

# For

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from Arkema

Forane®  
REFRIGERANTS

## Arkema's Forane® Refrigerant U.S. website offers expanded R-22 retrofitting coverage

Arkema's North American refrigerants website has expanded its information about R-22 retrofitting in response to users' needs to better understand the many options open to them. The new information can be reached from the homepage of [www.forane-us.com](http://www.forane-us.com), which now features a convenient "R-22 Retrofits" button that links to a comprehensive section about retrofitting. It can also be reached directly at [www.r22retrofit.com](http://www.r22retrofit.com).

"We realize that our customers and others in the industry need as much information as possible regarding

sections of information: An **Overview**, covering the Phase-out of R-22 and the EPA timeline, including yearly "milestones" during the phase-out; **Retrofit Options**, discussing possible retrofit solutions based on operating pressures and temperatures ranges depending on the application range; **Retrofit Solutions**, Arkema's recommendations for specific retrofit products based on operational data for each product and how it compares to R-22, including capacity, flow rates, TXV change-out, lubricant, and discharge pressure and temperature, plus

retrofit procedures to be followed in the field; finally, there is **Retrofit Resources**, which provides a wide ranging FAQ section, along with contact information for Arkema customer service and technical support.

The website will also feature a detailed, navigable Refrigerants Training Seminar for R-22 alternatives geared toward technicians in the field. This on-line seminar is modeled after a highly popular Arkema in-person training program about R-22 retrofits. It covers general issues, component comparisons, functional considerations, operational traits, and retrofit recommendations.

R-22 RETROFITS NEW

### Forane® R-22 Retrofits

Overview

Retrofit Options

Retrofit Solutions

Retrofit Resources

### An Overview of R-22 Retrofits

the best options for retrofitting R-22 refrigerant across different applications and conditions," said Gus Rolotti, Arkema's North American Technical Marketing Director for Fluorochemicals. "So we expanded our website to cover this area, taking various information from our training programs, product literature, and technical data and rolling them into a single, convenient location."

The new website section features four distinct

## Know your refrigerant source

There have been recent news reports of a number of explosions and at least three fatalities which have led to the grounding of hundreds of refrigerated "reefer" shipping containers around the world. The causes of the explosions are under investigation, however, preliminary indications point to contaminated or incorrect refrigerant being added to the refrigeration systems on the affected reefers, possibly while under service. Also, it has been reported that rogue counterfeit refrigerants were found in R-134a small cylinders. As refrigerant consumers, it is imperative to safeguard yourself and your customers against contaminated and/or potentially suspect product. To ensure a quality product, please purchase your Forane® refrigerants from authorized Arkema dealers.

## HFCs 134a, others still good for MVACs

In May 2011, the U.S. Environmental Protection Agency (EPA) determined that hydrofluoroolefin (HFO)-1234yf was acceptable for use as a substitute for chlorofluorocarbon (CFC)-12 in air conditioning for new passenger cars and light-duty trucks. This action does not mandate HFO-1234yf use for MVACs. It is only applicable to new passenger cars and light-duty trucks, and simply adds HFO-1234yf to the acceptable ozone depleting substitutes list. The additional listing does not affect the use of other MVACs accepted refrigerants such as HFC-134a. These substances continue to be on the acceptable substitutes list and can be used as ozone-depleting substance replacements. Arkema supports the addition of this new CFC substitute to the existing list of approved alternatives.

## Forane® Tech Tips

*The goal of Arkema's Forane® refrigerant Tech Tips is to provide useful information on refrigerants to the HVACR service technician in a concise, easy-to-understand format. These tips address some of the more common questions/concerns we've encountered and will hopefully help to dispel some of the misinformation across our industry.*

## How to determine if a refrigerant is a "blend"

There's a quick and easy way to tell if a refrigerant is a blend – ignore the trade name and look for the ASHRAE designation (or R#). Any refrigerant with a 400 or 500 series R# (e.g. R-408A or R-502) is a blend, which is a mixture of two or more refrigerant components. Any other ASHRAE designation (e.g. R-134a or R-22) refers to a single component product. Blends may or may not have a capital letter at the end of the designation (indicating specific component ratios), while single component fluids might have one or more lower case letters, denoting a specific molecular arrangement.

Why is this important? The components in refrigerant blends can separate under certain conditions, which can negatively impact system performance. One technique that is used to help prevent this is liquid charging. All 400 or 500 series refrigerants (blends) should be removed from the cylinder as a liquid. This helps to ensure that the blend's composition, or component mix, remains within the manufacturer's design tolerances.

ARKEMA  
The world is our inspiration

## OSHA regulations on proper labeling

We would like to make our customers aware of OSHA regulations regarding proper labeling of cylinders. Please be aware that having possession of product or shipping product without the proper label requirement is a violation of OSHA regulations. Listed below is the CFR Citation for OSHA requirements on a label for cylinders. According to OSHA 1910.1200 f (1) the label must include: 1) the identity of the chemical, 2) the hazard warnings, and 3) a name and address.

**1910.1200(f)** Labels and other forms of warning.

**1910.1200(f)(1)** The chemical manufacturer, importer, or distributor shall ensure that each container of hazardous chemicals leaving the workplace is labeled, tagged or marked with the following information:

**1910.1200(f)(1)(i)** Identity of the hazardous chemical(s);

**1910.1200(f)(1)(ii)** Appropriate hazard warnings; and

**1910.1200(f)(1)(iii)** Name and address of the chemical manufacturer, importer, or other responsible party.

Please visit [www.OSHA.gov](http://www.OSHA.gov) for additional information regarding labeling requirements. According to OSHA, penalties may range up to \$7,000 for each serious violation and up to \$70,000 for each willful or repeated violation.

Arkema is committed to working with you to meet your refrigerant needs now and in the future. We offer a complete line of refrigerants as well as a user-friendly reclamation program that is convenient and economical for wholesalers.

### Contact Us

**Customer Service**  
**(800) 245-5858**

**Technical Service**  
**(800) 738-7695**

**Forane® Refrigerants**  
**Reclaim Hotline**  
**(800) 738-7694**

[www.forane-us.com](http://www.forane-us.com)

## New Members of the Fluorochemicals Team



### Laurent Abbas – Senior Research Scientist

Laurent Abbas joined the Arkema Fluorochemicals team in North America in 2011 as a senior research scientist after working for Arkema France since 2007. He has been involved in various fluorochemicals related projects, including the development of low GWP fluids for refrigeration. Laurent has a Ph.D. in Polymer Science from the University of Louis Pasteur, France.

### Lauren Chesterton – Finance Manager

Lauren Chesterton joined the Arkema team in October 2011. Lauren brings over 20 years of Financial Analysis and Reporting experience, with 15 years in the manufacturing industry. Prior to Arkema, Lauren worked for a pharmaceutical company, supporting the global manufacturing division. Additionally, she participated in a successful global project to implement SAP throughout the company, improving end to end data flow and reporting capabilities. Lauren's work experience has also taken her to Europe, Asia and South America. Lauren has a BS degree in Finance from Penn State University and an MBA from Temple University.



### Rasaahn DuBose – Customer Service Representative

Rasaahn DuBose joined the Arkema Fluorochemicals customer service group in October 2011. Having an education in the Culinary Arts, he decided to pursue his B.A. from Penn Foster in Business Management. With five years of supply chain experience, Rasaahn began his career at Barry Callebaut as a logistics coordinator and inventory coordinator. His supply chain experience continued into customer service and support roles at LyondellBasell. Most recently, Rasaahn was handling the Wegman's, Delhaize, and Food Lion accounts at Kraft Foods.

### Joe Lynch – Commercial Development Manager

Joe Lynch joined the Fluorochemicals Business Unit in October 2011 and is responsible for the commercial development activities within the Foams, Solvents, and Aerosols application areas. He brings nearly 20 years experience in the various foam insulation and blowing agent application areas, serving both the North American and international marketplace. Joe started his career working for a foam insulation manufacturer, served in a variety of roles, including technical service and applications development, before focusing on business, marketing, and sales development. Joe has a B.S. degree in Chemistry from Rutgers University and an MBA in Chemical Management from Saint Joseph's University.



### Matt Ritter – Director, Government Activities

Matt Ritter joined the Fluorochemicals business team this past summer in preparation for Tom Werkema's retirement. Matt will progressively transition into the Director, Government Activities role during the next few months. Matt has been with Arkema for 15 years in commercial management, marketing, and regulatory roles. Most recently, Matt was a Strategic Procurement Manager within the Corporate Procurement, Raw Materials Group. Matt holds an MBA and M.S. from St. Joseph's University and a B.S. from Kutztown University.

### Rich Rowe – Fluorochemicals Group President

With Arkema for more than 22 years, Rich has directed several business units, including Technical Polymers, Altuglas International, Fluoropolymers, Functional Additives, and now Fluorochemicals. Rich has been responsible for global businesses for 15 years, with extensive experience in joint venture management as well as mergers and acquisitions. He also led Arkema Inc.'s Supply Chain organization. Rich is a graduate of Bucknell University with a Bachelor of Science degree in chemistry. He lives with his wife and two sons in the Philadelphia suburbs.



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Before handling this material, read and understand the MSDS (Material Safety Data Sheet) for additional information on personal protective equipment and for safety, health and environmental information.

For environmental, safety and toxicological information, contact our Customer Service Department at 1-800-245-5858 to request a Material Safety Data Sheet or visit our website at [www.forane.com](http://www.forane.com).

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