

A GUIDE TO PEROXIDE FORMER WARNINGS IN RISK & SAFETY SOLUTIONS

Type of Peroxide Former	Relative Risk Level	RSS Warning	Storage and Testing
Group A These compounds form peroxides without concentrating the solution (e.g., Vinylidene Chloride, Isopropyl Ether).	High	"Peroxide Former"	<u>Opened:</u> Test every 6 months and before use. <u>Unopened:</u> Dispose after 12 months, or if any of the following are seen: cloudiness or immiscible layers, crystalline deposits, or upon any positive peroxide test. <u>Storage:</u> Store preferably in the absence of oxygen - Solid materials such potassium amide, potassium metal, and sodium amide should not be stored for more than 3 months following air exposure.
Group B These compounds have a much higher risk of forming peroxides when concentrated/distilled (e.g., Cyclohexene, Isopropanol, Tetrahydrofuran).	Medium	"Peroxide Former: With Concentration"	<u>Opened:</u> Test every 6 months and before use. Record peroxide levels on bottle and discard where peroxides found where, upon distillation, concentration could read 25 mg/kg. <u>Unopened:</u> Dispose if any of the following are seen: cloudiness, immiscible layers, or crystalline deposits. <u>Storage:</u> Store away in the dark and preferably away from oxygen. For compounds, once distilled, test every 3 months and store in a dark, inert atmosphere
Group C These compounds have the ability to form peroxides which then increase the likelihood of autopolymerization (e.g., Vinyl Pyridine, Methyl Methacrylate, Styene).	Low	"Peroxide Former" Container warning states: "This chemical is known to autopolymerize following formation of peroxide compounds..."	<u>Opened and unopened:</u> Test every six months and before use. If peroxides are detected, discard without using. <u>Storage:</u> Date when received and store in the dark, preferably in the absence of oxygen. *For uninhibited compounds or compounds where the inhibitor has been removed, use immediately.

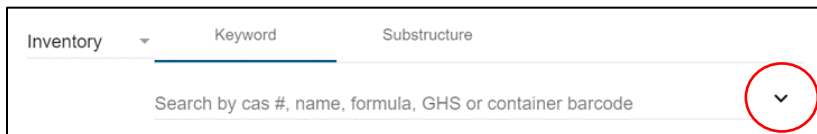
For a complete list of examples and more information on Group D, see the [Department of Chemistry SOP](#). In Risk & Safety Solutions (RSS), peroxides are expected to be tested every 6 months or a container warning will appear. Test strips are available from [Chem Stores](#).

Containers containing or suspected to contain peroxides should be labelled as "waste containing peroxides" (with concentration, if known) and brought to the Environmental Waste Facility (ESC 150) using your [regular appointment or pick-up process](#).

Finding and Searching Peroxides in RSS

You can search for all the peroxide formers in your chemical inventory using the Search Chemicals function. To search:

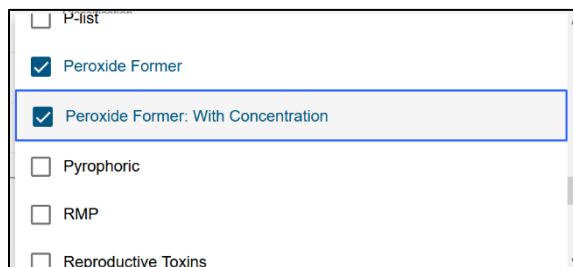
1. Open the Advanced Search:



2. Click the Classification drop-down:



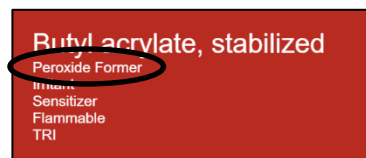
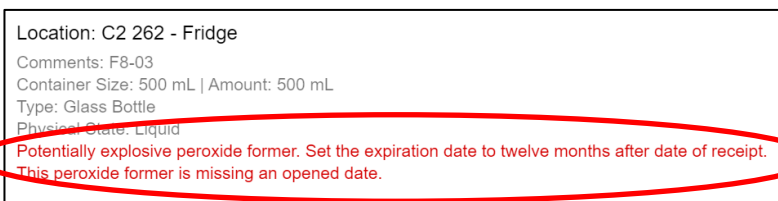
3. Select the type of peroxide you are looking for using options in the drop-down (see table on previous page). This will bring up all peroxide formers (based on your selection) in your Search Chemicals list, including those without active warnings.



Finding Chemical Warnings

RSS creates a container warning every 6 months for all types of peroxide formers to inform the user that testing is now required. There are two ways to view the current container warnings.

On the chemicals they will appear as a red banner and will be attached to added containers themselves (see below).



Alternatively, to see all chemicals with a container warning, click Container Warnings on your Inventory Summary page to see a list of current containers with warnings.

