interest. Do NOT submerge the wires.
2. Heat the liquid to the maximum expected operating temperature.  
**CAUTION:** Assuming it is safe to do so.
3. Leave the switch in this liquid at the maximum operating temperature for two weeks.
4. Remove the switch and inspect it for signs of:
  - Cracking
  - Crumbling
  - Crazeing
  - Melting
  - Deformation
  - Swelling

Assuming the switch appears to be unaffected, it should be tested in accordance with its operating procedure to ensure it remains functional.

If the switch passes its functional tests, then the liquid can be considered to be compatible with the switch housing material.