UNIVERSITY OF NOTRE DAME

TIME SENSITIVE MATERIALS

1. Chemicals that form explosive levels of peroxides without concentration by evaporation or distillation. Some of these may form explosive concentrations of peroxide even if never opened. **These chemicals must be disposed of within 3 months of being opened**.

Butadiene [a]	Isopropryl ether [a]	Tetrafluoroethylene
Chloroprene [a]	Potassium Metal	Vinylidene chloride
Divinylacetylene	Sodium amide	

2. Chemicals that may autopolymerize as a result of peroxide accumulation.
Uninhibited chemicals must be disposed of within 24 hours of being opened.
Inhibited chemicals must be disposed of within 12 months of being opened.

Acrylic acid [b]	Tetrafluoroethylene [c]
Acrylonitrile [b]	Vinyl acetate
Butadiene [c]	Vinyl acetylene
Chloroprene [c]	Vinyl chloride
Chlorotrifluoroethylene	Vinyl pyridine
Methyl Methacrylate [b]	Vinyladiene chloride
Styrene	

3. Chemicals that form explosive levels of peroxides on concentration by evaporation or distillation or otherwise treated to concentrate the peroxides.
These peroxide formers that must be disposed of within 12 months of being opened.

(2-Ethoxythyl)-o-benzoyl benzoate	1, 3, 3-Trimethoxypropene	2-Methoxy ethanol
> 80% Hydrogen Peroxide	1-Ethoxynaphthalene	2-Methoxyethyl vinyl ether
§ - Bromophenetole	1-Ethyoxy-2-propyne	2-Methyltetrahydrofuran
§ - Chlorophenetole	1-Phenylethanol	2-Penten-1-ol
1 - Pentene	2, 2-Diethoxypropane	2-Phenylethanol
1–(2-Chlororethoxy)–2-Phenoxyethane	2, 4-Dichlorophenetole	2-Propanol
1-(2-Ethoxyethoxyethyl)ethyl acetate	2, 4 Dinitrophenetole	3-Ethoxy-o-propionitrile
1, 1-Dimethoxymethane	2, 5 Hexadiyn-1-ol	3, 3-Dimethyoxypropene
1, 2-Bis(2-chloroethoxy) ethane	2-Bromomethyl ethyl ether	3-Bromopropyl phenyl ether
1, 2-Dibenzyloxyethane	2-Butane	3-Isoproposypropiontrile d
1, 2-Dichloroethyl ethyl ether	2-Chlorobutadiene	3-Methoxy ethyl acetate
1, 2-Diethoxyethane	2-Cyclohexen-1-ol	3-Methoxy-1-butyl acetate
1, 2-Epoxy-3-isopropoxypropane	2-Ethoxyethyl acetate	4-Heptanol
1, 2-Epoxy-3-phenoxypropane	2-Ethylacrylaldehyde oxime	4, 5-Hexadien-2-yn-1-ol
1, 3-Dioxepne	2-Ethylbutanol	4-Methyl-2-pentanol
1, 5-p-Methadiene	2-Ethylhexanal	4-Methyl-2-pentanone
1, 3 Butadiyne	2-Hexanol	4-Penten-1-ol

4-Vinyl Cyclohexene	Cyclopropyl methyl ether	m-Nitrophenetole 1-Octene
Acetal	Decahydronaphtalene	n-Amyl ether
Acetaldehyde	Di(1-propynyl) ether [f]	n-Butyl phenyl ether
Acrolein	Di(2-propynyl) ether	n-Butyl vinyl ether
Allyl ether	Diacetylene	n-Hexyl ether
Allyl ethyl ether	Diallyl ether	n-Methylphenetole
Allyl phenyl ether	Dicyclopentadiene	n-Propylisopropyl ether
a-Phenoxypropionitrile chloride	Diethoxymethane	o, p-Ethoxyphenyl isocyanate
B,B Oxdipropionitrile	Diethyl acetal isoamyl benzyl ether	o,p-Iodophenetole
Benzyl 1-naphthyl ether	Diethyl ether	o-Bromophenetole
Benzyl alcohol	Diethyl ethoxymethylene malonate	o-Chlorophenetole
Benzyl ether	Diethyl fumarated	Other Secondary Alcohols
Benzyl ethyl ether	Diethylene glycoldimethyl ether	Oxy bis (2 ethyl acetate)
Benzyl methyl ether	Diethylketene [f]	Oxy bis (2-ethyl benzoate)
Benzyl n-butyl ether	Dimethoxymethane	p-(n-Amyloxy)benzoyl chloride
Bis(2-chloroethyl) ether	Dimethylketene [f]	p-Bromophenetole
Bis(2-ethoxyethyl) ether	Di-n-propoxymethane	p-Chlorophenetole
Bis(2-ethoxyethyl) phthalate	Dioxanes	p-Dibenzyloxybenzene
Bis(2-methoxyethyl) adipate	Ethoxyacetophenone	p-Di-n-butoxybenzene
Bis(2-methoxyehtyl) carbonate	Ethyl §-ethoxypropionate	Perchloric Acid
Bis(2-methoxyethyl) ether	Ethyl Vinyl Ether	Phenoxy acetyl chloride
Bis(2-methoxyethyl phthalate	Ethylene glycol dimethyl ether (glyme)	Phenyl o-propyl ether
Bis(2-methoxymethyl) adipate	Furan p-Phenylphenetone	p-Phenylphenetone
Bis(2-n-butoxyethyl) phthalate	Isoamyl benzyl ether	Sodium 8, 11, 14 elcosate traenoate
Bis(2-phenoxyethyl) ether	Isoamyl ether	Sodium ethoxyacetylide
Bis(chloromethyl) ether [c]	Isobutyl vinyl ether	Tert-Butyl ethyl ether
Bis[2-(methoxyethoxy) ethyl] ether	Isopropy 1, 2, 4, 5 trichlorophenoxyacetate	Tert-Butyl methyl ether
B-methoxypropionitrile	1, 1, 2, 3 –Tetrachloro-1, 3-butadiene	Tetrahydrofuran (THF)
Bis(4-chlorobutyl) ether	Limonene	Tetrahydronaphthalene
Buten-3-yne	Isophorone	Tetrahydropyran
Chloroacetadehydediethyl acetal	m, o, p-Diethoxybenzene	Triethylene glycol diacetate
Chloromethyl methyl ether [e]	Methoxy-1, 3, 5, 7-cyclooctateraene	Trithylene glycol dipropionate
Chloromethylene	Methyl isobutyl ketone	Vinyl ethers
Cumene	Methyl p-(n-amyloxy) benzoate	Vinylene carbonate
Cyclohexanol	Methyl-1-butanol	Vinylidene chloride
Cyclohexene	Methylacetylene	
Cyclooctane	Methylcyclopentane	

Key to superscripts in above tables:

a. When stored as a liquid monomer
b. Although these chemicals form peroxides, no explosion involving these monomers have been reported.
c. When stored in liquid form, these chemicals form explosive levels of peroxides without concentration. They may also be stored as a gas in gas cylinders. When stored as a gas, these chemicals may auto- polymerize as a result of peroxide accumulation.
e. OSHA regulated carcinogen.
f. Extremely reactive and unstable compounds.