

Introduction

Corrosive chemicals have differing effects on the standard and Viton seals used in Ovation pipettes. The charts below serve as a general guide for chemical compatibility. Temperature, pressure, concentration and exposure time are additional factors that affect the chemical resistance of the seal materials.

More frequent lubrication of plunger surfaces is advised to preserve the integrity of the surfaces when known aggressive chemicals are used.

LEGEND:

A = no effect, little reaction

B = minor effect, slight softening of seal, and possible plunger stickiness could occur

C = moderate effect, not recommended for continuous use, softening or deterioration of seal could occur

D = not recommended for use

CHEMICAL	STANDARD	VITON
Acetylaldehyde	D	D
Acetic Acid	C	B
Acetone	D	D
Alcohol		
-Methyl	A	C
-Isopropyl	B	A
-Ethyl	C	A
-Butyl	C	A
Aluminum Chloride	A	A
Aluminum Sulfate	A	A
Aminos	D	D
Ammonia Acetate	B	A
Ammonium Chloride	B	A
Ammonium Phosphate	A	A
Benzaldehyde	D	D
Benzene	D	A
Boric Acid	A	A
Butadiene	D	B
Calcium Carbonate	A	A
Calcium Chloride	A	A
Calcium Hypochlorite	C	A
Calcium Sulfate	A	A

CHEMICAL	STANDARD	VITON
Carbon Disulfide	D	A
Carbon Tetrachloride	D	B
Chlorine	D	A
Chloroacetic Acid	D	D
Chlorobenzene	D	A
Chloroform	D	A
Citric Acid	A	A
Copper Cyanide	A	A
Copper Sulfate	A	A
Cupric Acid	B	A
Cyclohexanone	D	D
Diacetone Alcohol	D	D
O-Dichlorobenzene	D	C
Dichloroethane	D	C
Diethylene Glycol	A	A
Dimethyl Formamide	D	C
Diphenyl	D	A
Ethyl Acetate	D	D
Ethyl Benzoate	D	A
Ethyl Chloride	A	A
Ethyl Sulfate	A	A

CHEMICAL	STANDARD	VITON
Ethylene Bromide	D	A
Ethylene Chlorohydrin	D	A
Ethylene Glycol	A	A
Ferric Nitrate	A	A
Ferric Sulfate	A	A
Formaldehyde	C	D
Freon-113	A	B
Glycolic Acid	A	A
Hydrochloric Acid 30%	B	A
Hydrofluoric Acid 20%	D	A
Hydrogen Peroxide	D	A
Hydrogen Sulfide	D	D
Hydroxyacetic Acid 70%	A	A
Isopropyl Acetate	D	D
Lithium Chloride	A	A
Magnesium Chloride	A	A
Magnesium Hydroxide	A	A
Magnesium Oxide	A	C
Maleic Anhydride	D	A
Methane	A	A
Methanol	A	C
Methyl Acetone	D	D
Methyl Chloride	D	A
Methyl Ethyl Ketone	D	D
Methylamine	B	D
Methylene Chloride	D	B
Nitric Acid	D	A
Oleic Acid	B	B
Oxalic Acid	D	A
Perchloric Acid	D	A
Phenol	D	A
Phosphoric Acid	D	A
Potassium Bicarbonate	A	A

CHEMICAL	STANDARD	VITON
Potassium Chloride	A	A
Potassium Hydroxide	B	B
Potassium Nitrate	A	A
Potassium Sulfate	A	A
Potassium Sulfide	A	A
Propylene Glycol	A	A
Silicon	A	A
Sodium Acetate	B	D
Sodium Benzoate	B	A
Sodium Bicarbonate	A	A
Sodium Bisulfate	B	A
Sodium Carbonate	A	A
Sodium Chloride	A	A
Sodium Fluoride	A	A
Sodium Hydroxide 20%	D	C
Sodium Hypochlorite	D	A
Sodium Nitrate	A	A
Sodium Sulfide	A	A
Stearic Acid	B	A
Styrene	D	B
Sulfate	A	A
Sulfur Dioxide	D	A
Sulfuric Acid	C	A
Tetrachlorethylene	D	A
Toluene	D	C
Trichloroacetic Acid	.	C
Trichlorethane	D	A
Triethylamine	C	D
Trisodium Phosphate	A	A
Vinyl Acetate	D	A
Vinyl Chloride	D	A
Xylene	D	B
Zinc Chloride	A	A
Zinc Sulfate	A	A