

AEON-BIO MATERIALS COMPATIBILITY

The most meaningful evaluation of compatibility of an oil with various seals, plastics, paints, and metals is in actual field testing and customer usage. Our experience has shown that AEON-BIO has performed equally as well as conventional compressor oils 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.

The following is a list of materials which are Recommended, Good, or Not Recommended, based on laboratory testing.

Elastomers:

Recommended (Superior Performance)

Viton A, DuPont, fluoroelastomer
Kalrez 1050, DuPont, perfluoroelastomer
Kalrez 3018
Buna S, Butadiene - styrene copolymer
Buna N, over 36% nitrile content
Natural red rubber
Natural black rubber
Thiokol 3060, polysulfide
Silicone rubber
White asbestos
F rubber
H rubber

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

Neoprene
Natural gum rubber

Not Recommended

Butyl Rubber
Buna N - less than 36% nitrile
Hypalon, DuPont, chloro-sulfonated polyethylene

Paints:

Recommended (Superior Performance)

Epoxy
Oil Resistant Alkyd

Gardner Denver
Master Distribution Center
5585 East Shelby Drive, Memphis, TN
Phone: (901) 542-6100 FAX: (901) 542-6159

Not RecommendedAcrylic
PVC

Note: There are many paints available for industrial use. Generally, paints recommended for use in oil environments are suitable for use with AEON-BIO.

Plastics:**Recommended**Fluorocarbon
Nylon
Delrin
Celcon**Fair**

Polycarbonate

Not RecommendedPolystyrene
PVC
ABS

The very low volatility characteristics of AEON-BIO 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

	POLYOL ESTER OIL	DIESTER OIL	MINERAL OIL
Buna N	17.5	6.9	1.2
Buna N (H Stock)	1.9	10.0	3.0
Buna N (L Stock)	14.5	31.7	9.8
Neoprene	15.3	50.5	15.0
Viton	0.5	0.5	0.5
Butyl	96.6	55.1	119.5
Ethylene Propylene	22.6	69.7	143.5

As shown by the test results, the AEON-BIO series polyol ester type oil has fairly good compatibility with the oil resistant elastomers tested. The mineral oil is Dexron II, an oil commonly used for rotary screw applications in the U.S.