



# U.S. Fish and Wildlife Service INCOMPATIBLE MATERIALS CHART

Adapted from US Navy's, NAVOSHEN/TRACEN

GROUP	MATERIAL	EXAMPLES	INCOMPATIBLE MATERIALS EXAMPLES	POTENTIAL REACTION IF MIXED
1	ACIDS	Battery Acids; Paint Removers; Muriatic, Nitric, & Sulfuric Acid	<b>FLAMMABLES/COMBUSTIBLES</b> Fuels & Solvents <b>ALKALIES/BASES/CAUSTICS</b> pH Control Chemicals <b>OXIDIZERS</b> Chlorine Compounds Group 3, 4, 6, 8, 9, 10, 11, 14, 15, 16	<b>HEAT</b> <b>VIOLENT REACTION</b> <b>TOXIC GAS GENERATION</b>
2	ADHESIVES	Epoxies, Isocyanates	<b>ACIDS</b> <b>ALKALIES/BASES/CAUSTICS</b> <b>OXIDIZERS</b> Group 1, 3, 16	Sulfuric, Nitric Hydroxides Peroxides <b>HEAT</b> <b>FIRE HAZARD</b>
3	ALKALIES BASES/ CAUSTICS	Ammonia, Sodium Hydroxide, Sodium Bicarbonate, Cleaners/Detergents	<b>ACIDS</b> <b>FLAMMABLES/COMBUSTIBLES</b> Group 1, 10, 11, 14	Sulfuric Acid Fuels, Solvents <b>HEAT</b> <b>VIOLENT REACTION</b> <b>TOXIC GAS GENERATION</b>
4	CLEANING COMPOUNDS	Degreasers; Perchloroethylene chloroethylene	<b>OXIDIZERS</b> Group 1, 10, 16	Sodium Nitrate, Hydrogen Peroxide <b>HEAT</b> <b>FIRE HAZARD</b>
5	COMPRESSED GASES	Acetylene, Helium, Propane, Ammonia Oxygen, Nitrogen	<b>HEAT SOURCES</b> Keep bottles upright and secure. Store flammables 20 feet from oxygen and all flammable gasses.	<b>FIRE &amp; EXPLOSION HAZARD</b> 
6	PESTICIDES	Insecticides, Fungicides, Rodenticides, Fumigants Avicides	<b>ACIDS</b> <b>OXIDIZERS</b> Group 1, 3, 13	Sulfuric, Nitric Peroxides <b>TOXIC GAS GENERATION</b>
7	EXPLOSIVES	Ammunition, Netting Charges	<b>Incompatible with all other groups!</b>	<b>CONTAMINATED ENERGETICS LOSE ALL PREDICTABILITY!</b>
8	GREASES	Graphite, Silicone, Molybdenum	<b>OXIDIZERS</b> <b>ALKALIES/BASES/CAUSTICS</b> Group 3, 16	Peroxides Hydroxides <b>HEAT</b> <b>FIRE HAZARD</b>
9	HYDRAULIC FLUIDS	Transmission Oil, Petrol-eum-Based Synthetic Fire-Resistant Brake Fluid	<b>ACIDS</b> <b>OXIDIZERS</b> Group 1, 3, 16	Sulfuric, Nitric Peroxides <b>VIOLENT REACTION</b> <b>EXPLOSION HAZARD</b>
10	FUELS	Gasoline, Diesel Fuel, Kerosene	<b>ACIDS</b> <b>OXIDIZERS</b> Calcium Hypochlorite, Calcium Oxide, Hydrogen Peroxide, Lithium Hydroxide	Sulfuric, Nitric <b>HEAT</b> <b>EXPLOSION HAZARD</b>
11	LUBRICANTS/ OILS	Motor Oil	<b>IGNITION SOURCES</b> Group 1, 3, 16	<b>These reactions may be delayed!</b>
12	PAINTS	Primers, Enamels, Lacquers, Strippers	<b>OXIDIZERS</b> <b>ACIDS</b> Group 1, 3, 16	Hydroxides, Peroxide Sulfuric, Nitric <b>HEAT</b> <b>FIRE HAZARD</b>
13	BATTERIES	Lead Acid, Alkaline Lithium, Dry Cell	<b>SOLVENTS</b> <b>OXIDIZERS</b> Group 14, 16	Xylene, Toluene, Alcohol, Peroxides <b>HEAT</b> <b>VIOLENT REACTION</b> <b>TOXIC GAS GENERATION</b> <b>These reactions may be delayed!</b>
14	SOLVENTS HYDROCARBONS	Acetone, Methyl Ethyl Ketone (MEK), Toluene, Xylene, Alcohols	<b>ACIDS</b> <b>OXIDIZERS</b> Group 1, 3, 16	Sulfuric, Nitric Calcium Hypochlorite, Hydrogen Peroxide, Sodium Hydroxide <b>HEAT</b> <b>FIRE HAZARD</b>
15	WATER TREATMENT CHEMICALS	Tri Sodium Phosphate, Chlorates, Sodium Hydroxide	<b>ACIDS</b> <b>OXIDIZERS</b> GROUPS 1, 16	Sulfuric, Nitric Peroxide, Perchlorates <b>HEAT</b> <b>VIOLENT REACTION</b> <b>These reactions may be delayed!</b>
16	OXIDIZERS	Chlorine Bleach, Calcium Hypochlorite, Calcium Oxide, Hydrogen Peroxide, Lithium Hydroxide	<b>FUELS, SOLVENTS</b> <b>ACIDS</b> , Group 1, 8, 9, 10, 11, 13, 14	Gasoline, Oils, Grease Sulfuric, Nitric <b>FIRE HAZARD</b> <b>TOXIC GAS GENERATION</b>

1. This Chart is to be used as a **Guide only!** If the chemicals in the center column mix with the identified group on the left, the potential reactions can be seen in the right column.  
 2. For **specific information** on storage of Hazardous Materials, consult the Material Safety Data Sheet (MSDS). For more detailed chemical reactivity also consult [www.wiser.nlm.nih.gov](http://www.wiser.nlm.nih.gov) and the "NIOSH Pocket Guide to Chemical Hazards" Groups on this chart should not be confused with hazard classes, NFPA hazard ratings, or other established programs.