



# Safety Meeting Outline



**SMO 07-0701**

## **FLUOROCARBON REFRIGERANT HAZARDS**

*By SeaBright Insurance Loss Control*

The fluorocarbon refrigerants, such as Freon, decompose when exposed to the high temperatures of a brazing or welding operation to repair leaks or join tubing. This decomposition may produce toxic and irritating compounds such as hydrogen chloride and hydrogen fluoride. If water or oxygen is present in the refrigerant, a highly toxic phosgene gas can form.

Hydrogen chloride and fluoride compounds have a sharp, astringent effect on your sense of smell and are irritants to the respiratory system. These effects are severe enough that they are detected well before the toxicity level of the compounds is reached. This serves as a warning to tell you decomposition has begun to occur. You will be forced to evacuate the area well before toxic levels of the hydrogen chloride, hydrogen fluoride, or phosgene begin to form, because you literally cannot stay in the area.

Fluorocarbon refrigerants also have the capability to displace oxygen in enclosed spaces, and overfilled containers or refrigerant systems whose temperatures are increased may cause a dangerous increase in hydrostatic pressure.

To avoid the potential hazards when you are brazing or welding on refrigeration systems:

1. Make sure you have adequate ventilation in the space you are working in.
2. Pump the refrigerant down to the receiver or into another refrigerant container. Check with environmental codes before discharging Freon into atmosphere.
3. To evacuate residual refrigerant in the system, pull a deep vacuum on the section or assembly you are working on.
4. Charge with dry nitrogen, let it sweep through slowly at gauge pressure to prevent atmosphere from oxidizing the tubing. Braze or weld to repair or join the tubing.
5. Pressurize with the dry nitrogen and test for leaks.
6. Pull another deep vacuum to purge the system of nitrogen.
7. Recharge with the refrigerant and test the system.



# SAFETY MEETING AGENDA

DEPARTMENT/JOB SITE: \_\_\_\_\_ MEETING DATE: \_\_\_\_\_

1. **Open Meeting & Present safety topic:** \_\_\_\_\_
2. Read minutes from previous meeting.
3. **Persons present:**

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

4. **Old Business** – Status of previous recommendations. Discuss pending old business if any.
5. **Accidents** – Discuss accidents and near misses that have occurred since the last meeting. Brief summary of accidents to date by number and type. Note any trends. Discuss corrective action taken, or needed. Concentrate on accident causes to make everyone more aware.
6. **Inspection Reports** – Report on findings and recommendations of any inspection reports made since last meeting.
7. **New Business** – Solicit employee suggestions. Discuss new procedures, changes to company safety policy, etc.

TIME MEETING STARTED: \_\_\_\_\_ TIME FINISHED: \_\_\_\_\_

MEETING CHAIRED BY: \_\_\_\_\_ TITLE: \_\_\_\_\_