Suggested Storage Time Limits for Common Peroxidizable Compounds

Facts You Should Know About Organic Peroxides

General Facts

- Organic peroxides are a dangerous fire hazard if allowed to react with reducing agents.
- They are powerful oxidizers and are a severe explosion hazard
    - when shocked,
    - when/if exposed to heat, or
    - if they undergo a spontaneous chemical reaction.
- Upon contact with some reducing agents, explosions can occur.
- Many peroxides commonly handled in laboratories are far more sensitive to shock than most primary explosives (e.g. TNT).
- Many laboratory chemicals can form peroxides, particularly when exposed to air.

Containers

- **Containers used for storage of peroxidizable compounds or retention of materials that become hazardous upon prolonged storage shall be limited to a maximum of six months after opening**.
- Containers must then be **disposed of in a safe manner**.
- **All opened containers of such materials should be tested every three months for peroxides**.

Labeling

- Peroxidizable materials **must be labeled upon receipt**.
    - **The date of receipt and the date when the container was opened must be prominently displayed**.

Testing

- Use peroxide test strips to demonstrate the presence or absence of peroxides. These are available from most distributors of general chemical supplies.
- If no peroxides are detected, the **container label should be marked to indicate the absence of peroxides and the date of the test**.
- The material can then be retained for an additional three months.
    - **If peroxides are detected the Department of Occupational Health & Safety should be notified immediately!**

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MOST DANGEROUS **Discard *6 months after receipt* or *3 months after opening***	**DANGEROUS** **Discard *12 months after receipt* or *6 months after opening***	**DANGEROUS** **Discard *24 months after receipt***	**HAZARDOUS**
Susceptible to peroxide formation **during storage**		Peroxide Hazard by Concentration (As the ratio of product to peroxide concentration decreases, the hazard due to the peroxide increases.)	Hazardous Due to Peroxide Initiation of Polymerization
Cyclohexene Cyclooctene Diethyl ether Isopropyl ether p-Dioxane Sodium amide Tetrahydrofuran	Acrylonitrile Butadiene Chlorotrifluoroethylene Tetrafluoroethylene Vinyl chloride Vinyl ethers Vinylidene chloride	Acetal Decahydronaphthalene (Decalin) Diacetylene Dicyclopentadiene (Tetralin) Diethylene glycol dimethyl ether (Diglyme) Dimethyl ether Ethylene glycol Tetrahydronaphthalene	Acrylic acid Chloroprene Methyl acetylene Methyl methacrylate Styrene diacetylene Vinyl acetate Vinyl pyridine

***Read the chemical label or the SDS if you have questions or call OH&S.**