

# Industrial Fiberglass Specialties, Inc.

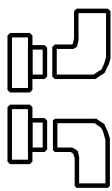
521 Kiser Street  
Dayton, OH 45404-1641  
Tel: 937-222-9000  
Fax: 937-222-9020

## Corrosion Guide Series 9400 Phenol Novolac Epoxy Pipe & Duct

11-12-2004

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Chemical Environment	Concentration %	Maximum Recommended Service Temperature (°F) for Series 9400 Pipe & Duct
Acetaldehyde	---	100
Acetamide	---	100
Acetic Acid	10%	200
Acetic Acid	25%	120
Acetic Acid	50%	120
Acetic Acid	75%	75
Acetic Anhydride	100%	100
Acetone	1%	200
Acetone	10%	200
Acetone	100%	125
Acetonitrile ACN	---	120
Acetyl Chloride	---	100
Acrylic Acid	25%	120
Acrylic Acid	95%	100
Acrylonitrile	100%	100
Adipic Acid, Hexanedioic Acid	---	250
Air (wet or dry) <span style="float: right;">note 4</span>	---	300
Alcohol Allyl	---	120
Alcohol Amyl	---	175
Alcohol, Butyl (Sec.)	10%	200
Alcohol, Butyl	100%	200
Alcohol, Ethyl	10%	200
Alcohol, Ethyl	95%	175
Alcohol, Ethyl	100%	175
Alcohol, Isopropyl	10%	175
Alcohol, Isopropyl	100%	150
Alcohol, Methyl	10%	175
Alcohol, Methyl	100%	150
Allyl Chloride	---	150



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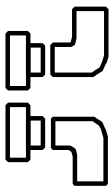
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Chemical Environment	Concentration %	Maximum Recommended Service Temperature (°F) for Series 9400 Pipe & Duct
Alum	Sat'd	275
Aluminum Chloride note 3	1%	275
Aluminum Chloride note 3	Sat'd	275
Aluminum Fluoride	Sat'd	100
Aluminum Hydroxide	Sat'd	200
Aluminum Nitrate	All	250
Aluminum Potassium Sulfate	Sat'd	275
Aluminum Sulfate	Sat'd	275
Ammonia, Gas, Dry, Anhydrous notes 2 & 4	---	275
Ammonia Acetate	65%	275
Ammonium Bicarbonate	Sat'd	225
Ammonium Bisulfite	Sat'd	275
Ammonium Carbonate	Sat'd	225
Ammonium Chloride	25%	225
Ammonium Chloride	Sat'd	225
Ammonium Citrate	Sat'd	275
Ammonium Fluoride	Sat'd	100
Ammonium Hydroxide	5%	200
Ammonium Hydroxide	10%	200
Ammonium Hydroxide	20%	200
Ammonium Hydroxide	28%	200
Ammonium Hydroxide	Sat'd	175
Ammonium Nitrate	25%	275
Ammonium Nitrate	Sat'd	210
Ammonium Persulfate	Sat'd	100
Ammonium Phosphate	25%	225
Ammonium Phosphate	65%	225
Ammonium Sulfate	Sat'd	275
Ammonium Sulfide (Bisulfide)	Sat'd	100



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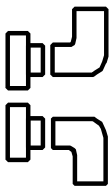
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Chemical Environment	Concentration %	Maximum Recommended Service Temperature (°F) for Series 9400 Pipe & Duct
Ammonium Sulfite	---	150
Amyl Acetate	100%	150
Amyl Alcohol	---	175
Amyl Chloride	---	100
Aniline	---	150
Aniline Hydrochloride	100%	100
Aniline Sulfate	Sat'd	100
Antimony Trichloride	---	150
Arsenious Acid	---	100
Barium Acetate	Sat'd	275
Barium Carbonate	Sat'd	275
Barium Chloride	Sat'd	275
Barium Hydroxide	0-10%	225
Barium Sulfate	Sat'd	275
Barium Sulfide	Sat'd	275
Beer	---	250
Benzaldehyde	---	200
Benzene	10%	180
Benzene	100%	180
Benzene Sulfonic Acid	50%	100
Benzene Sulfonic Acid	75%	100
Benzene Sulfonic Acid	100%	75
Benzoic Acid	Sat'd	200
Benzoyl (Ortho) Benzoic Acid	---	100
Benzyl Alcohol	100%	150
Benzyl Chloride	100%	150
Black Liquor (Pulp Mill)	---	230
Boric Acid	Sat'd	250
Brine	---	275



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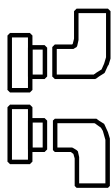
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Chemical Environment	Concentration %	Maximum Recommended Service Temperature (°F) for Series 9400 Pipe & Duct
Bromine Water	5%	75
Bromoform	---	185
Butane notes 1 & 4	100%	100
Butadiene, Gas	---	200
Butanol (Alcohol, Normal Butyl)	---	200
Butyl Acetate	100%	175
Butyl Alcohol	10%	200
Butyl Alcohol	100%	200
Butyl Benzoate	70%	200
Butyl Benzyl Phthalate note 3	100%	120
Butyl CELLOSOLVE	---	175
Butyl Phthalate	---	125
Butylene Gylcol	100%	250
Butyric Acid	0-25%	100
Butyric Acid	25-50%	100
Calcium Bisulfite	Sat'd	100
Calcium Carbonate	Sat'd	275
Calcium Chlorate	Sat'd	200
Calcium Chloride	Sat'd	275
Calcium Hydroxide	15%	225
Calcium Nitrate	Sat'd	275
Calcium Sulfate	Sat'd	275
Calcium Sulfite	Sat'd	100
Cane Sugar Liquor	Sat'd	250
Caprylic Acid	Sat'd	100
Carbon Dioxide Gas, Dry note 4	---	275
Carbon Dioxide, Wet Acidic note 4	---	250
Carbon Disulfide	---	150
Carbon Monoxide Gas	---	250



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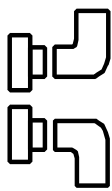
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Chemical Environment	Concentration %	Maximum Recommended Service Temperature (°F) for Series 9400 Pipe & Duct
Carbon Tetrachloride	100%	175
Carbonic Acid	---	150
Carboxymethyl Cellulose	10%	100
Castor Oil	---	250
CELLOSOLVE	---	150
Chlorinated Water	0-100 ppm CL <sub>2</sub>	275
Chlorinated Water	100-200 ppm CL <sub>2</sub>	275
Chlorinated Wax	---	150
Chlorine Dioxide	15%	150
Chlorine Saturated Brine <span style="float: right;">note 5</span>	---	75
Chlorine Water	Sat'd	75
Chloroacetic Acid	10%	150
Chloroacetic Acid	25%	100
Chloroacetic Acid	50%	100
Chloroacetic Acid, Glacial	---	100
Chlorobenzene	100%	200
Chloroform	100%	185
Chloromethane (Methyl Chloride)	---	75
2-Chlorophenol	---	100
Chlorosulfonic Acid	100%	75
Chromic Acid	5%	75
Chromic Acid	10%	75
Chromic Acid	15%	75
Chromic Acid	45%	100
Chromium Sulfate	Sat'd	100
Citric Acid	15%	225
Citric Acid	Sat'd	225
Coconut Oil	---	275
Copper Acetate	---	200



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Chemical Environment	Concentration %	Maximum Recommended Service Temperature (°F) for Series 9400 Pipe & Duct
Copper Brite Plating: Caustic-Cyanide	---	100
Copper Carbonate	--	200
Copper Chloride	Sat'd	225
Copper Cyanide	Sat'd	225
Copper Fluoride	Sat'd	225
Copper Matte Dipping Bath	---	200
Copper Nitrate	Sat'd	210
Copper Pickling Bath: 10% Ferric Sulfate	---	150
Copper Sulfate	Sat'd	250
Corn Oil	---	275
Corn Starch, Slurry	---	275
Corn Sugar	---	275
Cottonseed Oil	---	275
Cresol	5%	200
Cresol	10%	200
Cresol	100%	200
Cresylic Acid	100%	100
Crude Oil, Sour	100%	275
Crude Oil, Sweet	100%	275
Cupric Chloride	5%	200
Cupric Chloride	50%	200
Cyclohexane	100%	175
Cyclohexanol	---	200
Cyclohexanone	100%	125
Detergents, Sulfonated	---	275
Di-Ammonium Phosphate	65%	275
Diallylphthalate (DAP)	---	150
Dibromophenol	100%	100
Dibutyl Ether	100%	125



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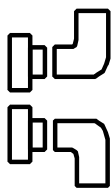
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<b>Chemical Environment</b>	<b>Concentration %</b>	<b>Maximum Recommended Service Temperature (°F) for Series 9400 Pipe &amp; Duct</b>
Dichloroacetic Acid	---	100
Dichlorobenzene (Ortho)	100%	180
Dichloroethane	---	185
Dichloroethylene	100%	185
Dichloromethane (Methylene Chloride)	---	100
Dichloromonomethane	100%	125
Dichloropropane	100%	185
Dichloropropene	100%	185
Diesel Fuel	---	275
Diethanolamine	100%	150
Diethyl Benzene	100%	185
Diethyl Carbonate	100%	100
Diethyl Sulfate	100%	100
Diethylamine	100%	100
Diethylene Glycol	100%	275
Diethylene Triamine	10%	120
Diisobutyl Phthalate	100%	175
Diisobutylene	100%	225
Diisopropanolamine	100%	120
Dimethyl Formamide (DMF)	100%	100
Dimethyl Morpholine	100%	100
Dimethyl Phthalate	100%	175
Diocetyl Phthalate (DOP)	100%	175
Dioxane	---	125
Dipropylene Glycol	100%	275
Distillery Stillage	---	175
Distillery Syrup	---	175
Divinyl Benzene	---	175
Dodecyl Alcohol	100%	225



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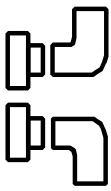
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<b>Chemical Environment</b>	<b>Concentration %</b>	<b>Maximum Recommended Service Temperature (°F) for Series 9400 Pipe &amp; Duct</b>
DOW Latex 2144	---	275
DOW Latex 560	---	275
DOW Latex 700	---	275
DOWANOL EE	---	100
DOWANOL EM	---	100
DOWFAX 9N9-Surfactant	---	100
ELECTROSOL	5%	225
Epichlorohydrin	100%	100
Epoxidized Soybean Oil	100%	275
Esters, Fatty Acids	100%	275
Ethanol (Ethyl Alcohol)	---	175
Ethyl Acetate	100%	150
Ethyl Acrylate	100%	150
Ethyl Alcohol	10%	200
Ethyl Alcohol	100%	175
Ethyl Benzene	100%	185
Ethyl Bromide	100%	100
Ethyl Chloride	100%	100
Ethyl Ether	100%	120
Ethyl Sulfate	100%	100
Ethylene Dichloride (EDC)	---	185
Ethylene Glycol (in water)	50%	275
Ethylene Glycol	100%	275
Fatty Acids	Sat'd	275
Ferric Chloride	Sat'd	275
Ferric Nitrate	Sat'd	275
Ferric Sulfate	Sat'd	275
Ferrous Chloride	Sat'd	275
Ferrous Nitrate	Sat'd	275





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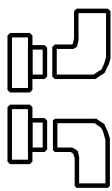
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Chemical Environment	Concentration %	Maximum Recommended Service Temperature (°F) for Series 9400 Pipe & Duct
Ferrous Sulfate	Sat'd	275
Fertilizer (8-8-8)	---	275
Fertilizer-Urea Ammonium Nitrate	---	275
Flue Gas	---	275
Fluoboric Acid	Sat'd	75
Fluorobenzene (phenyl fluoride)	---	180
Fluosilicic Acid	10%	125
Fluosilicic Acid	25%	125
Formaldehyde	25%	150
Formaldehyde	37%	150
Formaldehyde	40%	150
Formaldehyde	Sat'd	150
Formic Acid	0-10%	120
Formic Acid	10-25%	120
Formic Acid	25-88%	120
Formic Acid	Sat'd	100
Freon 11	---	75
Freon 12 or 22 (gas or liquid)	---	75
Fuel Oil	100%	275
Furfural	5%	150
Furfural	10%	125
Furfural	100%	100
Gas, Natural <span style="float: right;">note 4</span>	---	275
Gasoline	---	250
Gasoline, 0-12% Methanol	---	250
Glucose	100%	275
Glutaric Acid	50%	150
Gluteraldehyde	50%	150
Glycerine	100%	275



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**Corrosion Guide**  
**Series 9400 Phenol Novolac**  
**Epoxy Pipe & Duct**

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Chemical Environment	Concentration %	Maximum Recommended Service Temperature (°F) for Series 9400 Pipe & Duct
Glycol Ethylene	---	275
Glycolic Acid	10%	100
Glycolic Acid	70%	100
Glyconic Acid	50%	120
Glyoxal	40%	125
Glyoxal	Sat'd	120
Green Liquor (Pulp Mill)	---	225
Heptane	---	225
Hexane	---	175
Hexylene Glycol	----	250
Hot Stack Gases	---	275
Hydrated Lime (Calcium Hydroxide)	---	225
Hydraulic Fluid	0-60%	250
Hydraulic Fluid	100%	250
Hydrobromic Acid	0-18%	150
Hydrobromic Acid	18-48%	100
Hydrobromic Acid	48-62%	100
Hydrochloric Acid note 6	0-1%	200
Hydrochloric Acid note 6	1-5%	200
Hydrochloric Acid note 6	10%	200
Hydrochloric Acid notes 6 & 8	20%	200
Hydrochloric Acid (36.5% Muriatic) notes 6 & 8	38%	150
Hydrocyanic Acid	10%	100
Hydrocyanic Acid (Prussic)	Sat'd	100
Hydrofluoric Acid	1%	75
Hydrofluoric Acid	5%	75
Hydrofluoric Acid	10%	75
Hydrofluosilicic Acid	10%	125
Hydrofluosilicic Acid	25%	125



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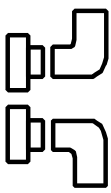
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Chemical Environment	Concentration %	Maximum Recommended Service Temperature (°F) for Series 9400 Pipe & Duct
Hydrofluosilicic Acid	37%	150
Hydrogen Chloride, Dry Gas	notes 2 & 4	100%
Hydrogen Peroxide	1-10%	75
Hydrogen Peroxide	10-20%	75
Hydrogen Peroxide	20-30%	75
Hydrogen Sulfide, Dry Gas	notes 1, 2 & 4	---
Hydrogen Sulfide, Wet Gas	note 4	Sat'd
Hydroxyacetic Acid (Glycolic Acid 70%)	---	100
Iodine, Sat'd Vapor at room temp	---	200
Isophthalic Acid (liquor)	---	200
Isopropyl Alcohol	10%	175
Isopropyl Alcohol	100%	150
Isopropyl Ether	---	150
Isopropyl Palmitate	100%	275
Jet Fuel	---	275
Kerosene	---	275
Keytones (General)	---	150
Lactic Acid	---	275
Latex	---	275
Lauric Acid	Sat'd	275
Lauryl Chloride	100%	200
Lead Acetate	Sat'd	275
Lead Nitrate	Sat'd	225
Levulinic Acid	---	250
Lime Slurry	---	275
Linseed Oil	---	275
Lithium Bromide	Sat'd	275
Lithium Chloride	Sat'd	275
Lithium Hydroxide	Sat'd	225



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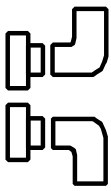
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Chemical Environment	Concentration %	Maximum Recommended Service Temperature (°F) for Series 9400 Pipe & Duct
Lithium Sulfate	Sat'd	275
Magnesium Bisulfite	Sat'd	225
Magnesium Carbonate	Sat'd	275
Magnesium Chloride	Sat'd	275
Magnesium Hydroxide	Sat'd	275
Magnesium Nitrate	Sat'd	275
Magnesium Sulfate	Sat'd	275
Maleic Acid	---	175
Maleic Anhydride	---	175
Manganese Chloride	30%	250
Manganese Chloride	Sat'd	275
Mercuric Chloride	Sat'd	275
Mercurous Chloride	Sat'd	275
Methane	---	150
Methanol (Methyl Alcohol)	10%	175
Methanol (Methyl Alcohol)	20-50%	175
Methanol (Methyl Alcohol)	80%	175
Methanol (Methyl Alcohol)	100%	150
Methyl Acetate	---	150
Methyl Chloride	---	75
Methyl Ethyl Ketone (MEK)	100%	175
Methyl Isobutyl Carbitol	100%	150
Methyl Isobutyl Ketone	100%	175
Methyl Styrene	100%	175
Methyl Tert-Butyl Ether	100%	100
Methylene Chloride	100%	100
Mineral Oils	---	275
Mineral Spirits	100%	275
Monochloro Acetic Acid	100%	100



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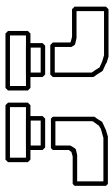
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Chemical Environment	Concentration %	Maximum Recommended Service Temperature (°F) for Series 9400 Pipe & Duct
Monochlorobenzene	---	200
Monoethanolamine	100%	100
Motor Oil	---	275
Myristic Acid	100%	250
Naphtha	100%	275
Naphthalene	100%	225
Natural Gas note 4	---	275
Nickel Chloride	Sat'd	275
Nickel Nitrate	Sat'd	275
Nickel Sulfate	Sat'd	275
Nitric Acid note 7	1%	150
Nitric Acid	5%	150
Nitric Acid	10%	120
Nitric Acid	20%	75
Nitric Acid	25%	75
Nitrobenzene	100%	200
Octanoic Acid "Caprylic Acid"	Sat'd	225
Oil, Sour Crude	100%	275
Oil, Sweet Crude	100%	275
Oleic Acid	100%	275
Oleum "Fuming Sulfuric"	---	100
Olive Oil	100%	275
Oxalic Acid	Sat'd	225
Perchloroethylene	100%	150
Phenol "in water"	1%	175
Phenol "in water"	5%	175
Phenol "in water"	10-88%	100
Phosphoric Acid note 7	2%	225
Phosphoric Acid	25%	150



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Chemical Environment	Concentration %	Maximum Recommended Service Temperature (°F) for Series 9400 Pipe & Duct
Phosphoric Acid	50%	125
Phosphoric Acid	85%	120
Picric Acid	Sat'd	100
Polyvinyl Acetate Latex "PVCa"	---	250
Polyvinyl Alcohol "PVA"	100%	175
Potassium Alum Sulfate	Sat'd	275
Potassium Bicarbonate	0-50%	225
Potassium Bromide	Sat'd	275
Potassium Carbonate	<14%	275
Potassium Carbonate	14-50%	275
Potassium Carbonate	50%-Sat'd	275
Potassium Chloride	Sat'd	275
Potassium Cyanide	5%	275
Potassium Ferricyanide	Sat'd	275
Potassium Ferrocyanide	Sat'd	275
Potassium Fluoride	30%	150
Potassium Hydroxide	0-25%	240
Potassium Hydroxide	25-50%	240
Potassium Hydroxide "Potash"	Sat'd	225
Potassium Nitrate	Sat'd	275
Potassium Permanganate	5%	225
Potassium Permanganate	10%	175
Potassium Sulfate	Sat'd	275
Propane Gas	note 4	100
Propionic Acid	20%	120
Propionic Acid	50%	120
Propionic Acid	100%	100
Propylene Glycol	---	275
Pyridine	100%	125



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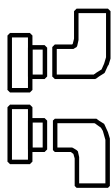
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Chemical Environment	Concentration %	Maximum Recommended Service Temperature (°F) for Series 9400 Pipe & Duct
Silver Nitrate	Sat'd	275
Soaps	---	275
Sodium Acetate	Sat'd	225
Sodium Alkyl Aryl, Sulfonates	---	225
Sodium Aluminate	Sat'd	225
Sodium Benzoate	Sat'd	250
Sodium Bicarbonate	Sat'd	275
Sodium Bisulfate	Sat'd	225
Sodium Bisulfite	Sat'd	250
Sodium Bromide	Sat'd	275
Sodium Carbonate	10%	225
Sodium Carbonate	25%	225
Sodium Carbonate	35%	225
Sodium Carbonate	50% (Sat'd)	225
Sodium Chlorate	Sat'd	200
Sodium Chloride	Sat'd	275
Sodium Cyanide	6%	250
Sodium Ferricyanide	Sat'd	275
Sodium Ferrocyanide	Sat'd	275
Sodium Fluoride	Sat'd	200
Sodium Hydroxide note 7	1%	200
Sodium Hydroxide	2%	200
Sodium Hydroxide	5%	200
Sodium Hydroxide note 1	10%	215
Sodium Hydroxide	20%	200
Sodium Hydroxide	25%	200
Sodium Hydroxide	30%	200
Sodium Hydroxide	50%	240
Sodium Hydroxide	Sat'd	240



# Industrial Fiberglass Specialties, Inc.

521 Kiser Street  
 Dayton, OH 45404-1641  
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## Corrosion Guide Series 9400 Phenol Novolac Epoxy Pipe & Duct

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Chemical Environment	Concentration %	Maximum Recommended Service Temperature (°F) for Series 9400 Pipe & Duct
Sodium Nitrate	Sat'd	275
Sodium Nitrite	Sat'd	275
Sodium Silicate	Sat'd	225
Sodium Sulfate "Soda Ash"	Sat'd	275
Sodium Sulfide	0-15%	250
Sodium Thiocyanate	57%	225
Sodium Thiosulfate	Sat'd	200
Sodium Tripolyphosphate	Sat'd	225
Sorbitol Solutions	---	225
Sour Crude Oil	100%	275
Soya Oil	100%	275
Soybean Fatty Acid	---	275
Stannic Chloride	Sat'd	225
Stannous Chloride "Tin Chloride"	Sat'd	225
Steam Condensate	---	250
Stearic Acid	---	275
Styrene	100%	185
Succinonitrile	---	120
Sugar, Beat or Cane Liquor	Sat'd	275
Sugar, Sucrose	Sat'd	275
Sulfamic Acid	0-10%	150
Sulfamic Acid	10-25%	150
Sulfated Detergents	Sat'd	225
Sulfur Dioxide, Dry Gas	notes 2 & 4	150
Sulfuric Acid	1-2%	200
Sulfuric Acid	3%	200
Sulfuric Acid	5%	200
Sulfuric Acid	10%	200
Sulfuric Acid	10-25%	175





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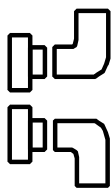
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## Corrosion Guide Series 9400 Phenol Novolac Epoxy Pipe & Duct

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Chemical Environment	Concentration %	Maximum Recommended Service Temperature (°F) for Series 9400 Pipe & Duct
Sulfuric Acid	25-50%	175
Sulfuric Acid	50-70%	175
Sulfuric Acid	75%	120
Sulfuric Acid	75-98%	120
Sulfuric Acid	100%	100
Sulfuric Acid, Fuming, Oleum	---	100
Sulfurous Acid	6%	75
Tall Oil	---	225
Tannic Acid	15%	275
Tartaric Acid	10%	275
Tartaric Acid	Sat'd	275
Tetrachloroethane 1,1,2,2	---	150
Tetrachloroethylene	100%	175
Tetrahydrofuran (THF)	---	100
Thionyl Chloride, Vents	---	120
Toluene	100%	200
Tomato Catsup	---	250
Tomato Puree	---	250
Transformer Oil (chloro-phenyl types)	---	100
Transformer Oil (mineral oil type)	---	275
Trichloroethane 1,1,1	---	175
Trichloroethylene	100%	150
Trichloromonofluoromethane	100%	120
Trichlorophenol	100%	100
Triethanolamine	100%	150
Trimethylene Chlorobromide	100%	150
Trisodium Phosphate	All	225
Turpentine	100%	150
Urea	50%	225



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Corrosion Guide

## Series 9400 Phenol Novolac Epoxy Pipe & Duct

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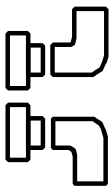
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Chemical Environment	Concentration %	Maximum Recommended Service Temperature (°F) for Series 9400 Pipe & Duct
Urea	Sat'd	225
Vegetable Oils	---	275
Vinegar, 300 Grain, "Acetic Acid"	---	120
Vinyl Acetate Monomer	100%	120
Vinyl Ester Resin, 45% Styrene	---	150
Vinyltoluene	100%	200
Water, Brine	---	275
Water, Chlorinated, 100 PPM	---	275
Water, Deionized	---	275
Water, Distilled	---	275
Water, Fresh	---	275
Water, Hard	---	275
Water, pH 2-13	---	275
Water, Salt	---	275
Water, Sea	---	275
White Liquor (Pulp Mill)	---	275
Xylene	100%	200
Zinc Chloride	50%	250
Zinc Nitrate	Sat'd	250
Zinc Sulfate	Sat'd	275

### General Notes:

**Spills and Upset Conditions:** Flush the system immediately if spills or upsets exposes the piping to chemicals that have not been recommended.

**Solvent Applications:** Solvents may separate from the fluid stream in piping with static or low flow rates. The solvent will be concentrated and may damage piping not recommended for 100% concentrations. Flush the piping system immediately after shutdown to prevent solvent damage. Vent lines carrying solvent vapors can also have high concentrations of liquid solvent due to condensation. The condensation can affect the service life of systems not recommended for full concentrations.



**Mixing Chemicals in the Piping System:** Chemical should not be mixed in Industrial Fiberglass piping if mixing will cause a chemical reaction. Reaction by-products and free radicals may aggressively attack piping systems.

**Abrasive Fluid:** Industrial Fiberglass piping is used successfully in many abrasive slurry applications. Products made especially for abrasive applications are available. Product selection is dependent on particle size, percent solids, particle hardness, flow rates, and continuous or intermittent usage. Industrial Fiberglass is pleased to provide recommendations based on the above information.

**Regulations and Standards:** Local, state, or federal regulations, or industry standards may govern the use of Industrial Fiberglass products in particular applications and should be reviewed by the customer to assure compliance.

**Specific Notes:**

1. Maximum temperature for which information is available; could be serviceable at higher temperatures. Consult your local Industrial Fiberglass representative.
2. Avoid use of Industrial Fiberglass piping systems where contact with liquefied gases, such as chlorine or sulfur dioxide, is a possibility. Dry gases under pressure can condense to liquids in cool weather. This situation should be avoided. Liquid chlorine and liquid sulfur dioxide should not be confused with water solutions of these gases.
3. Industrial Fiberglass does not recommend pneumatic conveying of dry chemicals.
4. Consult your local Industrial Fiberglass representative concerning all pressurized gas applications if the pipeline is not buried at least 3 feet deep. Under no circumstances are Industrial Fiberglass piping systems recommended for above ground pressurized gas lines if the operating pressures exceed 25 psig for 1-6" diameter pipe, 14 psig for 8" diameter pipe, 9 psig for 10" diameter pipe, 6 psig for 12" diameter pipe, 5 psig for 14" diameter pipe, 4 psig for 16" diameter pipe, and 1 psig for 18" diameter and larger sizes.
5. Saturated at atmospheric pressure. Higher concentrations or super saturation caused by higher pressure in the system may increase attack.
6. Heavy wall products such as the Series 9400 construction should be used in this application for extended economic service life.
7. For very low acid or caustic concentrations see "Water, pH 2-13" for recommended service temperatures.
8. Not recommended above boiling point.