DuPont™ Neoprene Fluid Resistance at Room Temperature

Technical Information — Rev. 1, July 2010

Chemical	Rating
Acetic acid, 30%	A
Acetic acid, glacial	B
Acetic anhydride	A
Acetone	B
Acetylene	B
Aluminum chloride solutions	A
Aluminum sulfate solutions, 70 °C [158 °F]	A
Ammonia, anhydrous	A
Ammonium chloride solutions	A
Ammonium hydroxide solutions, 70 °C [158 °F]	A
Ammonium sulfate solutions, 70 °C [158 °F]	A
Amyl acetate	C
Amyl alcohol, 70 °C [158 °F]	A
Aniline	C
ASTM hydrocarbon test fluid	X
ASTM oil #1	A
ASTM oil #3, 70 °C [158 °F]	B
ASTM reference fuel A	A
ASTM reference fuel B	C
ASTM reference fuel C	C
Asphalt	B
Barium hydroxide solutions, 70 °C [158 °F]	A
Benzaldehyde	C
Benzene	C
Benzoyl chloride	C

Chemical	Rating
Borax solutions, 70 °C [158 °F]	A
Borax acid solutions 70 °C [158 °F]	A
Bromine, anhydrous liquid	C
Butane	A
Butyl acetate	C
Butyraldehyde	B
Butyric acid	C
Calcium bisulfite solutions, 93 °C [200 °F]	A
Calcium chloride solutions	A
Calcium hydroxide solutions, 70 °C [158 °F]	A
Calcium hypochlorite, 5%	B
Calcium hypochlorite	X
Carbon bisulfide	C
Carbon dixoide	A
Carbon monoxide	A
Carbon tetrachloride	C
Castor oil, 70 °C [158°F]	A
Chlorine gas, dry	B
Chlorine gas, wet	C
Chloroacetic acid	A
Chlorobenzene	X
Chloroform	C
Cholorsulfonic acid	C
Chromic acid, 10-50%	C
Citric acid solutions	A
Copper chloride solutions	A
Copper sulfate solutions	A

Chemical	Rating
Cottonseed oil	A
Creosote oil	C
Cyclohexane	C
Dibutyl phthalate	C
Diethyl sebacate	C
Dioctyl phthalate	C
Dowtherm A	B
Ethyl acetate	C
Ethyl alcohol, 70 °C [158 °F]	A
Ethyl chloride	B
Ethyl ether	C
Ethylene dichloride 49 °C [120 °F]	C
Ethylene glycol, 70 °C [158 °F]	A
Ethylene oxide	X
Ferric chloride solutions	A
Fluosilici acid, 70 °C [158 °F]	A
Formaldehyde, 40%	A
Formaldehyde, 40%, 70 °C [158 °F]	C
Formic acid	A
Freon® 11	A-B
Freon® 11, 54 °C [130 °F]	B
Freon® 12	A
Freon® 12, 54 °C [130 °F]	A
Freon® 22	A
Freon® 22, 54 °C [130 °F]	A
Freon® 113	A
Freon® 113, 54 °C [130 °F]	A
Freon® 114	A
Freon® 114, 54 °C [130 °F]	T
Fuel oil	A
Furfural	B
Gasoline	B
Glue, 70 °C [158 °F]	A
Glycerin, 70 °C [158 °F]	A
n-Hexane	A
Hydraulic oils	A
Hydrochloric acid, 20%	A
Hydrochloric acid, 37%	A
Hydrochloric acid, 37%, 70°C [158°F]	B

Chemical	Rating
Hydrocyanic acid	A
Hydrofluoric acid, 48%	A
Hydrofluoric acid, 75%	T
Hydrogen	A
Hydrogen peroxide, 88-1/2%	B
Hydrogen sulfide	A
Isooctane	A
Isopropyl alcohol	A
Isopropyl ether	C
JP-4	C
JP-5	X
JP-6	X
Kerosene	B
Lacquer solvents	C
Lactic acid	A
Linseed oil	A
Lubricating oils, 70 °C [158 °F]	B
Magnesium chloride solutions, 70 °C [158 °F]	A
Magnesium chloride solutions, 70 °C [158 °F]	A
Mecuric chloride solutions	A
Mercury	A
Methyl alcohol, 70 °C [158 °F]	A
Methyl ethyl ketone	X
Methylene chloride, 212 °C [100 °F]	C
Mineral oil	A
Mixed acids	X
Naphtha	C
Naphthalene, 80 °C [176 °F]	C
Nitric acid, 10%	B
Nitric acid, 30%	C
Nitric acid, 60%	X
Nitric acid, 70%	C
Nitric acid, red fuming	C
Nitrobenzene	C
Oleic acid	B
Oleum, 20%	C
Palmitic acid, 70 °C [158 °F]	B
Perchloroethylene	X

Chemical	Rating
Phenol	B
Phosphoric acid, 20%	T
Phosphoric acid, 60%	A
Phosphoric acid, 70%	T
Phosphoric acid, 85%	A
Pickling solution, 20% nitric acid, 4% HF	B-C
Pickling solution, 17% nitric acid, 4% HF	X
Picric acid	A
Potassium dichromate solutions	A
Potassium hydroxide solutions, 70 °C [158 °F]	A
Pydraul, 312 °C [154 °F]	C
Pyridine	X
SAE #10 oil	C
Skydrol 500	C
Shell turbine oil 307	T
Silicone grease	A
Skydrol 500	C
Soap Solutions, 70 °C [158 °F]	A
Sodium chloride solutions	A
Sodium dichromate, 20%	B
Sodium hydroxide, 46%, 70 °C [158 °F]	A
Sodium hydroxide, 50%	A
Sodium hydroxide, 73%	T
Sodium hypochlorite, 20%	B
Sodium peroxide solutions	A
Soybean oil	A
Stannic chloride	B
Stannous chloride, 15%, 70 °C [158 °F]	A
Steric acid, 70 °C [158 °F]	B
Sulfur, molten	A
Sulfur dioxide, liquid	A
Sulfur dioxide, gas	A
Sulfur trioxide	C
Sulfuric acid, up to 50%, 70 °C [158 °F]	A
Sulfuric acid, 60%	A
Sulfuric acid, 90%	X
Sulfuric acid, 95%	C
Sulfuric acid, fuming, 20% oleum	C
Sulfurous acid	X
Tannic acid, 10%	A
Tartaric acid	A
Toluene	C
Tributyl phosphate	C
Trichloroethylene	C
Tricresyl phosphate solutions	T
Triethanolamine, 70 °C [158 °F]	A
Trisodium phosphate solutions	T
Tung Oil	A
Turpentine	C
Water, 100 °C [212 °F]	A
Xylene	X
Zinc chloride solutions	A

Key:

A Fluid has little or no effect

B Fluid has minor to moderate effect

C Fluid has severe effect

T No data: likely to be compatible

X No data: not likely to be compatible

Unless otherwise noted, concentrations of aqueous solutions are saturated. All ratings are at room temperature unless specificed.

This tabulation is based on laboratory tests and records of actual service performance. It should be used as a guide only. Neoprene's degree of compatibility with a particular fluid in a given application will depend on variables such as temperature, aeration, velocity of flow, duration of exposure, stability of the fluid, degree of contact, etc. For this reason, it is always advisable to test the material under actual service conditions before specification. If this is not practical test should be devised which simulate service conditions as closely as possible.

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(08/03) Reference No. NPE-A10435-00-B0710

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