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 Dimethyl ETHER (DIGLYME)
- Diethylether (Ethyl Ether; Ether)
- Dimethoxyethane (Glyme)
- Dioxane (Diethylene Oxide)
- Di-Isopropyl Ether
- Divinyl Acetylene
- Ethyl Ether
- Ethyl Vinyl Ether
- Glyme (1,2-Dimethylethane; Ethylene Glycol Dimethyl Ether)
- Isopropyl Ethers
- Potassium Amide
- Potassium Metal
- Tetrahydrofuran (Cyclotetramethylene Oxide)
- Vinlylidene Chloride (1,1 Dichloroethylene)

#### 6 MONTH LIMIT

- Acetal
- Acrolein (Propanal; Acrylic Aldehyde; Allyl Aldehyde)
- Acrylic Acid
- Acrylonitrile (Propene Nitrite; Vinyl Cyanide)
- Alkyl-Substituted Cycloaliphatics (M ethyl Ethyl Cyclo-____ane)
- ALL OTHER ETHERS
- Allyl Glycidyl 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
- M ethycyclopentane
- M ethyl 1-Butylketone (2-Hexanone; N-Butyl M ethylketone)
- M ethyl Acetylene (Allylene; Propyne)
| Methyl Ether | Styrene (Phenylenylene; Vinylbenzene; Cinnamene) |
| Methyl Ether Ether | Tetrafluoroethylene (Perfluoroethylene) |
| Methyl Isobutyl Ketone | Tetrahydrophththalene (Tetralin) |
| Methyl Methacrylate | Vinyl Acetate |
| Methylvinyl Ether | Vinyl Acetylene |
| Olefins (Unsaturated Hydro Carbon Propene, Hexene,) | Vinyl Chloride (Chloroethylene; Chloroethene) |
| Perfluoroethylene | Vinyl Ethers |
| Phenyl Ether | Vinyl Ethers |
| Propyne | Vinyl Pyridine |