Peroxide Forming Chemicals

Peroxide Forming Chemicals

Are a class of chemicals which have a unique ability to "auto-oxidize" with the oxygen that is already in the atmosphere. Exposure to air, self-polymerization or any impurities in the solvent can cause peroxides to form. When peroxides form in a chemical, using the chemical is dangerous. The dangers associated when peroxides form can be from as small as becoming a low-grade explosive to becoming extremely sensitive to any ignition source.

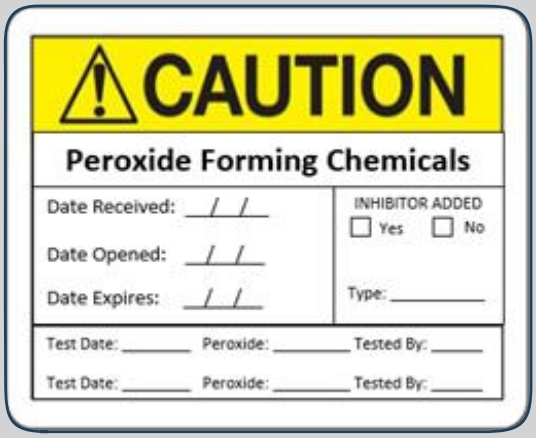
Has Peroxide Formed?

- Look for:
  - Wisp-like structures forming
  - Crystallizations
  - Cloudiness
  - White crystals, particularly under the cap
  - Gross contamination
  - Discoloration

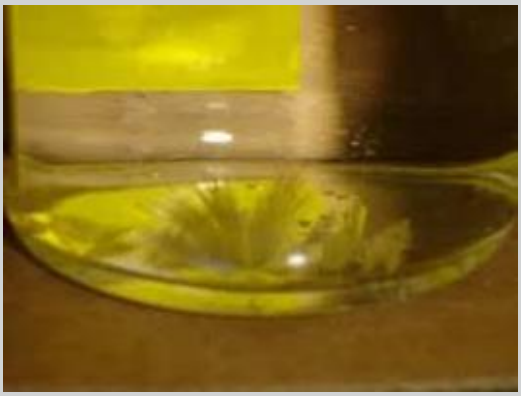
If any of the conditions above are observed, **Call the Hazardous Waste Team immediately (541-346-2348)!**

Test all Peroxide Forming Chemicals

Testing chemicals that are at risk of forming peroxides is essential. Lab personnel should test the chemical with at least a qualitative peroxide testing strip and record the results on the peroxide forming chemical label (seen on the right) after each use. Familiarizing your lab personnel about how to properly handle, store, and recognize the signs of peroxides forming is key to making sure that you, your colleagues, and your lab are safe from any accidents that could occur. A positive test > 20 ppm indicates the solvent should not be distilled or concentrated. A positive test > 100ppm indicates the solvent must be disposed of by EHS.



Peroxide Forming Chemical Label



Example of Peroxide Formation

Quantitative Peroxide Testing Strips

Safety and Risk Services
1260 University of Oregon
Eugene, OR 97403
safety.uoregon.edu/safetysheets

Environmental Health and Safety
ehsinfo@uoregon.edu
541-346-3192

*Does not act in place of official training. Contact EHS for more information. Updated: 10/23