

## Liquid Rubber Chemical Resistance Chart

Chemical name	Formula	Concentration	Acceptability
Acetic acid	CH <sub>3</sub> COOH	10%	Limited
Acetic acid	CH <sub>3</sub> COOH	50%	Unsuitable
Aluminum chloride	NH <sub>4</sub> Cl	Saturated	Suitable
Aluminum sulfate	NH <sub>4</sub> SO <sub>4</sub>	Saturated	Suitable
Ammonium chloride	NH <sub>4</sub> Cl	Saturated	Suitable
Ammonium nitrate	NH <sub>4</sub> NO <sub>3</sub>	All concentrations	Unsuitable
Ammonium sulfate	(NH <sub>4</sub> ) <sub>2</sub> SO <sub>4</sub>	Saturated	Suitable
Aqua regia	HCl-H NO <sub>3</sub>	All concentrations	Unsuitable
Barium carbonate	BaCO <sub>3</sub>	Saturated	Suitable
Barium chloride	BaCl <sub>2</sub>	Saturated	Suitable
Barium hydroxide	Ba(OH) <sub>2</sub>	Saturated	Suitable Barium sulfate
BaSO <sub>4</sub>		Saturated	Suitable
Borax (sodium tetraborate)	Na <sub>2</sub> B <sub>4</sub> O <sub>7</sub>	Saturated	Suitable
Bromine (gas or liquid)	Br <sub>2</sub>	All concentrations	Unsuitable
Calcium carbonate	CaCO <sub>3</sub>	Saturated	Suitable
Calcium chloride	CaCl <sub>2</sub>	Saturated	Suitable
Calcium cyanide	Ca(CN) <sub>2</sub>	All concentrations	Unsuitable
Calcium hydroxide (lime)	Ca(OH) <sub>2</sub>	Saturated	Suitable
Calcium nitrate	Ca(NO <sub>3</sub> ) <sub>2</sub>	Saturated	Suitable Calcium sulfate
CaSO <sub>4</sub>		Saturated	Suitable
Carbon dioxide (gas)	CO <sub>2</sub>	All concentrations	Suitable
Chlorine	Cl <sub>2</sub> gas	All concentrations	Unsuitable
Chromic acid	H <sub>2</sub> CrO <sub>7</sub>	All concentrations	Unsuitable
Copper carbonate	CuCO <sub>3</sub>	Saturated	Suitable
Copper (cupric) chloride	CuCl <sub>2</sub>	Saturated	Suitable
Copper (cupric) hydroxide	Cu(OH) <sub>2</sub>	Saturated	Suitable
Copper (cupric) nitrate	Cu(NO <sub>3</sub> ) <sub>2</sub>	Saturated	Suitable
Copper (cupric) sulfate	CuSO <sub>4</sub>	Saturated	Suitable
Corn Syrup	C <sub>6</sub> O <sub>6</sub> H <sub>12</sub>	<50% w/w	Suitable
Corn Syrup	C <sub>6</sub> O <sub>6</sub> H <sub>12</sub>	>50% w/w	Limited
Ethyl alcohol	C <sub>2</sub> H <sub>5</sub> OH	<35% w/w	Limited
Ethyl alcohol	C <sub>2</sub> H <sub>5</sub> OH	>35% w/w	Unsuitable
Glycerol	C <sub>3</sub> O <sub>3</sub> H <sub>6</sub>	<35% w/w	Limited
Glycerol	C <sub>3</sub> O <sub>3</sub> H <sub>6</sub>	>35% w/w	Unsuitable
Hydrochloric acid	HCl	35% w/w (conc.)	Unsuitable
Hydrocyanic acid	HCN	All concentrations	Unsuitable
Hydrogen (gas)	H <sub>2</sub>	All concentrations	Unsuitable
Hydrogen peroxide	H <sub>2</sub> O <sub>2</sub>	5% w/w	Limited
Hydrogen peroxide	H <sub>2</sub> O <sub>2</sub>	>20% w/w	Unsuitable
Iron (ferrous) amm. sulfate	Fe(NH <sub>4</sub> )SO <sub>4</sub>	Saturated	Suitable
Iron (ferrous) carbonate	FeCO <sub>3</sub>	Saturated	Suitable
Iron (ferrous) chloride	FeCl <sub>2</sub>	Saturated	Suitable
Iron (ferrous) hydroxide	Fe(OH) <sub>2</sub>	Saturated	Suitable
Iron (ferrous) sulfate	FeSO <sub>4</sub>	Saturated	Suitable
Iron (ferric) carbonate	Fe <sub>2</sub> (CO <sub>3</sub> ) <sub>3</sub>	Saturated	Suitable
Iron (ferric) chloride	FeCl <sub>3</sub>	Saturated	Unsuitable
Iron (ferric) hydroxide	Fe(OH) <sub>3</sub>	Saturated	Suitable
Iron (ferric) nitrate	Fe(NO <sub>3</sub> ) <sub>3</sub>	Saturated	Unsuitable
Iron (ferric) sulfate	Fe <sub>2</sub> (SO <sub>4</sub> ) <sub>3</sub>	Saturated	Limited
Magnesium carbonate	MgCO <sub>3</sub>	Saturated	Suitable
Magnesium chloride	MgCl <sub>2</sub>	Saturated	Suitable
Magnesium hydroxide	Mg(OH) <sub>2</sub>	Saturated	Suitable
Magnesium sulfate	MgSO <sub>4</sub>	Saturated	Suitable
Methyl alcohol	CH <sub>3</sub> OH	<35%	Limited
Methyl alcohol	CH <sub>3</sub> OH	>35%	Unsuitable
Nickel carbonate	NiCO <sub>3</sub>	Saturated	Suitable

Nickel chloride	NiCl <sub>2</sub>	Saturated	Suitable
Nickel hydroxide	Ni(OH) <sub>2</sub>	Saturated	Suitable
Nickel sulfate	NiSO <sub>4</sub>	Saturated	Suitable
Nitric acid	HNO <sub>3</sub>	35% w/w	Limited
Phosphoric acid (ortho)	H <sub>3</sub> PO <sub>4</sub>	75% w/w	Suitable
Potassium carbonate	K <sub>2</sub> CO <sub>3</sub>	Saturated	Limited
Potassium chlorate	KClO <sub>3</sub>	All concentrations	Unsuitable
Potassium chloride	KCl	Saturated	Suitable
Potassium citrate	K <sub>3</sub> C <sub>4</sub> O <sub>7</sub>	Saturated	Suitable
Potassium cyanide	KCN	All concentrations	Unsuitable
Potassium hydroxide	KOH	45% w/w	Suitable
Potassium perchlorate	KClO <sub>4</sub>	All solutions	Unsuitable
Potassium permanganate	KMnO <sub>4</sub>	All solutions	Unsuitable
Potassium nitrate	KNO <sub>3</sub>	Saturated	Limited
Potassium sulfate	K <sub>2</sub> SO <sub>4</sub>	Saturated	Suitable
Sodium acid phosphate	NaH <sub>2</sub> PO <sub>4</sub>	Saturated	Limited
Sodium bisulfite	NaHSO <sub>3</sub>	Saturated	Suitable
Sodium bromide	NaBr	Saturated	Suitable
Sodium carbonate	Na <sub>2</sub> CO <sub>3</sub>	Saturated	Suitable
Sodium chlorate	NaClO <sub>3</sub>	All concentrations	Unsuitable
Sodium chloride	NaCl	Saturated	Suitable
Sodium dichromate	Na <sub>2</sub> CrO <sub>7</sub>	Saturated	Suitable
Sodium cyanide	NaCN	All concentrations	Unsuitable
Sodium fluoride	NaF	Saturated	Suitable
Sodium hydroxide	NaOH	50% w/w	Suitable
Sodium hypochlorite	NaOCl	1% av.Cl <sub>2</sub>	Limited
Sodium hypochlorite	NaOCl	10% av.Cl <sub>2</sub>	Unsuitable
Sodium metasilicate	Na <sub>2</sub> SiO <sub>3</sub>	Saturated	Suitable
Sodium nitrate	NaNO <sub>3</sub>	Saturated	Suitable
Sodium nitrite	NaNO <sub>2</sub>	Saturated	Suitable
Sodium orthophosphate	Na <sub>3</sub> PO <sub>4</sub>	Saturated	Suitable
Sodium perborate	Na <sub>2</sub> B <sub>4</sub> O <sub>7</sub> ·H <sub>2</sub> O <sub>2</sub>	Saturated	Suitable
Sodium perchlorate	NaClO <sub>4</sub>	All concentrations	Unsuitable
Sodium permanganate	NaMnO <sub>4</sub>	All concentrations	Unsuitable
Sodium sulfate	Na <sub>2</sub> SO <sub>4</sub>	Saturated	Suitable
Sucrose	C <sub>6</sub> H <sub>12</sub> O <sub>6</sub>	Saturated	Suitable
Sulfuric acid	H <sub>2</sub> SO <sub>4</sub>	50% w/w	Suitable
Sulfuric acid	H <sub>2</sub> SO <sub>4</sub>	93% w/w	Unsuitable
Tin (stannous) chloride	SnCl <sub>2</sub>	Saturated	Suitable
Tin (stannous) sulfate	Sn SO <sub>4</sub>	Saturated	Limited
Urea	CO(NH <sub>2</sub> ) <sub>2</sub>	Saturated	Suitable
Zinc oxide	ZnO	Saturated	Suitable
Zinc chloride	ZnCl <sub>2</sub>	Saturated	Suitable
Zinc sulfate	ZnSO <sub>4</sub>	Saturated	Suitable

#### Disclaimer

The information provided here was determined in the Lafarge Asphalt Engineering Laboratories using Liquid Rubber sprayed and cured using the recommended procedures. Samples of Liquid Rubber were immersed in the solutions shown for 90 days at room temperature (20±2°C) before examination.

The information is provided in good faith and is accurate to the best of our knowledge. Results may vary if the Liquid Rubber is incorrectly applied or if unknown contaminants are present.

These data provide no guarantee of performance and Lafarge accepts no responsibility for any problems which might arise as a result of exposure of Liquid Rubber to any of the chemicals described.

#### Additional notes:

1. Performance was evaluated by determining the strength of samples before and after immersion in the chemical solutions shown for 180 days at room temperature (22±3°C) according to the method described in ASTM D-412.
2. Most of the results were obtained using saturated solutions of the chemical in water. Although it may generally be assumed that a saturated solution represents the worst case, results may differ if more dilute solutions are employed.

3. Most of the chemicals listed are solutions of inorganic compounds in water. With rare exceptions Liquid Rubber is not recommended for applications in which it is to be in contact with organic compounds such as oils or solvents.
4. The list shown is not exhaustive. Please consult with your Liquid Rubber Technical Representative for any chemicals, or concentrations thereof which may be of interest but are not on the list.
5. Liquid Rubber is not recommended for use with strong oxidizing agents.
6. All testing was carried using pure chemicals. In some cases the presence of even small quantities of contaminants may dramatically affect the results.
7. Please contact the Lafarge Asphalt Engineering Technical Department for information about chemicals not included on this list, or if more than one chemical is present in the system.
8. "Limited" indicates that occasional contact with the chemical indicated may be tolerated but that continuous exposure is unacceptable. In cases where limited acceptability is indicated, please consult with the Lafarge Asphalt Engineering Technical Department.