

From: [richardastrust.com](mailto:richardastrust.com) <[richardastrust@yahoo.com](mailto:richardastrust@yahoo.com)>  
Date: Tue, Jun 2, 2026 at 2:27 PM  
Subject: DOT cylinder in small cans  
To: [snap@epa.gov](mailto:snap@epa.gov) <[snap@epa.gov](mailto:snap@epa.gov)>, [infocntr@dot.gov](mailto:infocntr@dot.gov) <[infocntr@dot.gov](mailto:infocntr@dot.gov)>  
Cc: Joerg Blachutzik <[joerg.blachutzik@gmx.de](mailto:joerg.blachutzik@gmx.de)>, [maruyama.emily@epa.gov](mailto:maruyama.emily@epa.gov) <[maruyama.emily@epa.gov](mailto:maruyama.emily@epa.gov)>, Andy Tujios <[tujios@aol.com](mailto:tujios@aol.com)>, Pam Waterterman <[watermanpj28@gmail.com](mailto:watermanpj28@gmail.com)>

To whom it may concern at the DOT.

Attached you will find a letter of what type of cylinder the DOT allowed my pure hydrocarbon blend refrigerant to be packaged.  
EPA Stratosphere O Zone Division (Cindy Newburg/Monica Shimamura) told me that my product, packaged in small cylinders, is not acceptable even though many hydrocarbons are sold in small cans (eg propane, isobutane and even butane).

I need to blend and package my product R441A and R443A in small cans to be exported but will need to cross state lines to get to the pier at Houston to be shipped out of the country. EPA told me EPA Enforcement can confiscate the container because it is not filled in the proper containers (even with a DOT letter) and it also being in small cans. Plus, I need to acquire a special permit since I will be crossing state lines to allow my product to be delivered to the pier at Houston.

Would you be so kind as to tell me the proper cylinder that I can use and what permits I need to obtain to get my refrigerants which will be made in America to the pier for export? If the U S EPA Stratosphere O Zone Division supersedes the DOT, then I know this manufacturing in America cannot be done.

Thank you, Richard,

Richard Maruya  
phone,cell, text 808 5614688  
fax 808 4653830  
e mail [richard@astrust.com](mailto:richard@astrust.com) or [richardastrust@yahoo.com](mailto:richardastrust@yahoo.com)  
web site HCR188C [www.hcr188c.com](http://www.hcr188c.com)

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## Fwd: R441A and R443A in small cans

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**INFOCNTR (PHMSA)** <infocntr.infocntr@dot.gov>  
To: Hazmat Interps <hazmatinterps@dot.gov>

Mon, Jun 8, 2026 at 4:15 PM

Please see below request for letter of interpretation.

Thanks,  
Jonathon, HMIC

----- Forwarded message -----

From: [richardastrust.com](mailto:richardastrust@yahoo.com) <[richardastrust@yahoo.com](mailto:richardastrust@yahoo.com)>

Date: Fri, Jun 5, 2026 at 1:59 AM

Subject: R441A and R443A in small cans

To: [snap@epa.gov](mailto:snap@epa.gov) <[snap@epa.gov](mailto:snap@epa.gov)>, [maruyama.emily@epa.gov](mailto:maruyama.emily@epa.gov) <[maruyama.emily@epa.gov](mailto:maruyama.emily@epa.gov)>

Cc: Joerg Blachutzik <[joerg.blachutzik@gmx.de](mailto:joerg.blachutzik@gmx.de)>, Andy Tujios <[tujios@aol.com](mailto:tujios@aol.com)>, Pam Waterterman <[watermanpj28@gmail.com](mailto:watermanpj28@gmail.com)>, [infocntr@dot.gov](mailto:infocntr@dot.gov) <[infocntr@dot.gov](mailto:infocntr@dot.gov)>

To whom it may concern

Since only R441A and R443A are the only two pure hydrocarbon blends environmentally safe. PFAS free, nontoxic, American Born refrigerants not allowed by the U S EPA Stratosphere O Zone Division to be packaged in small cans. and can be confiscated by EPA enforcement because the crossing or county state lines is illegal as told to me by Cindy Newburg I would like to know what is the legal type of cylinder and procedure R441A and R443A can be manufactured and packaged in America which allow both R441A and R443A access from the manufacture to the port destination to be exported .

Please advise on the DOT type smallest cylinder or UN number the two refrigerants R441A and R443A can be packaged and the type of permit required for transportation to the nearest port for export. This is important because I do not need a container of these two refrigerants made in America be confiscated for illegal size containers and non-permit of crossing a state/county line to a port for export.

Please provide the information needed because seems like EPA Stratosphere O Zone Division over rides any DOT ruling.

Thank you, Richard,

Richard Maruya  
phone,cell, text 808 5614688  
fax 808 4653830  
e mail [richard@astrust.com](mailto:richard@astrust.com) or [richardastrust@yahoo.com](mailto:richardastrust@yahoo.com)  
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U.S. Department  
of Transportation

**Pipeline and Hazardous  
Materials Safety  
Administration**

1200 New Jersey Avenue, SE  
Washington, D.C. 20590

MAY 23 2016

Mr. Richard Maruya  
President  
A.S. Trust & Holdings  
44-129 Mikiola Drive  
Kaneohe, HI 96744

Reference No. 15-0231

Dear Mr. Maruya:

This is in response to your November 24, 2015 email requesting clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) applicable to the packaging requirements for HCR188C/R441A and HCR188C/R443A refrigerant gases. As previously stated in a letter of interpretation, Ref. No. 14-0169 (see Attachment 1), you plan to ship the refrigerants as "UN1965, Hydrocarbon gas mixture, liquefied, n.o.s., Division 2.1." We have summarized and answered your questions below.

Q1. Can a DOT 39-400 cylinder be used for these HCR188C refrigerants?

A1. The answer is yes. In accordance with 49 CFR 173.304, HCR188C/ R441A and HCR188C/R443A may be packaged in specification DOT 39 cylinders with a service pressure of 400 p.s.i. provided all of the applicable requirements of the HMR are met, including, but not limited to, filling limits prescribed in §§ 173.304 and 173.304a. As stated in the letter of interpretation, Ref. No. 14-0169, § 173.304(b) states the liquid portion of a liquefied gas may not completely fill the packaging at any temperature up to and including 55 °C (131 °F). In addition, the filling density for any cylinder containing these materials can be determined by calculating the percent ratio of the weight of the gas in the packaging to the weight of the water the container will hold at 16 °C (60 °F). See "Note 1" of § 173.304a(a)(2).

As stated in a previous interpretation letter, Ref. No. 15-0022 (see Attachment 2), the Pipeline and Hazardous Materials Safety Administration (PHMSA) does not believe it is a safe practice to ship liquefied flammable gases in a DOT 39 cylinder exceeding 75 cubic inches. Prior to 2002, § 173.304(a)(3) "Note 9" appeared in the HMR and limited liquefied flammable gases in DOT 39 cylinders to a size of 75 cubic inches. In an October 20, 1998 (HM-220D) [63 FR 58460] Notice of Proposed Rulemaking (NPRM), PHMSA proposed to limit all liquefied

flammable gases in DOT 39 cylinders to 75 cubic inches. The NPRM proposed to remove "Note 9" from §173.304(a)(3) and apply the 75 cubic inch size limit on DOT 39 cylinders to all liquefied compressed gases (not just flammable) in 173.304(a)(3). PHMSA received several comments in opposition to extending the 75 cubic inch limit on DOT-39 cylinders to all liquefied compressed gases. PHMSA then published a Final Rule on August 8, 2002 (HM-220D) [67 FR 51625] and, based on comments received from the regulated community, decided not to expand the 75 cubic inch limit on DOT 39 cylinders containing liquefied compressed gases. However, in the process of publishing the Final Rule, PHMSA inadvertently deleted Note 9 in § 173.304a that limited liquefied flammable gases in DOT 39 cylinders to 75 cubic inches. It was never the intention of PHMSA to remove the 75 cubic inch limit for liquefied flammable gases in DOT 39 specification cylinders. PHMSA received and accepted a petition (P-1622) from Worthington Cylinders to address this error in a future rulemaking.

Q2. Is a DOT 39-400 equipped with a standard pressure relief cap acceptable for flammable refrigerants at this time?

A2: In accordance with § 173.301(f)(4), a pressure relief device (PRD) is required on a specification DOT 39 cylinder regardless of cylinder size or filled pressure. A specification DOT 39 cylinder used for liquefied Division 2.1 materials must be equipped with a metal PRD. Fusible PRDs are not authorized on specification DOT 39 cylinders containing liquefied gas. Furthermore, in accordance with § 173.301(f)(1), a specification DOT 39 cylinder filled with R443A and R441A would need to comply with the requirements specified in CGA S-1.1/CGA S-7. As you stated in your incoming letter, CGA Publication S-1.1 does not specifically identify your commodity. However, based on the component gases that make up the mixtures R441A or R443A, and following the procedure outlined in CGA S-7, it is determined that a rupture disk CG-1 type PRD or CG-7 type pressure relief valve PRD may be used with your R441A and R443A liquefied compressed gases.

I trust this information is helpful. Please feel free to contact this office if you need further assistance.

Sincerely,



Duane A. Pfund

International Standards Coordinator  
Standards and Rulemaking Division

Attachments



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

JUN 03 2016

OFFICE OF  
AIR AND RADIATION

Richard H. Maruya  
A.S. Trust & Holdings  
44-129 Mikiola Drive  
Kaneohe, Hawaii 96744

Re: Completeness Determination for SNAP Submission for R-441A (HCR-188C1) in Motor Vehicle Air Conditioning (MVAC)

Dear Mr. Maruya:

Thank you for A.S. Trust & Holdings' submission to the Environmental Protection Agency (EPA) for R-441A (HCR-188C1) in motor vehicle air conditioning (MVAC). EPA established the Significant New Alternatives Policy (SNAP) program to implement section 612 of the Clean Air Act. EPA has reviewed your SNAP submission for R-441A (HCR-188C1) in MVAC submitted on September 13, 2010, along with the additional information you have provided since then and determined that your SNAP submission for R-441A in MVAC is now complete.

Here is a summary of information concerning your submission:

Substitute name: R-441A (HCR-188C1)  
Sector: Refrigeration and air conditioning  
End-uses: Motor vehicle air conditioning  
New or retrofit usage: New equipment

Date received: September 13, 2010  
Date of most recent information received: November 18, 2013  
Status of submission: Complete

Although the Agency has determined that this SNAP submission is complete, use of R-441A in MVAC remains prohibited. EPA has listed all flammable refrigerants, except for those specifically listed as acceptable, acceptable subject to use conditions, or unacceptable, as *unacceptable* for use in MVAC systems at 40 CFR part 82 subpart G appendix B. This prohibits the use of R-441A, a flammable hydrocarbon blend refrigerant, in any automotive air conditioning system in the United States, including U.S. territories.

Please note that this letter is not the same as a proposed or final listing decision. For this submission, such a final determination can only be made through a notice and comment rulemaking process.

If you have questions about your submission, please contact our SNAP Coordinator, Chenise Farquharson, at [Farquharson.Chenise@epa.gov](mailto:Farquharson.Chenise@epa.gov) or (202) 564-7768.

Sincerely,

A handwritten signature in blue ink, appearing to read "C. Newberg", with a long, sweeping flourish extending to the right.

Cindy Newberg  
Alternatives and Emissions Reduction Branch  
Stratospheric Protection Division



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

Mr. Richard H. Maruya  
A.S. Trust & Holdings  
44-129 Mikiola Drive  
Kaneohe, Hawaii 96744

APR 15 2016

OFFICE OF  
AIR AND RADIATION

Re: Complete SNAP Submission for R-443A (HCR-188C2) for Residential Air Conditioning

Dear Mr. Maruya:

Thank you for A.S. Trust & Holdings' letter to the Environmental Protection Agency (EPA) received on November 12, 2015. The Agency has reviewed the information in the letter and determined that the Significant New Alternatives Policy (SNAP) program does not need additional information from you, and therefore, your SNAP submission for R-443A in residential air conditioning (AC) is now complete.

Here is a summary of information concerning your submission:

Substitute name: R-443A (HCR-188C2)  
Substance(s) the substitute will replace: HCFC-22  
Sector: Refrigeration and Air Conditioning  
End-uses: Residential and light commercial air conditioning and heat pumps  
Applications: Residential split-system A/C units, residential heat pumps, and portable (floor model) room A/C  
New or retrofit usage: New only  
Date received: February 13, 2013  
Most recent update received: November 12, 2015  
Status of submission: Complete

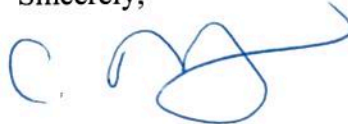
The Agency has reviewed this information, as well as the information in A.S. Trust & Holding's addendum to this submission for the use of R-443A in window air conditioners. On March 29, 2016, Administrator McCarthy signed a proposed rule that, if finalized as proposed, would list R-443A as unacceptable for use in all residential and light commercial air conditioning and heat pump equipment. We expect publication of this proposed rule in the *Federal Register* on April 18, 2016 or later that week. Following publication, the public docket will open and there will be a comment period of 45 days. You may comment during the comment period by accessing [www.regulations.gov](http://www.regulations.gov) and searching for docket number "EPA-HQ-OAR-2015-0663."

Your submissions was complete as of November 12, 2015. Because EPA is proposing that R-443A would be unacceptable in all residential and light commercial air conditioning and heat

pump equipment, we strongly suggest that you not sell or import R-443A in the United States for such use, pending EPA's final decision. If EPA lists R-443A as unacceptable in the final rule, as proposed, you would be required to recall any equipment using R-443A that entered the market ahead of the final listing.

If you have questions about your submission or about the rulemaking process, please contact our SNAP Coordinator, Chenise Farquharson at (202) 564-7768 or [Farquharson.chenise@epa.gov](mailto:Farquharson.chenise@epa.gov).

Sincerely,



Cindy Newberg  
Alternatives and Emissions Reduction Branch  
Stratospheric Protection Division