

Chemical Compatibility Charts

These charts are intended as a general guide for various materials and chemicals. They show some of the materials used in Terra's products and chemicals likely to be used with them. Testing is strongly recommended for extreme conditions of use, such as prolonged exposure or immersion, high temperatures and high concentrations. The acids, caustics and salts in this chart are assumed to be in solution. Materials may react differently to the pure substances (glacial acetic acid, for example).

Hazards (Only the primary ones are shown. For example, chlorine is not shown as an asphyxiant because its toxicity will kill you first).	
A	Asphyxiant (gases and vapors only)
C	Corrosive
F	Flammable
O	Oxidizer
T	Toxic
○	No noticeable effect.
●	Minor effect or slight change in appearance or properties. Test before repeated exposure.
★	No noticeable effect at low concentration and room temperature. Moderate to severe effect at high concentration and/or high temperature. Test before using.
●	Severe effect or degradation, exposure not recommended.

		METALS					
		HAZARDS					
ACIDS	CAUSTICS	Aluminum	Brass	Bronze	Copper	304 Stainless Steel	316 Stainless Steel
Acetic	C	●	●	●	●	●	●
Aqua Regia	C	●	●	●	●	●	●
Chromic	C	●	●	●	●	●	●
Hydrochloric	C	●	●	●	●	●	●
Hydrofluoric	C	●	●	○	●	●	●
Nitric	C	●	●	○	●	●	●
Phosphoric	C	●	●	●	●	●	●
Sulfuric	C	●	●	●	●	●	●
Ammonium Hydroxide	C	●	●	●	●	○	○
Potassium Hydroxide	C	●	●	●	●	●	●
Sodium Hydroxide	C	●	●	●	●	●	●
GASES	OXYDANTS	Air	O	○	○	○	○
Ammonia	C,F,T	○	●	●	●	○	○
Argon	A	○	○	○	○	○	○
Carbon Dioxide	A	○	○	○	○	○	○
Carbon Monoxide	F,T	○	○	○	○	○	○
Chlorine	C,T	●	●	●	●	●	○
Flourine	C,O,T	*	*	●	●	*	○
Helium	A	○	○	○	○	○	○
Hydrogen	A,F	○	○	○	○	○	○
Hydrogen Sulfide	C,F,T	○	○	○	○	○	○
Methane	A,F	○	○	○	○	○	○
Nitrogen	A	○	○	○	○	○	○
Nitrous Oxide	O	○	○	○	○	○	○
Ozone	O	●	●	●	●	●	●
Propane	A,F	○	○	○	○	○	○
OXYDANTS	SOLVENTS	Hydrogen Peroxide	O	●	●	●	●
Sodium Hypochlorite	O	●	●	●	●	*	*
SOLVENTS	SALTS	Ammonium Nitrate	●	●	●	●	○
Ethyl Alcohol	Ammonium Persulfate	●	●	●	●	●	●
Ethyleneglycol	Sodium Carbonate	●	●	○	○	○	○
Glycerine	Acetone	F	○	○	○	○	○
Isopropyl Alcohol	Carbon Tetrachloride	T	●	○	○	●	●
Kerosene	DI Water	F	●	○	○	●	○
Methyl Alcohol	Ethyl Alcohol	F	●	○	○	○	○
Methyl Ethyl Ketone	Ethyleneglycol	F,T	○	○	○	●	○
Toluene	Glycerine	F	●	○	○	●	○
Trichloroethane	Isopropyl Alcohol	A	●	○	○	●	●

PLASTICS																
		HAZARDS														
		Acrylic (plexiglass)	ABS	CPVC	Noryl	Nylon	Polycarbonate	Polyethylene (TPX)	Polypropylene	Polystyrene	PPS (Fytlon)	PVC	PVC, Static Dissipative	Syntex Acrylonitrile (SAN)	PVDF (Kynar)	Teflon, PTFE
ACIDS	Acetic	C	●	*	*	○	●	*	●	*	○	*	*	○	●	○
	Aqua Regia	C	●	●	●	●	●	●	●	●	●	●	●	○	○	○
	Chromic	C	●	●	●	*	*	●	*	*	●	○	*	○	*	○
	Hydrochloric	C	*	○	*	*	○	●	*	*	*	●	*	○	*	○
	Hydrofluoric	C	●	●	●	*	*	●	*	*	○	*	○	*	*	○
	Nitric	C	●	●	*	*	*	●	*	*	●	●	*	○	*	●
	Phosphoric	C	●	●	*	*	○	●	*	○	●	●	●	○	*	○
CAUSTICS	Sulfuric	C	*	*	*	○	●	*	*	○	*	*	*	*	*	○
	Ammonium Hydroxide	C	●	●	○	*	○	○	●	○	○	○	*	○	*	○
	Potassium Hydroxide	C	●	●	○	○	●	●	○	○	○	*	*	○	*	○
GASES	Sodium Hydroxide	C	●	○	*	○	*	●	●	○	●	●	*	○	*	○
	Air	O	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	Ammonia	C,F,T	●	●	*	●	○	●	●	○	●	*	○	○	*	○
	Argon	A	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	Carbon Dioxide	A	●	●	*	○	○	○	*	○	●	●	●	*	○	●
	Carbon Monoxide	F,T	*	*	○	○	○	*	*	●	●	●	●	*	○	*
	Chlorine	C,T	●	●	●	●	○	●	●	●	●	●	●	●	*	○
	Flourine	C,O,T	○	*	●	●	●	●	●	●	●	●	●	●	*	●
	Helium	A	○	○	*	○	○	○	○	○	●	●	●	*	○	●
	Hydrogen	A,F	●	●	*	○	○	○	○	●	●	●	●	*	●	●
	Hydrogen Sulfide	C,F,T	●	●	*	●	●	●	●	*	●	●	●	*	*	○
	Methane	A,F	●	●	*	●	○	○	○	○	●	●	●	*	*	○
	Nitrogen	A	○	○	○	○	○	○	○	○	○	○	○	●	○	○
	Nitrous Oxide	O	●	*	●	●	●	●	●	●	●	●	●	*	○	●
	Ozone	O	○	○	○	○	●	●	●	●	●	●	●	*	○	○
	Propane	A,F	●	○	○	○	●	●	●	●	●	●	●	*	○	*
OXYDANTS	Hydrogen Peroxide	O	○	○	*	○	●	○	○	*	*	○	●	●	*	*
	Sodium Hypochlorite	O	●	●	○	*	○	●	●	●	●	●	●	*	○	○
	Ammonium Nitrate		○		*	○	●	○	*	○	*	○	○	*	○	○
SALTS	Ammonium Persulfate		○		*	○	●		*	●	*	○	○	*	○	○
	Sodium Carbonate	*	○	*	○	○	○	○	○	○	*	○	*	*	○	○
	Hydrogen Peroxide	O	○	○	*	○	●	○	○	*	*	○	●	●	*	*
SOLVENTS	Acetone	F	●	●	●	●	●	○	●	●	●	●	●	●	●	●
	Carbon Tetrachloride	T	●	●	●	●	●	●	●	●	●	●	●	●	*	○
	DI Water		○	○	○	○	○	○	○	○	○	○	○	○	○	○
	Ethyl Alcohol	F	○	●	●	●	○	○	●	*	●	●	●	●	●	●
	Ethylene Glycol		●	●	*	○	○	○	●	●	●	●	●	*	*	○
	Glycerine		●	●	*	○	○	○	●	●	●	●	●	*	*	○
	Isopropyl Alcohol	F	●	●	●	●	○	●	●	*	*	*	●	●	*	●
	Kerosene	F	●	●	○	*	●	○	*	*	●	*	●	*	●	●
	Methyl Alcohol	F,T	●	●	●	*	○	○	●	*	*	●	●	●	*	●
	Methyl Ethyl Ketone	F	●	●	●	●	●	●	●	●	*	●	●	●	●	●
	Toluene	F	●	●	●	●	●	●	●	●	●	●	●	*	●	●
	Trichloroethane	A	●				●	●	●	●	●	●	●	●	●	●

RUBBER & SYNTHETICS (ELASTOMERS)											
-HAZARDS-											
	Buna N	EPDM	Hypalon	Natural Rubber	Neoprene	Nitrile	PVA (Polyvinyl Alcohol)	Iygon	Silicone	Viton	
ACIDS	Acetic	C	D	O	*	*	*	D	●	D	*
	Aqua Regia	C	●	D	D	●	*	*	●	●	*
	Chromic	C	●	D	D	●	●	D	●	D	*
	Hydrochloric	C	D	*	*	O	*	D	●	●	*
	Hydrofluoric	C	●	●	D	*	●	O	●	●	*
	Nitric	C	●	*	*	●	●	*	●	●	*
	Phosphoric	C	●	D	D	*	*	●	●	●	*
	Sulfuric	C	*	*	*	*	*	●	●	●	*
CAUSTICS	Ammonium Hydroxide	C	O	O	O	*	*	O	●	O	●
	Potassium Hydroxide	C	D	O	O	O	O	●	D	D	D
	Sodium Hydroxide	C	*	D	O	*	O	●	D	O	*
GASES	Air	O	O	O	O	O	O	O	O	O	O
	Ammonia	C,F,T	D	O	●	●	O	O	O	D	●
	Argon	A	O	O	O	O	O	O	O	O	O
	Carbon Dioxide	A	*	*	*	*	*	*		*	*
	Carbon Monoxide	F,T	O	O	D	●	*	*		O	*
	Chlorine	C,T	D	O	●	●	●		D	●	*
	Flourine	C,O,T	●	O	D	●	●		●	●	*
	Helium	A	O	O	O	*	O	O	O	O	O
	Hydrogen	A,F	O	O	*	*		O	O	D	*
	Hydrogen Sulfide	C,F,T	●	D	D	D	●		●	D	*
	Methane	A,F	O	●	D	●	*		●	●	*
	Nitrogen	A	O	O	O	*	O		O	O	*
	Nitrous Oxide	O	O			●					*
	Ozone	O	●	O	O	D			O	*	
	Propane	A,F	O	●		●	*		●	●	*
OXIDANTS	Hydrogen Peroxide	O	●	*	●	D	●	●	D	*	*
	Sodium Hypochlorite	O	D	D	*	D	*	●	D	D	*
SALTS	Ammonium Nitrate		O	O	O	D	D	O	●	O	D
	Ammonium Persulfate		O	D	O	O	*	O	●	O	●
	Sodium Carbonate		O	O	O	*		●	D	O	*
SOLVENTS	Acetone	F	●	O	D	D	*	*	●	D	●
	Carbon Tetrachloride	T	D	D	●	●	*	*	O	●	*
	DI Water		O	O	O	O	O	●	O	O	O
	Ethyl Alcohol	F	D	O	O	O	*	O	●	D	*
	Ethylene Glycol		O	O	O	O	*	O	D	O	*
	Glycerine		O	O	O	O	*	O	D	O	*
	Isopropyl Alcohol	F	D	O	O	O	*	O	●	O	*
	Kerosene	F	O	●	●	●	●	O	●	●	*
	Methyl Alcohol	F,T	D	O	O	O	*	O	●	O	*
	Methyl Ethyl Ketone	F	●	O	●	*	●	●	D	●	●
	Toluene	F	●	●	●	●	*	*	D	●	*
	Trichloroethane	A	●	●	●	●	*	*	D	●	O