### Pneuline Supply, Inc. DATA SHEET MPV-4BH-NK

#### **Chemical Compatibility Information**

Inline diagphram type check valves, all types of filters, self-sealing check valves, ball type check valves, and spring loaded check valves are all products that can, and typically do, contain multiple types of different materials. The chemical compatibility of the whole product is limited to those chemicals which are compatible with all of the materials present in the product. Pneuline has compiled an extensive list of various chemical compatibility ratings for the different materials that we use to manufacture our products, and have provided a list of chemical compatibility ratings for each specific product based on the materials used in that product.

#### The rating system is as follows:

- **A = Excellent** -- The product is fully compatible with the chemical and is recommended for continuous use within the normal operating parameters of the product (temprature, pressure, etc).
- **B** = **Adequate** -- The chemical causes a minor effect to the product, slight corrosion or discoloration, minor loss in performance or slightly shortened operating lifespan.
- **C** = **Not Ideal** -- The chemical has a pronounced effect on the product and will degrade it. Material softening, swelling, loss of strength, corrosion, and discoloration may occur. Use only for limited timespans and replace often.
- **D** = **Severe Effect** -- The chemical has a severe adverse affect on the product and will likely destroy it. Not reccomended for use.
- N/A = No Data Available -- One or more of the materials in the product has an unknown compatibility with the chemical.

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Chemical Substance Acetaldehyde Acetamide Acetic Acid Acetic Acid 20% Acetic Acid 20% Acetic Acid 80% Acetic Acid, Glacial Acetic Anhydride Acetone Acetone Acetyl Chloride (dry) Acetylene Alcohols: Amyl Alcohols: Butyl Alcohols: Butyl Alcohols: Ethyl Alcohols: Isopropyl Alcohols: Isopropyl Alcohols: Methyl Aluminum Chloride 20% Aluminum Nitrate Aluminum Nitrate Aluminum Potassium Sulfate 10% Aluminum Sulfate Amines Ammonia 10% Ammonia, anhydrous	<b>Rating</b> A A D D D B A A B A A D A D A D B D A D B D A D A	Chemical Substance Barium Carbonate Barium Chloride Barium Hydroxide Barium Nitrate Barium Sulfate Beer Benzaldehyde Benzene Benzoic Acid Benzol Bromine Butadiene Butane Butane Butanol (Butyl Alcohol) Buttermilk Butyl Amine Butyl acetate Butyl acetate Butyric Acid Calcium Bisulfite Calcium Carbonate Calcium Hydroxide Calcium Hydroxide	<b>Rating</b> <ul> <li>A</li> <li>A</li> <li>A</li> <li>A</li> <li>A</li> <li>A</li> <li>D</li> <li>D</li> <li>C</li> <li>A</li> <li>B</li> <li>B</li> <li>A</li> <li>A</li> <li>C</li> <li>A</li> <li>A</li> <li>C</li> <li>A</li> <li>A</li> <li>C</li> <li>A</li> <li>A</li> <li>D</li> <li>D</li> <li>C</li> <li>A</li> <li>D</li> <li>D</li> <li>D</li> <li>D</li> <li>C</li> <li>A</li> <li>A</li></ul>
		Calcium Hypochlorite	_
Ammonia, anhydrous	B	Calcium Sulfate	D
Ammonia, liquid	B	Carbolic Acid (Phenol)	D
Ammonium Chloride	B	Carbon Disulfide	B
Ammonium Hydroxide	B	Carbon Tetrachloride	D
Ammonium Phosphate, Dibasic	C	Carbonic Acid	A
Ammonium Sulfate	A	Chlorine (dry)	D
Amyl Acetate	B	Chlorine Water	C
Amyl Alcohol	A	Chlorine, Anhydrous Liquid	D
Aniline	A	Chloroacetic Acid	
Aqua Regia (80% HCl, 20% HNO3)	D	Chlorobenzene (Mono)	D
Arsenic Acid	C	Chloroform	A
Asphalt	A	Chlorosulfonic Acid	D

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Chemical Substance	Rating	Chemical Substance	Rating
Chocolate Syrup	A	Ferric Sulfate	A
Chromic Acid 10%	D	Ferrous Chloride	D
Chromic Acid 30%	D	Ferrous Sulfate	D
Chromic Acid 5%	D	Fluorine	D
Chromic Acid 50%	D	Fluorosilicic Acid	D
Chromic Acid 80%	D	Formaldehyde 100%	D
Cider	A	Formaldehyde 40%	A
Citric Acid	A	Formic Acid	D
Copper Cyanide	D	Fuel Oils	A
Copper Nitrate	D	Furfural (Furfuraldehyde)	В
Copper Sulfate (more than 5%)	D	Gasoline (high-aromatic)	A
Copper Sulfate 5%	D	Gasoline, leaded, ref.	A
Cresols	D	Gasoline, unleaded	A
Cresylic Acid	D	Glucose	A
Cyclohexane	A	Glycerin	А
Cyclohexanone	А	Heptane	А
Detergents	А	Hexane	В
Dichloroethane	А	Honey	А
Diesel Fuel	А	Hydrochloric Acid 100%	D
Diethylamine	А	Hydrochloric Acid 20%	D
Diethylene Glycol	A	Hydrochloric Acid 37%	D
Dimethyl Aniline	A	Hydrofluoric Acid 100%	D
Dimethyl Formamide	А	Hydrofluoric Acid 20%	С
Epsom Salts (Magnesium Sulfate)	А	Hydrofluoric Acid 50%	D
Ethanol	А	Hydrofluoric Acid 75%	D
Ethyl Acetate	А	Hydrogen Peroxide 10%	С
Ethyl Chloride	А	Hydrogen Peroxide 100%	D
Ethylene Chloride	А	Hydrogen Peroxide 30%	D
Ethylene Chlorohydrin	D	Hydrogen Peroxide 50%	D
Ethylene Dichloride	А	Hydrogen Sulfide (aqua)	С
Ethylene Glycol	А	Isopropyl Acetate	В
Ethylene Oxide	А	Isopropyl Ether	А
Fatty Acids	A	Jet Fuel (JP3, JP4, JP5)	С
Ferric Chloride	А	Kerosene	А
Ferric Nitrate	А	Ketones	А

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<b>Chemical Substance</b>	Rating	<b>Chemical Substance</b>	Rating
Lacquer Thinners	A	Nitrobenzene	
Lacquers	А	Nitromethane	В
Lactic Acid	В	Oils: Citric	А
Lard	А	Oils: Fuel Oil (1, 2, 3, 5A, 5B, 6)	А
Lead Sulfamate	В	Oils: Mineral	А
Lubricants	А	Oils: Olive	А
Lye: Ca(OH)2 Calcium Hydroxide	А	Oils: Pine	А
Lye: KOH Potassium Hydroxide	С	Ozone	D
Lye: NaOH Sodium Hydroxide	А	Paraffin	А
Magnesium Chloride	А	Pentane	А
Magnesium Hydroxide	В	Perchloroethylene	С
Magnesium Nitrate	А	Phenol (10%)	D
Magnesium Sulfate (Epsom Salts)	А	Phenol (Carbolic Acid)	D
Mercuric Chloride (dilute)	D	Phosphoric Acid (more than 40%)	В
Mercury	А	Phosphoric Acid (crude)	В
Methanol (Methyl Alcohol)	В	Phosphoric Acid (less than 40%)	В
Methyl Acetate	А	Photographic Solutions	А
Methyl Alcohol 10%	В	Picric Acid	С
Methyl Butyl Ketone	D	Potassium Bromide	А
Methyl Cellosolve	С	Potassium Chlorate	С
Methyl Chloride	В	Potassium Chloride	А
Methyl Ethyl Ketone	А	Potassium Dichromate	В
Methylene Chloride	С	Potassium Hydroxide (Caustic Potash)	С
Milk	А	Potassium Nitrate	В
Mineral Spirits	A	Potassium Permanganate	D
Motor oil	А	Potassium Sulfate	А
Mustard	А	Propane (liquefied)	Α
Naphtha	A	Propylene Glycol	A
Nickel Chloride	С	Pyridine	С
Nickel Nitrate	A	Salicylic Acid	А
Nickel Sulfate	A	Sea Water	А
Nitric Acid (20%)	D	Silicone	А
Nitric Acid (50%)	D	Silver Nitrate	А
Nitric Acid (5-10%)	D	Soap Solutions	А
Nitric Acid (Concentrated)	D	Soda Ash (see Sodium Carbonate)	В

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Chemical Substance	Rating	Chemical Su
Sodium Acetate	В	Xylene
Sodium Bicarbonate	А	Zinc Chloride
Sodium Bisulfate	А	Zinc Sulfate
Sodium Bisulfite	С	
Sodium Carbonate	В	
Sodium Chlorate	D	
Sodium Chloride	А	
Sodium Hydroxide (20%)	А	
Sodium Hydroxide (50%)	А	
Sodium Hydroxide (80%)	С	
Sodium Hypochlorite (less than 20%)	D	
Sodium Peroxide	А	
Sodium Sulfate	А	
Sodium Sulfide	А	
Sodium Thiosulfate (hypo)	В	
Stannic Chloride	В	
Stearic Acid	А	
Stoddard Solvent	A	
Sulfur Dioxide (dry)	В	
Sulfuric Acid (less than 10%)	С	
Sulfuric Acid (10-75%)	D	
Tannic Acid	С	
Tetrachloroethylene	А	
Tetrahydrofuran	А	
Toluene (Toluol)	A	
Tomato Juice	А	
Trichloroethane	С	
Turpentine	В	
Urea	A	
Vinegar	А	
Water, Acid, Mine	A	
Water, Distilled	A	
Water, Fresh	A	
Water, Salt	A	
Whiskey and Wines	A	

hemical Substance Rating

A A A

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#### Chemical Compatibility Disclaimer

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#### Sources

https://www.plasticsintl.com/chemical-resistance-chart https://www.astisensor.com/KYNAR\_PVDF\_Chemical\_Compatibility\_Resistance\_Chart.pdf https://www.ipexna.com/media/12311/chemical-guide-us-ipex-pvdf.pdf https://www.polyfluor.nl/en/chemical-resistance/pvdf/ https://www.fhr.com/KochFHR/media/Polyproylenes-unrestricted/PP%20Random%20Copolymers/P5M6K-080.pdf https://mykin.com/rubber-chemical-resistance-chart https://www.calpaclab.com/nylon-chemical-compatibility-chart/ https://www.calpaclab.com/acetal-polyoxymethylene-chemical-compatibility-chart/ https://www.calpaclab.com/polycarbonate-chemical-compatibility-chart/ https://www.calpaclab.com/polycarbonate-chemical-compatibility-chart/ https://www.calpaclab.com/polypropylene-chemical-compatibility-chart/ https://www.calpaclab.com/polypropylene-chemical-compatibility-chart/ https://www.calpaclab.com/polypropylene-chemical-compatibility-chart/ https://www.calpaclab.com/polypropylene-chemical-compatibility-chart/

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