

# TECHNICAL INFORMATION COMMUNICATION



**United  
Technologies**

Building & Industrial Systems

Quality and Continuous Improvement

**Number:** TIC14-0007

**Date:** April 7, 2014

**Title:** Product Safety Alert – Use of R-22a Refrigerant in R-22 units

**Product Category:** Air Conditioners/Heat Pumps

## Products Affected

All residential and commercial split-system and packaged air conditioner and heat-pump units that are specifically designed to use R-22 refrigerant.

## Situation

**The purpose of this communication is to warn distributors and dealers of the potential safety hazards of using R-22a or any other propane or other hydrocarbon based refrigerants in systems designed for use with R-22.**

We have received several reports where the use of R-22a refrigerant in residential split-system outdoor units has resulted in property damage and personal injury. Although all of the reported failures were on the “Dry R-22” units that were charged with **R-22a** at installation, the risk involved applies to any use of R-22a refrigerant in any unit designed for use with R-22. R-22a refrigerant is NOT the same as R-22.

## Technical Information

**R-22a is a highly flammable refrigerant. The United States Environmental Protection Agency (EPA) has declared the use of R-22a in systems designed for use with R-22 as illegal.**

The following link to the EPA website provides a specific three-page question and answer sheet about the dangers of R-22a.

<http://www.epa.gov/ozone/snap/r22a.html>

Additionally, we place product warnings that specifically instruct users to use only R-22 in both the product Installation Instructions and physically on the product. For additional information concerning the proper refrigerant usage, refer to SMB 11-0005.

Use this information to properly train dealers on using only approved refrigerants and the dangers of using R-22a in R-22 systems. Based on the failure reports noted above, some installers and servicers apparently believe that R-22a is an acceptable substitute for R-22, which it clearly is not.

Only trained and qualified personnel should design, install, repair and service HVAC systems and equipment. All national standards and safety codes must be followed when designing, installing, repairing and servicing HVAC systems and equipment. It is the responsibility of the Dealer to ensure local codes, standards, and ordinances are met.

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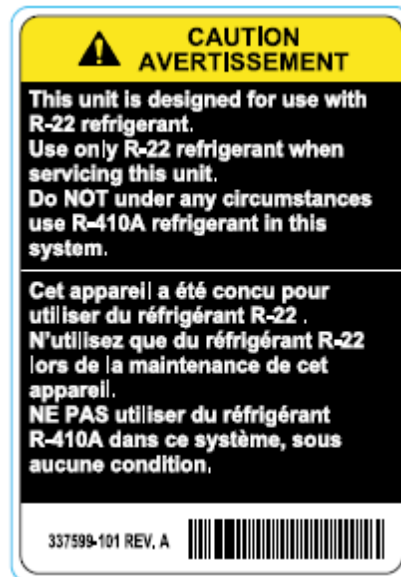
R-22a is a hydrocarbon based refrigerant. In addition to the specific warnings about the unapproved use of R-22a, the EPA has warned against the use of ANY propane or other hydrocarbon based refrigerants in systems designed for use with R-22. The following link to the EPA web site contains a press release warning homeowners, propane manufacturers and sellers, home improvement contractors and air conditioning technicians of potential safety hazards related to the use of propane or other unapproved refrigerants in home air conditioning systems.

<http://yosemite.epa.gov/opa/admpress.nsf/bd4379a92ceceac8525735900400c27/61416ea839b0618e85257b9b0065aec0!OpenDocument>

According to the EPA, in addition to R-22a, other names for other unapproved propane and hydrocarbon based refrigerants include R-290, 22a, 22-A, HC-22a, and CARE 40.

## References

Examples of product warnings provided on the product and in the Installation Instructions.



Example label used on Product

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## CAUTION

### UNIT OPERATION HAZARD

Failure to follow this caution may result in improper unit operation.

This unit utilizes R-22 refrigerant. Use only R-22 refrigerant when servicing this unit.

**DO NOT** under any circumstances use R-410A refrigerant in this system.

Warning in Product Installation Instructions

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