Peroxide Forming Chemicals

Many ethers and similar compounds tend to react with air and light to form unstable peroxides. Some of the more common peroxide-forming chemicals include p-dioxane, ethyl ether, tetrahydrofuran, acetaldehyde, and cyclohexene. The following storage practices will help minimize hazards associated with these types of chemicals.

- ✓ Store peroxide-forming chemicals in airtight bottles or cans away from light.
- ✓ Label containers with date received and date opened.
- ✓ Discard peroxide formers 3 to 6 months after opening, depending on the chemical (see table below).
- ✓ Discard unopened containers of peroxide-forming chemicals in accordance with the manufacturer's expiration date or 18 months after the date received.

All chemicals received should be checked against the list of peroxide forming chemicals. If a chemical is peroxidizable then the following procedure should be followed:

1. Determine from list if chemical has 3 or 6-month limit after opening.
2. Write date received on a sticker, tape or label.
3. Write a 3 or 6 under the date.

Common Peroxide Forming Chemicals

3 MONTH LIMIT

ABSOLUTE ETHERS (Ethyl Ether Anhydrous)
Bis (2-Methoxyethyl) Ether (Diethylene-Glycol Dimethyl Ether; Diglyme)
DIETHYLENE GLYCOL Dlmethyl ETHER (DIGLYME)
Diethylether (Ethyl Ether; Ether)
Dimethoxyethane (Glyme)
Dioxane (Diethylene Oxide)
Dl-Isopropyl Ether
Divinyl Acetylene
Ethyl Ether
Ethyl Vinyl Ether
Glyme (1 ,2-Di Methoxyethane; Ethylene Glycol Dimethyl Ether)
Isopropyl Ethers
Potassium Amide
Potassium Metal
Sodium Amide (Sodamide)
Tetrahydrofufian (Cyclotetramethylene Oxide)
Vinylidene Chloride (1,1 Dichloroethylene)

6 MONTH LIMIT

Acetal
Acrolein (Propenal; Acrylic Aldehyde; Allyl Aldehyde)
Acrylic Acid
Acrylonitrile (Propene Nitrile; Vinyl Cyanide)
Alkyl-Substituted Cycloaliphatics (Methyl Ethyl Cyclo_____ane)
ALL OTHER ETHERS
Allyl Gylcidyl Ether
n-Amyl Ether
Anisole
Butadiene (Erythrene)
n-Butyl Glycidyl Ether
Butyl Vinyl Ether
2 Chloro 2,3 Butadiene
Chloroethylene
Chloromethyl Ether
Chloroprene (2-Chloro-1, 3-Butadiene; Chlorobutadiene)
Chlorotrifluoroethylene
Cyclopentene
Methycylopentane
Methyl 1-Butylketone (2-Hexanone; N-Butyl Methylketone)
Methyl Acetylene (Allylene; Propyne)

Methyl Ether
Methyl Ether Ether
Methyl Isobutyl Ketone
Methyl Methacrylate
Methylvinyl Ether
Olefins (Unsaturated Hydro Carbon Propene, Hexene,)
Perfluoroethylene
Phenyl Ether
Propyne
Styrene (Phenylethylene;Vinylbenzene;Cinnamene)
Tetrafluoroethylene (Perfluoroethylene)
Tetrahydronaphthalene (Tetralin)
Vinyl Acetate
Vinyl Acetylene
Vinyl Chloride (Chloroethylene; Chloroethene)
Vinyl Ethers
Vinyl Pyridine