

# TECH TIP # 11



One of a series of dealer contractor technical advisories prepared by HARDI wholesalers as a customer service.

## SAFETY TIPS ON HANDLING REFRIGERANTS

The handling and storage of fluorinated refrigerants is considered dangerous enough so that the U. S. Department of Transportation (DOT) prescribes how much refrigerant can be loaded into containers and also specifies working and test pressures for these containers. Also, the Clean Air Act forbids venting of refrigerants to the atmosphere.

Here are some safety tips:

1. Wear safety goggles and gloves for personal protection whenever handling refrigerant cylinders, transferring or charging refrigerants.
2. Don't tamper with fusible plugs, relief valves or discs in cylinders. They are designed to release excessive internal pressure.
3. Never apply a direct flame to a refrigerant cylinder. This can cause chemical decomposition of the refrigerant, weaken cylinders and raise internal pressure beyond safe limits.
4. Never warm a cylinder above 125° F even using "accepted" and well controlled heaters, blankets, etc.
5. Always "crack" a service valve open gradually to assure positive control of gas flow.
6. Don't interchange refrigerants. Cylinders are color coded; White is R-12, Green is R-22, Red top or band is R-500, Orchid is R-502, and R-410 is Rose.
7. Liquid refrigerant can cause "frost bites." Wash hands immediately upon contact. If eyes are contaminated, wash with mineral oil if possible (except for ammonia gas); then use a boric acid solution. (Note No. 1 rule -- above.)

Published by the Independent Study Institute, a division of the Heating, Airconditioning & Refrigeration Distributors International. The Institute offers accredited, industry training courses in HVAC/R technology. Direct inquiries to HARDI 3455 Mill Run Drive, Ste. 820, Columbus, OH 43026. Phone 888/253-2128 (toll free) · 614/345-4328 · Fax 614/345-9161

[www.hardinet.org](http://www.hardinet.org)

8. Refrigerant vapors are dense (heavy). They can collect in low spots and could cause asphyxiation (lack of oxygen) in sufficient quantities and in poorly ventilated space. Avoid inhalation of concentrated vapors.
9. Refrigerant vapors exposed to air, open flame or hot surfaces and water may decompose into more toxic products.
10. Before loosening any valves, bolts, screws, etc. holding parts in place, see that pressure or vacuum differences are relieved.
11. Properly dispose of throw away refrigerant cans and cylinders. Do not use them for any purposes. Do not use old refillable cylinders if date stamp on shoulder is more than five years old.
12. Go easy on muscle power and don't do anything in a hurry.