

<b>A. Chemicals that form explosive levels of peroxides without concentration</b>		
Butadiene <sup>a</sup>	Isopropyl ether	Sodium amide (sodamide)
Chloroprene <sup>a</sup>	Potassium metal	Tetrafluoroethylene <sup>a</sup>
Divinylacetylene	Potassium amide	Vinylidene chloride
<b>B. Chemicals that form explosive levels of peroxides on concentration</b>		
Acetal	Diethyl ether	4-Methyl-2-pentanol
Acetaldehyde	Diethylene glycol dimethyl ether (diglyme)	2-Pentanol
Benzyl alcohol	Dioxanes	4-Penten-1-ol
2-Butanol	Ethylene glycol dimethyl ether (glyme)	1-Phenylethanol
Cumene	4-Heptanol	2-Phenylethanol
2-Cyclohexen-1-ol	2-Hexanol	2-Propanol
Cyclohexene	Methylacetylene	Tetrahydrofuran
Decahydronaphthalene	3-Methyl-1-butanol	Tetrahydronaphthalene
Diacetylene	Methylcyclopentane	Vinyl ethers
Dicyclopentadiene	Methyl isobutyl ketone	Other secondary alcohols
<b>C. Chemicals that may autopolymerize as a result of peroxide accumulation</b>		
Acrylic acid <sup>b</sup>	Methyl methacrylate <sup>b</sup>	Vinyl chloride
Acrylonitrile <sup>b</sup>	Styrene	Vinylpyridine
Butadiene <sup>c</sup>	Tetrafluoroethylene <sup>c</sup>	Vinyladiene chloride
Chloroprene <sup>c</sup>	Vinyl acetate	
Chlorotrifluoroethylene	Vinylacetylene	
<b>D. Chemicals that may form peroxides but cannot clearly be placed in sections A-C</b>		
Acrolein	<i>p</i> -Chlorophenetole	4,5-Hexadien-2-yn-1-ol
Allyl ether <sup>d</sup>	Cyclooctene <sup>d</sup>	<i>n</i> -Hexyl ether
Allyl ethyl ether	Cyclopropyl methyl ether	<i>o,p</i> -Iodophenetole
Allyl phenyl ether	Diallyl ether <sup>d</sup>	Isoamyl benzyl ether <sup>d</sup>
<i>p</i> -( <i>n</i> -Amyloxy)benzoyl chloride	<i>p</i> -Di- <i>n</i> -butoxybenzene	Isoamyl ether <sup>d</sup>
<i>n</i> -Amyl ether	1,2-Dibenzoyloxyethane <sup>d</sup>	Isobutyl vinyl ether
Benzyl <i>n</i> -butyl ether <sup>d</sup>	<i>p</i> -Dibenzoyloxybenzene <sup>d</sup>	Isophorone <sup>d</sup>
Benzyl ether <sup>d</sup>	1,2-Dichloroethyl ethyl Ether	<i>B</i> -Isopropoxypropionitrile <sup>d</sup>
Benzyl ethyl ether <sup>d</sup>	2,4-Dichlorophenetole	Isopropyl 2,4,5-trichloro-phenoxy- acetate
Benzyl methyl ether	Diethoxymethane <sup>d</sup>	Limonene

Benzyl 1-naphthyl ether <sup>d</sup>	2,2-Diethoxypropane	1,5- <i>p</i> -Methadiene
1,2-Bis(2-chloroethoxy) Ethane	Diethyl ethoxymethylene-Malonate	Methyl <i>p</i> -( <i>n</i> -amyloxy)-benzoate
Bis(2 ethoxyethyl)ether	Diethyl fumarate <sup>d</sup>	4-Methyl-2-pentanone
Bis(2-(methoxyethoxy)-ethyl) ether	Diethyl acetal <sup>d</sup>	<i>n</i> -Methylphenetole
Bis(2-chloroethyl)ether	Diethylketene <sup>f</sup>	2-Methyltetrahydrofuran
Bis(2-ethoxyethyl)adipate	<i>m,o,p</i> -diethoxybenzene	3-Methoxy-1-butyl acetate
Bis(2-ethoxyethyl)phthalate	1,2-Diethoxyethane	2-Methoxyethanol
Bis(2-methoxyethyl)-Carbonate	Dimethoxymethane <sup>d</sup>	3-Methoxyethyl acetate
Bis(2-methoxyethyl) ether	1,1-Dimethoxyethane <sup>d</sup>	2-Methoxyethyl vinyl ether
Bis(2-methoxyethyl) Phthalate	Dimethylketene <sup>f</sup>	Methoxy-1,3,5,7-cyclo-octa-tetraene
Bis(2-methoxymethyl) Adipate	3,3-Dimethoxypropene	B-Methoxypropionitrile
Bis(2- <i>n</i> -butoxyethyl) Phthalate	2,4-Dinitrophenetole	<i>m</i> -Nitrophenetole
Bis(2-phenoxyethyl) ether	1,3-Dioxepane <sup>d</sup>	1-Octene
Bis(4-chlorobutyl) ether	Di(1-propynyl)ether <sup>f</sup>	Oxybis(2-ethyl acetate)
Bis(chloromethyl) ether <sup>e</sup>	Di(2-propynyl)ether	Oxybis(2-ethyl benzoate)
2-Bromomethyl ethyl ether	Di- <i>n</i> -propoxymethane <sup>d</sup>	<i>B,B</i> -oxydipropionitrile
<i>B</i> -Bromophenetole	1,2-Epoxy-3-isopropoxy-propane <sup>d</sup>	1-Pentene
<i>o</i> -Bromophenetole	1,2-Epoxy-3-phenoxy-propane	Phenoxyacetyl chloride
<i>p</i> -Bromophenetole	<i>p</i> -Ethoxyacetophenone	<i>a</i> -Phenoxypropionyl chloride
3-Bromopropyl phenyl ether	2-Ethoxyethyl acetate	Phenyl <i>o</i> -propyl ether
1,3-Butadiyne	(2-Ethoxyethyl)- <i>o</i> -benzoyl benzoate	<i>p</i> -Phenylphenetone
Buten-3-yne	1-(2-Ethoxyethoxy)ethyl acetate	<i>n</i> -Propyl ether
<i>tert</i> -Butyl ethyl ether	1-Ethoxynaphthalene	<i>n</i> -Propyl isopropyl ether
<i>tert</i> -Butyl methyl ether	<i>o,p</i> -Ethoxyphenyl isocyanate	Sodium 8,11,14-eicosa-tetraenoate
<i>n</i> -Butyl phenyl ether	1-Ethoxy-2-propyne	Sodium ethoxyacetylde <sup>f</sup>
<i>n</i> -Butyl vinyl ether	3-Ethoxypropionitrile	Tetrahydropyran
Chloroacetaldehyde diethylacetal <sup>d</sup>	2-Ethylacrylaldehyde oxime	Triethylene glycol diacetate

2-Chlorobutadiene	2-Ethylbutanol	Triethylene glycol dipropionate
1-(2-Chloroethoxy)-2-phen-oxyethane	Ethyl <i>B</i> -ethoxypropionate	1,3,3-Trimethoxypropene <sup>d</sup>
Chloroethylene	2-Ethylhexanal	1,1,2,3-Tetrachloro-1,3-butadiene
Chloromethyl methyl ether <sup>e</sup>	Ethyl vinyl ether	4-Vinyl cyclohexene
B-Chlorophenetole	Furan	Vinylene carbonate
o-Chlorophenetole	2,5-Hexadiyn-1-ol	Vinylidene chloride <sup>d</sup>

**NOTES:**

<sup>a</sup> When stored as a liquid monomer.

<sup>b</sup> Although these chemicals form peroxides, no explosions involving these monomers have been reported.

<sup>c</sup> 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 autopolymerize as a result of peroxide accumulation.

<sup>d</sup> These chemicals easily form peroxides and should probably be considered under Part B.

<sup>e</sup> OSHA - regulated carcinogen.

<sup>f</sup> Extremely reactive and unstable compound.