
AEON NG-P5 15

MATERIALS COMPATIBILITY

The most meaningful evaluation of compatibility of oil with various seals, plastics, paints and metals is in actual field testing and customer usage. Our experience has shown that Polyalphaolifin "PAO" based product has performed equally as well as conventional, mineral oil based lubricants with seals, paints, metals, and plastics normally used in oil applications. We are not aware of any compatibility problems in either controlled tests or extensive service usage.

Elastomers:

Recommended (superior performance)

Nitrile (Buna N)
Epichlorohydrin
Poly Urethane
Fluorosilicene
Fluoroelastomer (Viton)
Polyacrylate
Phosphonitrilic Fluoroelastomer
Aflas (TFE Propylene)
Buna N, over 36% nitrile content

Good (performance equal to or better than conventional mineral oil lubricants)

Silicone
Chlorsosulfonate Polyethylene (Hypalon)
Neoprene
Polysulfide
Ethylene Acrylate (Vamac)

Not Recommended

Natural Rubber
Butadiene Styrene (SBR, Buna S)
Butyl rubber
Ethylene Propylene (EDPM)
Buna N – less than 36% nitrile

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Paints:**Recommended**

Epoxy
Oil resistant Alkyd
Acrylic Enamel

Not Recommended

Latex
Water Solvent Based Paints

NOTE: There are many paints available for industrial use. Generally paints recommended for use in oil environments are suitable for use with PAO based products.

Plastics:**Recommended**

Fluorocarbon
Nylon
Delrin
Celcon
Polyethylene
Polycarbonate
Polystyrene
PVC
ABS
PBT-Poly-1,1,4-Butylene Terephthalate

The very low volatility characteristics of PAO based product will greatly reduce the oil carried over into air lines and equipment and therefore reduce the possibility of compatibility problems in the air line.

TYPICAL TEST RESULTS

Elastomer Swell, ASTM D-471, 158°F (70°C), 168 hrs, % Volume Swell

	<u>Diester Oil</u>	<u>PAO Oil</u>	<u>Mineral Oil</u>
Buna N	6.9	0.7	1.2
Neoprene	50.5	9.0	15.0
Viton	0.5	0.2	0.5
Butyl	55.1	71.7	119.5
Ethylene Propylene	69.7	86.1	143.5

As shown by the test results, Polyalphaolifin (PAO) type oil has fairly good compatibility with the oil resistant elastomers tested.