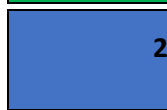


## O-RING CHEMICAL RESISTANCE FOR EXPLORATION AND PRODUCTION COMPANIES

### Rating Legend



**1** Little to Minor Effect, 0 to 5%  
Volume Swell



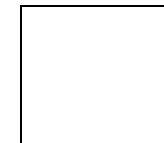
**2** Minor to Moderate Effect, 5 to 10%  
Volume Swell



**3** Moderate to Severe Effect, 10 to 20%  
Volume Swell



**4** Not Recommended



**5** No Data  
Available

KC SEALS MATERIALS	V75/90	CV75	LTFKM	A80	HSN80/90	NBR 70/90	SZ481	SZ498	SZ134
Acetic Acid, 30%	C	A	A	A	B	B	A	A	A
Acetone	C	B	C	C	D	D	A	A	A
Amine/oil inhibitors	C	A	C	A	B	B	A	A	A
Aromatic hydrocarbons	A	A	A	C	C	C	A	A	A

Base oil		A	A	A	A	A	A	A	A	A
Biocides		C	C	C	B	B	B	A	A	A
Biodiesel		A	A	A	A	B	C	A	A	A
Bioethanol		A	A	A	A	A	A	A	A	A
Boric Acid		A	A	A	ND	A	A	A	A	A
Brine	Calcium Chloride	A	A	A	A	A	A	A	A	A
	Bromine Water	A	A	A	A	C	D	A	A	A
	Formate	C	B	B	A	C	C	A	A	A
	Potassium Chloride	A	A	A	A	A	A	A	A	A
	Sodium Chloride	A	A	A	ND	A	A	A	A	A
	Water	A	A	A	A	A	A	A	A	A
Butyl Amine		D	D	D	D	C	C	A	A	A
Calcium Chloride		A	A	A	A	A	A	A	A	A
Carbon Dioxide (CO2)		A	A	A	A	A	A	A	A	A
Cement		A	A	A	A	A	B	A	A	A
Chlorine		B	A	B	ND	C	D	A	A	A
De-emulsifier (mud)		A	A	A	A	A	B	A	A	A
Defoamers		A	A	B	A	A	A	A	A	A
Dibutyl Amine		D	D	D	D	D	D	A	A	A
Dicyclohexylamine		D	D	D	D	D	D	A	A	A
Dielectric fluid		A	A	A	A	A	A	A	A	A
Diethylamine		D	D	D	ND	B	B	A	A	A
Emulsifiers		A	A	B	A	B	B	A	A	A
Emulsion (oil and water)		A	A	B	A	A	A	A	A	A
Ethanolamine		D	D	D	A	B	B	A	A	A

Ethylene Diamine		D	D	D	ND	A	A	A	A	A
Ethylene Glycol		A	A	A	A	A	A	A	A	A
Foaming agents		A	A	B	A	A	B	A	A	A
Formic Acid		D	C	D	A	B	B	A	A	A
Formation water	Acid	A	A	A	A	B	B	A	A	A
	Chloride	A	A	A	A	A	B	A	A	A
Gravel packer fluid		A	A	A	A	A	A	A	A	A
	Oceanic HW 443	B	B	B	A	B	B	A	A	A
	Oceanic HW 500	B	A	B	A	B	B	A	A	A
Hot water		B	A	A	A	B	B	A	A	A
High pH fluids (30% KOH)		C	A	C	A	A	A	A	A	A
Hydraulic control fluid	Oceanic HW 525	B	A	B	A	B	B	A	A	A
	Oceanic HW 540	B	A	B	A	B	B	A	A	A
Hydrochloric Acid (70%)		A	A	A	B	D	D	A	A	A
Hydrogen Sulfide (HBS)	<10%	B	B	B	A	B	C	A	A	A
Hydrogen Sulfide (HBS)	<30%	B	B	B	A	C	D	A	A	A
Hydrocarbon diesel		A	A	A	C	B	B	A	A	A
Lost circulation fluids		A	A	A	A	A	A	A	A	A
Lubricants		A	A	A	A	A	A	A	A	A
Methane		A	A	A	A	A	A	A	A	A
Methanol		A	A	B	A	A	A	A	A	A
Mineral based oil		A	A	A	A	A	A	A	A	A
	Water	A	A	A	A	A	A	A	A	A
Mud	Oil	A	A	A	A	A	A	A	A	A
	Synthetic oil	B	B	C	B	B	C	A	A	A

Monoethanol Amine	D	D	D	D	D	D	A	A	A
Phosphoric Acid (85%)	A	A	A	A	B	B	A	A	A
Polyalkylene glycol	A	A	A	A	A	B	A	A	A
Poly-a-olefin	A	A	A	A	A	B	A	A	A
Poly-ol fire resistant ester	B	B	C	C	C	C	A	A	A
Potassium Hydroxide (30%)	D	A	D	A	B	B	A	A	A
Potassium Hydroxide (Saturated)	D	A	D	A	B	B	A	A	A
Sea water	A	A	A	A	A	A	A	A	A
Sodium Carbonate	A	A	A	ND	A	A	A	A	A
Sodium Hydroxide	A	A	A	A	B	B	A	A	A
Slurries	A	A	A	A	A	A	A	A	A
Synthetic biodegradeable ester	B	B	B	B	C	C	A	A	A
Steam	C	C	C	A	D	D	A	A	A
Thinners/dissolvers	A	A	A	A	B	B	A	A	A
Triethanol Amine	D	D	D	A	C	B	A	A	A
Viscosifiers	A	A	A	A	A	A	A	A	A
Well cleaning fluids	B	B	B	A	A	B	A	A	A