

Peroxide-Forming Chemicals

Peroxide-forming chemicals are a class of compounds that can form shock-sensitive peroxide crystals. Follow the steps below to appropriately manage your peroxide-forming chemicals.

- Label** with the date received, date opened, test dates, and results.
- Segregate** from incompatible materials. For information on chemical incompatibility, consult a safety data sheet (SDS).
- Store** in original, airtight bottle, away from light and heat sources. Peroxide-forming chemicals should be checked for the presence of peroxides prior to distillation or evaporation. Peroxide formation may accelerate once container is opened.
- Visually inspect** for crystal formation, cloudiness, discoloration, precipitate, or an oily viscous layer. Do not open if these conditions are observed. Notify EH&S by calling (949) 824-6200.
- Test** for peroxides according to **Table A** using a [peroxide test strip](#). Disposal is recommended if peroxides are detected. Peroxide test strips are available at [PS Stores](#).

Labels are available at
[Self-Service Empty Container Locations](#)

Peroxide Forming Chemical	
Date Received: _____	Date Opened: _____
Date Tested: _____	Result: _____
_____	_____
_____	_____
_____	_____

Table A – Common Examples of Peroxide Formers

Class A – Form explosive levels of peroxides without concentration. Can form explosive peroxide levels even if not opened.		
Dispose or Test Open Containers After – 3 months		
Divinyl acetylene	Potassium amide	Sodium amide
Isopropyl ether	Potassium metal	Vinylidene chloride
Class B – Form explosive levels of peroxides upon concentration through distillation, evaporation, or exposure to air after opening.		
Dispose or Test Open Containers After – 12 months		
Acetal	Diacetylene	3-Methyl-1-butanol
Acetaldehyde	Dicyclopentadiene	Methyl-isobutyl ketone
Benzyl Alcohol	Diglyme	4-Methyl-2-pentanol
2-Butanol	Diethyl ether	2-Pentanol
Chlorofluoroethylene	1,4-Dioxanes	4-Penten-1-ol
Cumene	Ethylene glycol ether acetates	1-Phenylethanol
Cyclohexene	Furan	Tetrahydrofuran
2-Cyclohexen-1-ol	4-Heptanol	Tetrahydronaphthalene
Cyclopentene	2-Hexanol	Vinyl ethers
Decahydronaphthalene	Methyl acetylene	Secondary Alcohols
Class C – May auto-polymerize as the result of peroxide formation.		
Dispose or Test Open Containers After – 12 months		
Acrylic acid	Chlorobutadiene	Styrene
Acrylonitrile	Chloroprene	Vinyl acetate
Butadiene	Methyl methacrylate	Vinyl pyridine



Dispose or test unopened manufacturer's containers within 12 months of date received, or dispose at manufacture's expiration date, whichever comes first.

For more information on peroxide-forming chemicals please review the [UCI Peroxide-Forming Chemicals SOP](#) and [Chemical Hygiene Plan](#).