Liquid Rubber

Liquid Rubber Chemical Resistance Chart

Chemical name	Formula	Concentration	Acceptability
Acetic acid	CH_3COOH	10%	Limited
Acetic acid	CH_3COOH	50%	Unsuitable
Aluminum chloride	NH_4Cl	Saturated	Suitable
Aluminum sulfate	NH_4SO_4	Saturated	Suitable
Ammonium chloride	NH_4Cl	Saturated	Suitable
Ammonium nitrate	NH_4NO_3	All concentrations	Unsuitable
Ammonium sulfate	$(NH_4)_2SO_4$	Saturated	Suitable
Aqua regia	HCl-H NO_3	All concentrations	Unsuitable
Barium carbonate	$BaCO_3$	Saturated	Suitable
Barium chloride	$BaCl_2$	Saturated	Suitable
Barium hydroxide	$Ba(OH)_2$	Saturated	Suitable
Barium sulfate	$BaSO_4$	Saturated	Suitable
Borax (sodium tetraborate)	$Na_2B_4O_7$	Saturated	Suitable
Bromine (gas or liquid)	Br_2	All concentrations	Unsuitable
Calcium carbonate	$CaCO_3$	Saturated	Suitable
Calcium chloride	$CaCl_2$	Saturated	Suitable
Calcium cyanide	$Ca(CN)_2$	All concentrations	Unsuitable
Calcium hydroxide (lime)	$Ca(OH)_2$	Saturated	Suitable
Calcium nitrate	$Ca(NO_3)_2$	Saturated	Suitable
Calcium sulfate	$CaSO_4$	Saturated	Suitable
Carbon dioxide (gas)	CO_2	All concentrations	Suitable
Chlorine	Cl_2, gas	All concentrations	Unsuitable
Chromic acid	H_2CrO_7	All concentrations	Unsuitable
Copper carbonate	$CuCO_3$	Saturated	Suitable
Copper (cupric) chloride	$CuCl_2$	Saturated	Suitable
Copper (cupric) hydroxide	$Cu(OH)_2$	Saturated	Suitable
Copper (cupric) nitrate	$Cu(NO_3)_2$	Saturated	Suitable
Copper (cupric) sulfate	$CuSO_4$	Saturated	Suitable
Corn Syrup	$C_6O_6H_{12}$	<50% w/w	Suitable
Corn Syrup	$C_6O_6H_{12}$	>50% w/w	Limited
Ethyl alcohol	C_2H_5OH	<35% w/w	Limited
Ethyl alcohol	C_2H_5OH	>35% w/w	Unsuitable
Glycerol	$C_3O_3H_6$	<35% w/w	Limited
Glycerol	$C_3O_3H_6$	>35% w/w	Unsuitable

Hydrochloric acid	HCl	35% w/w (conc.)	Unsuitable
Hydrocyanic acid	HCN	All concentrations	Unsuitable
Hydrogen (gas)	H_2	All concentrations	Unsuitable
Hydrogen peroxide	H_2O_2	5% w/w	Limited
Hydrogen peroxide	H_2O_2	>20% w/w	Unsuitable
Iron (ferrous) amm. sulfate	$Fe(NH_4)SO_4$	Saturated	Suitable
Iron (ferrous) carbonate	$FeCO_3$	Saturated	Suitable
Iron (ferrous) chloride	$FeCl_2$	Saturated	Suitable
Iron (ferrous) hydroxide	$Fe(OH)_2$	Saturated	Suitable
Iron (ferrous) sulfate	$FeSO_4$	Saturated	Suitable
Iron (ferric) carbonate	$Fe_2(CO_3)_3$	Saturated	Suitable
Iron (ferric) chloride	$FeCl_3$	Saturated	Unsuitable
Iron (ferric) hydroxide	$Fe(OH)_3$	Saturated	Suitable
Iron (ferric) nitrate	$Fe(NO_3)_3$	Saturated	Unsuitable
Iron (ferric) sulfate	$Fe_2(SO_4)_3$	Saturated	Limited
Magnesium carbonate	$MgCO_3$	Saturated	Suitable
Magnesium chloride	$MgCl_2$	Saturated	Suitable
Magnesium hydroxide	$Mg(OH)_2$	Saturated	Suitable
Magnesium sulfate	$MgSO_4$	Saturated	Suitable
Methyl alcohol	CH_3OH	<35%	Limited
Methyl alcohol	CH_3OH	>35%	Unsuitable
Nickel carbonate	$NiCO_3$	Saturated	Suitable
Nickel chloride	$NiCl_2$	Saturated	Suitable
Nickel hydroxide	$Ni(OH)_2$	Saturated	Suitable
Nickel sulfate	$NiSO_4$	Saturated	Suitable
Nitric acid	HNO_3	35% w/w	Limited
Phosphoric acid (ortho)	H_3PO_4	75% w/w	Suitable
Potassium carbonate	K_2CO_3	Saturated	Limited
Potassium chlorate	$KClO_3$	All concentrations	Unsuitable
Potassium chloride	KCl	Saturated	Suitable
Potassium citrate	$K_3C_4O_7$	Saturated	Suitable
Potassium cyanide	KCN	All concentrations	Unsuitable
Potassium hydroxide	KOH	45% w/w	Suitable
Potassium perchlorate	$KClO_4$	All solutions	Unsuitable
Potassium permanganate	$KMnO_4$	All solutions	Unsuitable
Potassium nitrate	KNO_3	Saturated	Limited
Potassium sulfate	K_2SO_4	Saturated	Suitable
Sodium acid phosphate	NaH_2PO_4	Saturated	Limited
Sodium bisulfite	$NaHSO_3$	Saturated	Suitable
Sodium bromide	NaBr	Saturated	Suitable

Sodium carbonate	Na_2CO_3	Saturated	Suitable
Sodium chlorate	$NaClO_3$	All concentrations	Unsuitable
Sodium chloride	NaCl	Saturated	Suitable
Sodium dichromate	Na_2CrO_7	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_2	Limited
Sodium hypochlorite	NaOCl	10% av.Cl_2	Unsuitable
Sodium metasilicate	Na_2SiO_3	Saturated	Suitable
Sodium nitrate	$NaNO_3$	Saturated	Suitable
Sodium nitrite	$NaNO_2$	Saturated	Suitable
Sodium orthophosphate	Na_3PO_4	Saturated	Suitable
Sodium perborate	$Na_2B_4O_7.H_2O_2$	Saturated	Suitable
Sodium perchlorate	$NaClO_4$	All concentrations	Unsuitable
Sodium permanganate	$NaMnO_4$	All concentrations	Unsuitable
Sodium sulfate	Na_2SO_4	Saturated	Suitable
Sucrose	$C_6O_6H_{12}$	Saturated	Suitable
Sulfuric acid	H_2SO_4	50% w/w	Suitable
Sulfuric acid	H_2SO_4	93% w/w	Unsuitable
Tin (stannous) chloride	$SnCl_2$	Saturated	Suitable
Tin (stannous) sulfate	Sn SO_4	Saturated	Limited
Urea	$CO(NH_2)_2$	Saturated	Suitable
Zinc oxide	ZnO	Saturated	Suitable
Zinc chloride	$ZnCl_2$	Saturated	Suitable
Zinc sulfate	$ZnSO_4$	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^{o}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^{o}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.