

Graphitar Grades by Chemical compatibility category.

A		B		C		D		E		F	
2	64	14	77	101	2831	2767	2690	111			
3	67	35	86	102	2832	2840	2866	112			
18	75	38	88	103	2833	2864	2936	113			
30A	80	39	89	105	2835	2865	2980	114			
34	84	40	92	107	2837		3048				
48	110	47	94	109	2859						
	2413	70	95		2887						
			108		2957						
					3030						

## Chemical Compatibility of Graphitar®

Resistance to chemical attack varies among GRAPHITAR Grades. GRAPHITAR Grades can be grouped into six chemical compatibility categories ... see Chart at left. A GRAPHITAR component may be compatible with its chemical environment, yet suffer mechanical damage from corroded mating parts. This situation can be avoided by specifying GRAPHITAR for both mating surfaces.

## CHEMICAL COMPATIBILITY CHART

CHEMICAL	GRAPHITAR CATEGORY SUGGESTED	CHEMICAL	GRAPHITAR CATEGORY SUGGESTED	CHEMICAL	GRAPHITAR CATEGORY SUGGESTED
<b>ACIDS</b>		Sulphuric (75-96%)	A - - - - F	Ammonium Bicarbonate	A B - D - F
Abietic	A B C D - F	Sulfurous	A B - - - - F	Ammonium Carbonate	A B - D - F
Acetic	A B - D - F	Tannic	A B C D - F	Ammonium Chloride	A B - D - F
Acetic Anhydride	A B - D - F	Tartaric	A B C D - F	Ammonium Nitrate	A B - D - F
Acetylsalicylic	A B C D - F	Terephthalic	A B - D - F	Ammonium Phosphate	A B - D - F
Adipic	A B C D - F	Toluenesulfonic	A B - D - F	Ammonium Sulfate	A B - D - F
Aqua Regia	- - - - -	Toluic	A B - D - F	Ammonium Thiocyanate	A B - D - F
Arsenic	A B C D - F	Trichloroacetic	A B - D - F	Arsenic Trichloride	A B - D - F
Ascorbic	A B C D - F	Uric	A B - D - F	Baking Soda	A B - D - F
Battery	A B - D - F	Valeric	A B - D - F	Barium Carbonate	A B - D - F
Benzensulfonic	A B C D - F	Vinyl Acetate	A B - D - F	Barium Chloride	A B - D - F
Benzoic	A B C D - F			Barium Sulfate	A B - D - F
Boiler Acid Phosphates	A B C D - F	<b>ALKALINE CHEMICALS</b>		Barium Sulfide	A B - D - F
Boric	A B C D - F	Ammonium Carbonate	A B - D - F	Borax	A B - D - F
Butyric	A B C D - F	Ammonium Hydroxide	A B - D - F	Boiler Feed Water Compounds	A B C D - F
Carbolic	A B - D - F	Amyl Amines	A - - - - F	Calcium Bisulfite	A B - D - F
Carbonic	A B - D - F	Anhydrous Ammonia Liquid	A B - D - F	Calcium Chloride	A B - D - F
Chlorine(Anhydrous Liquid)	A B - - - - F	Barium Hydroxide	A B - D - F	Calcium Sulfate	A B - D - F
Chloric	- - - - -	Bleaching Powder	- - - - -	Calgon	A B C D - F
Chlorous	- - - - -	Butyl Amines	A B - D - F	Chromium Potassium Sulfate	A B - D - F
Chloroacetic	A B - D - F	Calcium Carbonate	A B - D - F	Copper Chloride	A B - D - F
Chlorosulfonic	A B - D - F	Calcium Hydroxide	A B - D - F	Copper Nitrate	A B - D - F
Chromic	- - - - -	Calcium Hypochlorite	- - - - -	Copper Sulfate	A B - D - F
Citric	A B C D - F	Calcium Oxide	- - - - -	Ferric Chloride	A B - D - F
Cresylic	A B C D - F	Caustic Soda	- - - - -	Ferric Sulfate	A B - D - F
Cyanic	A B - D - F	Cyclohexylamine	A B - D - F	Ferrous Chloride	A B - D - F
Fatty Acids	A B C D - F	Detergents	A B - D - F	Ferrous Sulfate	A B - D - F
Fluoboric	- - - - -	Diethanol Amine	A B - D - F	Glauber's Salt	A B - D - F
Fluosilicic	A B - - - - F	Disodium Phosphate	A B - D - F	Ink	A B - D - F
Formic	A B C D - F	Hydrazine	- - - - -	Lead Acetate	A B - D - F
Gallic	A B C D - F	Hydroxylamine	A B - D - F	Lead Carbonate	A B - D - F
Glutamic	A B C D - F	Lime Slurries	- - - - -	Lead Nitrate	A B - D - F
Hydrobromic	A B - D - F	Lithium Carbonate	A B - D - F	Lithium Carbonate	A B - D - F
Hydrochloric	A B - D - F	Lithium Hydroxide	A B - D - F	Magnesium Chloride	A B - D - F
Hydrocyanic	A B - D - F	Lye	- - - - -	Magnesium Oxide	A B - D - F
Hydrofluoric	- - - - -	Magnesium Hydroxide	A B - D - F	Magnesium Sulfate	A B - D - F
Hydrofluosilicic	A B - - - - F	Monoethanolamine	A B - D - F	Manganous Sulfate	A B - D - F
Hydrogen Peroxide	- - - - -	Morpholine	A B - D - F	Mercury Salts	A B - D - F
Hypochlorous	- - - - -	Potassium Bicarbonate	A B - D - F	Nickel Acetate	A B - D - F
Isophthalic	A B - D - F	Potassium Carbonate	A B - D - F	Nickel Chloride	A B - D - F
Lactic	A B C D - F	Potassium Chlorate	- - - - -	Nickel Nitrate	A B - D - F
Lauric	A B C D - F	Potassium Cyanide	A B - D - F	Nickel Sulfate	A B - D - F
Maleic	A B - D - F	Potassium Hydroxide	- - - - -	Nylon Salt	A B - D - F
Malic	A B - D - F	Potassium Phosphate	A B - D - F	Phosphorus Trichloride	A - - - - F
Muriatic	A B - D - F	Pyridine	A B - D - F	Potassium Bisulfide	A B - D - F
Nitrating (To 75%)	- - - - -	Soap & Soap Solutions	A B C D - F	Potassium Carbonate	A B - D - F
Nitric 0 to 20%	A B - - - - F	Sodium Bicarbonate	A B - D - F	Potassium Chloride	A B - D - F
Nitric 20 to 100%	- - - - -	Sodium Carbonate	A B - D - F	Potassium Chromate	A B - D - F
Nitrous	A B - - - - F	Sodium Hydroxide	- - - - -	Potassium Cyanide	A B - D - F
Oleic	A B - D - F	Sodium Hypochlorite	- - - - -	Potassium Iodide	A B - D - F
Oleum	- - - - -	Sodium Peroxide	- - - - -	Potassium Permanganate	A - - - - F
Orthophosphoric	A B - D - F	Sodium Phosphate	A B - D - F	Potassium Phosphates	A B - D - F
Organic Acids	A B - D - F	Sodium Tetraborate	A B - D - F	Potassium Sulfate	A B - D - F
Oxalic	A B C D - F	"Tetramine" C	A B - D - F	Sal Ammoniac	A B - D - F
Palmitic	A B C D - F	Triethanolamine	A B - D - F	Sal Soda	A B - D - F
Perchloric	- B - - - -	Triethylamine	A B - D - F	Sea Water	A B - D - F
Phenolsulfonic	A B - D - F	Trisodium Phosphate	A B - D - F	Silver Nitrate	- B - - - - F
Phosphoric (Glacial)	A B - D - F	U rea	A B - D - F	Soda Ash	A B - D - F
Phthalic	A B - D - F	Water Glass	A B - D - F	Sodium Aluminate	A B - D - F
Picric	A B - D - F			Sodium Acid Sulfate	A B - D - F
Propionic	A B - D - F	<b>SALT SOLUTIONS</b>		Sodium Bicarbonate	A B - D - F
Pyrogallic	A B - D - F	Alkylaryl Sulfonates	A B C D - F	Sodium Bisulfate	A B - D - F
Salicylic	A B - D - F	Allyl Chloride	A B - D - F	Sodium Bisulfite	A B - D - F
Sorbic	A B - D - F	Alum (Ammonia)	A B - D - F	Sodium Borate	A B - D - F
Stearic	A B C D - F	Alum (Chrome)	A B - D - F	Sodium Carbonate	A B - D - F
Succinic	A B - D - F	Alum (Potash)	A B - D - F	Sodium Chloride	A B - D - F
Sulphuric (0-75%)	A B - D - F	Aluminum Chloride	A B - D - F		
		Aluminum Sulfate	A B - D - F		



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Sodium Chromate	A B - D - F	Argon (inert)	A B C D E F	Ethyl Alcohol	A B C D - F
Sodium Cyanide	A B - D - F	Boron Trifluoride	A B - D - F	Ethyl Benzene	A B C D - F
Sodium Dichromate	A B - D - F	Bromine	- - - - F	Ethyl Chloride	A B C D - F
Sodium Fluoride	A B - D - F	Butadiene	A B C D E F	Ethyl Mercaptan	A B C D - F
Sodium Nitrate	A B - D - F	Butane	A B C D E F	Ethyl Sulfate	A B C D - F
Sodium Nitrite	A B - D - F	Butylene	A B C D E F	Ethylene	A B C D - F
Sodium Phosphates	A B - D - F	Carbon Dioxide	A B C D E F	Ethylene Dichloride	A B C D - F
Sodium Silicate	A B - D - F	Carbon Monoxide	A B C D E F	Ethylene Glycol	A B C D - F
Sodium Sulfate	A B - D - F	Chlorine	- - - - F	Ethylene Oxide	A B C D - F
Sodium Sulfide	A B - D - F	Cyanogen	A B C D E F	Formaldehyde	A B C D - F
Sodium Sulfite	A B - D - F	Cyclohexane	A B C D E F	Freon (Liquefied)	A B C D - F
Sodium Thiosulfate	A B - D - F	Ethane	A B C D E F	Fuel Oil	A B C D - F
Stannic Chloride	A B - D - F	Ether	A B C D E F	Furfural	A B C D - F
Stannous Fluoride	A B - D - F	Ethylene	A B C D E F	Furfuryl Alcohol	A B C D - F
Sulfate Liquors	A B - D - F	Fluorine	- - - - -	Gasoline	A B C D - F
Trisodium Phosphate	A B - D - F	Freons	A B C D E F	Glycerine	A B C D - F
Zinc Acetate	A B - D - F	Hydrogen	A B C D E F	Glue	A B C D - F
Zinc Ammonium Chloride	A B - D - F	Hydrogen Chloride	A B C D E F	Heptane	A B C D - F
Zinc Chloride	A B - D - F	Hydrogen Fluoride	- - - - F	Hydrazine Hydrate	A B C D - F
Zinc Hydrosulfite	A B - D - F	Hydrogen Sulfide	A B - D E F	Isobutyl Acetate	A B C D - F
Zinc Sulfate	A B - D - F	Iodine	- - - - -	Isobutyl Alcohol	A B C D - F
<b>FOOD &amp; FOOD PRODUCTS</b>		Methane	A B C D E F	Isopropyl Acetate	A B C D - F
Aspirin	A B C D - F	Natural Gas	A B C D E F	Isopropyl Alcohol	A B C D - F
Alcohol	- B - D - F	Neon	A B C D E F	Isopropyl Ether	A B C D - F
Ale	- B - D - F	Nitric Oxide	A B C D E F	Jet Fuel	A B C D - F
Beer	- B - D - F	Nitrogen	A B C D E F	Kerosene	A B C D - F
Beet Sugar Liquors	- B - D - F	Nitrous Oxide	A B C D E F	Ketones	A B C D - F
Butter	- B - D - F	Oxygen	A B C D E F	Lubricating Oil	A B C D - F
Buttermilk	- B - D - F	Phosgene	- - - - -	Lacquers & Lacquer Solvents	A B C D - F
Cane Sugar Liquors	- B - D - F	Propane	A B C D E F	Linseed Oil	A B C D - F
Castor Oil	- B - D - F	Propylene	A B C D E F	Ligroin (Petroleum Ether)	A B C D - F
Cheeses	- B - D - F	Steam (to 500 F.)	A B C D - F	Methyl Acetate	A B C D - F
Chocolate	- B - D - F	Sulfur Dioxide	A B - D - F	Methyl Acrylate	A B C D - F
Cider	- B - D - F	Sulfur Trioxide	- - - - -	Methyl Alcohol	A B C D - F
Citrus Juices	- B - D - F	<b>SOLVENTS &amp; ORGANIC MATERIALS</b>		Methyl "Cellosolve"	A B C D - F
Coconut Oil	- B - D - F	Acetaldehyde	A B C D - F	Methyl Chloride	A B C D - F
Coffee	- B - D - F	Acetone	A B C D - F	Methylethyl Ether	A B C D - F
Cola Drinks	- B - D - F	Acetophenone	A B C D - F	Methyl Ethyl Ketone	A B C D - F
Corn Oil	- B - D - F	Acrolein	A B C D - F	Methyl Formate	A B C D - F
Cornstarch Slurry	- B - D - F	Acetate Solvents	A B C D - F	Methyl Isobutyl Ketone	A B C D - F
Cottonseed Oil	- B - D - F	Almond Oil	A B C D - F	Methyl Salicylate	A B C D - F
Dextrin	- B - D - F	Amyl Acetate	A B C D - F	Mineral Oil	A B C D - F
Dextrose	- B - D - F	Amyl Alcohol	A B C D - F	Mineral Spirits	A B C D - F
Eggs	- B - D - F	Amyl Chloride	A B C D - F	Monochloro benzene	A B C D - F
Fish Oil	- B - D - F	Aniline	A B C D - F	Naphtha	A B C D - F
Fruit Juices	- B - D - F	Anthracene	A B C D - F	Naphthalene	A B C D - F
Gelatin	- B - D - F	Asphalt	A B C D - F	Nitrobenzene	A B C D - F
Hydrogenated Fats	- B - D - F	Benzaldehyde	A B C D - F	Octyl Alcohol	A B C D - F
Ice Cream	- B - D - F	Benzene	A B C D - F	Oleyl Alcohol	A B C D - F
Jelly	- B - D - F	Butyl Alcohol	A B C D - F	Ortho Dichlorobenzene	A B C D - F
Ketchup	- B - D - F	Butyl "Cellosolve"	A B C D - F	Paint & Paint Vehicles	A B C D - F
Lard	- B - D - F	Camphor	A B C D - F	Paraffin	A B C D - F
Malt	- B - D - F	Carbitols (Diethylene Glycol Ethers)	A B C D - F	Paraffin Oils	A B C D - F
Monnitol	- B - D - F	Carbon Disulfide	A B C D - F	Para Dichlorobenzene	A B C D - F
Mayonnaise	- B - D - F	Carbon Tetrachloride	A B C D - F	Paraformaldehyde	A B C D - F
Maple Shrup	- B - D - F	Chloral	A B C D - F	Paraldehyde	A B C D - F
Milk	- B - D - F	Chlorobenzene	A B C D - F	Perchloroethylene	A B C D - F
Mineral Oil	- B - D - F	Chlorothene	A B C D - F	Phenol	A B C D - F
Molasses	- B - D - F	Chloroform	A B C D - F	Pine Oil	A B C D - F
Monosodium Glutamate	- B - D - F	Coal Tar	A B C D - F	Polyethylene	A B C D - F
Oleomargarine	- B - D - F	Creosote	A B C D - F	Polystyrene	A B C D - F
Olive Oil	- B - D - F	Cresol	A B C D - F	Polyurethane	A B C D - F
Palm Oil	- B - D - F	Crotonaldehyde	A B C D - F	Prestone	A B C D - F
Pickle Solutions	- B - D - F	Cumene	A B C D - F	Propyl Alcohol	A B C D - F
Salad Oil	- B - D - F	Cyclohexane	A B C D - F	Propylene Dichloride	A B C D - F
Sorbitol	- B - D - F	Diacetone	A B C D - F	Resorcinol	A B C D - F
Saccharine	- B - D - F	Dibutyl Phosphite	A B C D - F	Stoddard Solvent	A B C D - F
Soybean Oil	- B - D - F	Dibutyl Phthalate	A B C D - F	Styrene	A B C D - F
Sugar Solutions	- B - D - F	Dichloroethane	A B C D - F	Tar	A B C D - F
Soft Drinks	- B - D - F	Dichloropentane	A B C D - F	Tetrachloroethane	A B C D - F
Starches	- B - D - F	Diesel Oil	A B C D - F	Terachloroethylene	A B C D - F
Vegetable Oil	- B - D - F	Diethylbenzene	A B C D - F	Toluene	A B C D - F
Vinegar	- B - D - F	Diethyleneglycol	A B C D - F	Trichlorobenzene	A B C D - F
Whiskey & Wine	- B - D - F	Diethyl Sulfate	A B C D - F	Trichloroethylene	A B C D - F
Water	- B - D - F	Dimethyl Phthalate	A B C D - F	Tricresyl Phosphate	A B C D - F
Yeast	- B - D - F	Dioxane	A B C D - F	Turpentine	A B C D - F
Yogurt	- B - D - F	Dipentene	A B C D - F	Varnish	A B C D - F
<b>GASES</b>		Diphenyl	A B C D - F	Vinyl Acetate	A B C D - F
Acetylene	A B C D E F	Dowtherms	A B C D - F	Vinyl Chloride	A B C D - F
Air	A B C D E F	Ether-Diethyl	A B C D - F	Water	A B C D - F
Ammonia Wet)	A B - D - F	Ether-Petroleum	A B C D - F	Waxes	A B C D - F
Ammonia Anhydrous)	A - - D - F	Ethyl Acetate	A B C D - F	Xylene	A B C D - F

