U.S. Department of Transportation
Pipeline and Hazardous Materials Safety Administration

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

DEC - 2 2010

Mr. Ralph Diaz
Air Liquide America Specialty Gases LLC
2700 Post Oak Blvd.
Houston, TX 77056

Reference No. 10-0062

Dear Mr. Diaz:

This is in response to your e-mail, and subsequent conversations and photos pertaining to a clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) applicable to marking requirements. Specifically, you ask whether the photos you submitted display marking configurations that meet the proper shipping name and technical name marking requirements applicable to cylinders.

Section 172.301(b) specifies that, except for a Division 6.2 material, technical names must be marked in parentheses and in association with the proper shipping name in accordance with the HMR. As shown in the photographs you forwarded, the technical names appear to be marked in parentheses, in association with the proper shipping name, and not separated by other non-required information in the photographs you forwarded.

I hope this information is helpful. Please contact this office should you have additional questions.

Sincerely,

T. Glenn Foster
Chief, Regulatory Review and Reinvention
Standards and Rulemaking Division

McIntyre
§172.203
§173.30
Applicability
10-0062

Drakeford, Carolyn (PHMSA)

From: INFOCNTR (PHMSA)
Sent: Thursday, March 18, 2010 10:55 AM
To: Drakeford, Carolyn (PHMSA)
Subject: FW: Hazmat Information Center Feedback: Shippers-General Requirements for Shipments and Packagings (Sections 173.1 – 173.476)

Carolyn,
This gentleman would like an official written letter of interpretation on the issue described below.
Thanks,
Rob

-----Original Message-----
From: PHMSA-Feedback [mailto:PHMSA-Feedback]
Sent: Friday, March 12, 2010 5:48 PM
To: PHMSA HM InfoCenter; PHMSA Webmaster
Subject: Hazmat Information Center Feedback: Shippers-General Requirements for Shipments and Packagings (Sections 173.1 – 173.476)

Completed via phone by NS on 03/15/10 at 12:30pm

Relevant section is actually 172.301(b)regarding "Technical names".
Note this paragraph references 172.203(k) which addresses mixtures.

My question pertains to shipping compressed gas mixtures of 2, 5, 10 or more gaseous components in compressed gas cylinders.

Question: Regulation 172.301(b) requires that in addition to the proper shipping name ("Compressed gas, n.o.s." for example) a non-bulk packaging must also " . . . be marked with the technical name in parenthesis in association with the proper shipping name in accordance with the requirements . . . specified for shipping papers in 172.203(k) of this part." In addition, for mixtures, subparagraph 172.203(k)(1) requires that at least 2 components most predominantly contributing to the hazards of the mixture be entered on the shipping paper.

It is clear and we agree that at least two components for mixtures be included on shipping papars AND ON THE PACKAGING.
Our question pertains mainly to the packaging. Most cylinders in the compressed gas industry are shipped with a preprinted adhesive sticker (label) with required US DOT information placed on the shoulder of the cylinder. Certain complex calibration gas mixtures also have their certification label (indicating accuracy, etc.) affixed to the upper part of the cylinder sidewall. Our concern is the acceptable location for marking "... at least two components ..." as required by 172.203(k)(1).

QUESTION: With the understanding that a certification label includes ALL the components of a given gas mixture, is it acceptable to place the traditional product label that includes the proper shipping name and UN number on the cylinder shoulder and affix a label (to satisfy the "two component requirement"), such as our certification label, on the upper part of the cylinder sidewall directly below the product label (e.g., within 6 inches of the cylinder shoulder)? It is our position, that this satisfies the intent of the regulation - i.e., to disclose the critical components and prominently and clearly display their technical names.

Name: Ralph Diaz
Organization: Air Liquide America Specialty Gases LLC

Email: ralph.diaz@airliquide.com
Address: 2700 Post Oak Blvd
City: Houston
Zip Code: 770565
Phone: 713-499-6867
FAX: 713-624-8540

Foster, Glenn (PHMSA)

From: Foster, Glenn (PHMSA)
Sent: Thursday, December 02, 2010 12:56 PM
To: Chaney, Wayne (PHMSA)
Subject: 10-0062: New Photos of Cylinder Marking/Labeling
Attachments: DOT Example Labels 2.pdf; DOT Mixture Label Examples 2.jpg; Labeling Examples July2b-2010 001.jpg; Labeling Examples July2b-2010 002.jpg; Labeling Examples July2d2010 001.jpg; Labeling Examples July2e-2010.jpg

Wayne,

Did you ever get a chance to look at these photos for compliance with the labeling requirements of the HMR?

Thanks,
Glenn

From: Foster, Glenn (PHMSA)
Sent: Wednesday, October 13, 2010 1:00 PM
To: Chaney, Wayne (PHMSA)
Cc: Hines, Billy C. (PHMSA)
Subject: 10-0062: New Photos of Cylinder Marking/Labeling

Wayne,

Can you take a look at these attachments when you get a second, please? The inquiry pertains to whether the configurations meet the marking/labeling requirements for cylinders.

Thanks,
Glenn

Please find attached photos of typical cylinder packaging and labeling for compressed gas MIXTURES. Also, our understanding is that in addition to the labeling demonstrated in the attachments, it would be permitted to include more complete information such as stenciling all components of a mixture vertically on a cylinder or including all components of a mixture (not just two) on a certification label, provided such component listing is bracketed by parentheses.

LABELING EXAMPLE #1 (see first attachment)

Photo - DOT Example Labels 2: Labeling for a mixture of Oxygen, Nitrogen and Helium.
Proper shipping name: Compressed Gases, N.O.S.; UN 1956
Here, components are stenciled in 1 inch size letters directly below the shoulder label containing the PROPER SHIPPING NAME, UN number and hazard class diamond to satisfy the US DOT technical name requirement, i.e., including the names of **at least** two components most predominantly contributing to the hazards of the mixture.

LABELING EXAMPLE #2 (see second attachment)

Photo - DOT Mixture Label Examples 2: Demonstrating three labeling styles for labeling a mixture of Helium and Nitrogen.
Proper shipping name: Compressed Gases, N.O.S.; UN 1956
Here, small preprinted stickers are used to label a cylinder with a gas mixture of Helium and Nitrogen. The preprinted labels with the components are affixed directly below the shoulder label containing the PROPER SHIPPING NAME, UN number and hazard class diamond to satisfy the US DOT technical name requirement, i.e., including the names of **at least** two components most predominantly contributing to the hazards of the mixture.

LABELING EXAMPLE #3 (see 3rd and 4th attachment)

Photo - Labeling Examples July2b-2010 001 (close up view) and #002: Demonstrating a method for labeling a mixture of Oxygen and Helium.
Proper shipping name: Compressed Gas, N.O.S.; UN 1956
Here, components are identified and checked on a preprinted label containing several popular and frequently used gases. The preprinted label with the components is affixed directly below the shoulder label containing the PROPER SHIPPING NAME, UN number and hazard class diamond to satisfy the US DOT technical name requirement, i.e., including the names of **at least** two components most predominantly contributing to the hazards of the mixture.

LABELING EXAMPLE #4 (see 5th and 6th attachment)

Photo - Labeling Examples July2d2010 001 and Labeling Examples July2e-2010 (close up view): Demonstrating a method for labeling a mixture of Nitrogen, Carbon Dioxide and Argon.
Proper shipping name: Compressed Gas, N.O.S.; UN 1956

Here, a certification sticker (i.e., label) is designed so that the components of the gas mixture are listed first (above all other information on the certification label) and is applied to the cylinder sidewall directly and immediately below the label containing the PROPER SHIPPING NAME to satisfy the US DOT regulation that requires the names of at least two components most predominantly contributing to the hazards of the mixture to be is association with (i.e., close to) the "proper shipping name".

Comments:
In our opinion, [considering all four general labeling examples, i.e., 1) the components stenciled on the side of the cylinder below the proper shipping name, 2) applying stickers/labels of components below the proper shipping name, 3) identifying the components on a preprinted label placed directly below the proper shipping name, and 4) listing the components ***away from other information*** on the certification label and placing this certification label below the proper shipping name] ALL are examples that list the components in association with the PROPER SHIPPING NAME, UN number and hazard class diamond. A user and an emergency responder can clearly associate the components in each example with the proper shipping name and UN number.

Note that for smaller cylinders, the 'shoulder label' that includes the proper shipping name and UN number as well as additional labeling as presented in the four examples above, will be on the cylinder sidewall as the area of the shoulder for small cylinders is too small for such labeling.

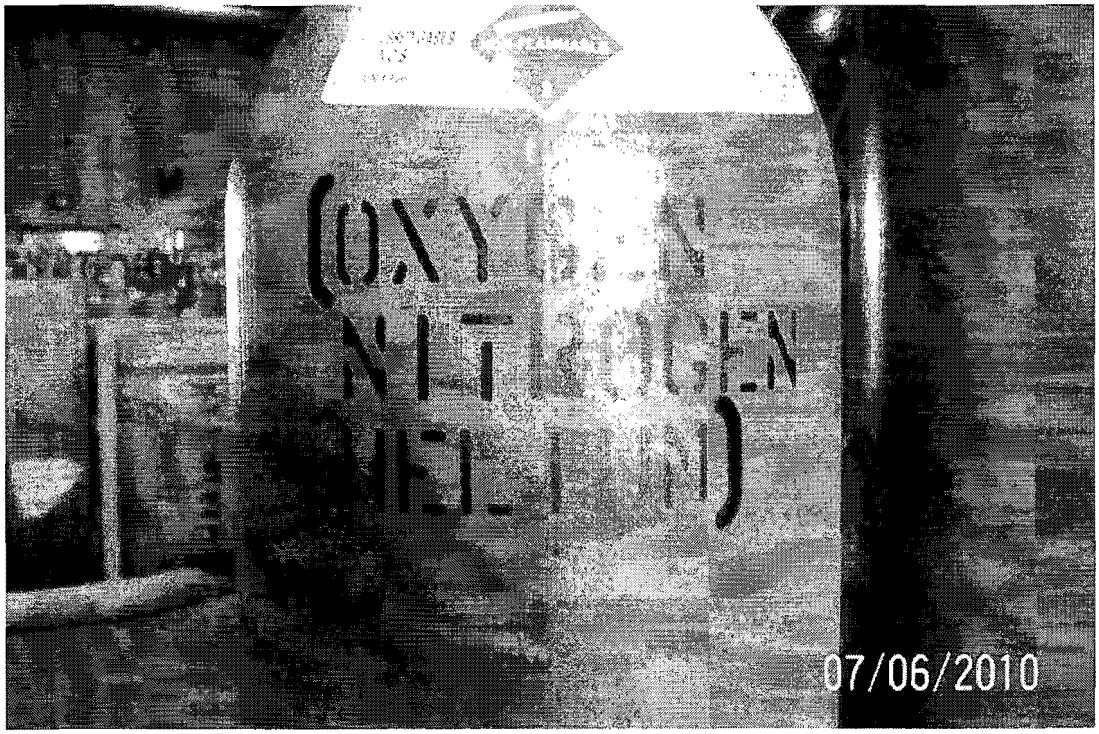
Although all photos are not as clear as I would like, you can see and evaluate the position of the labeling and stenciling. As mentioned last week, stenciling letters (via painting) smaller that 1 inch size will not be as clear as the 1 inch size. Note that the style and format of certification labels applied can vary according to the type of certification and accuracy required by the user/purchaser of such a calibration gas standard.

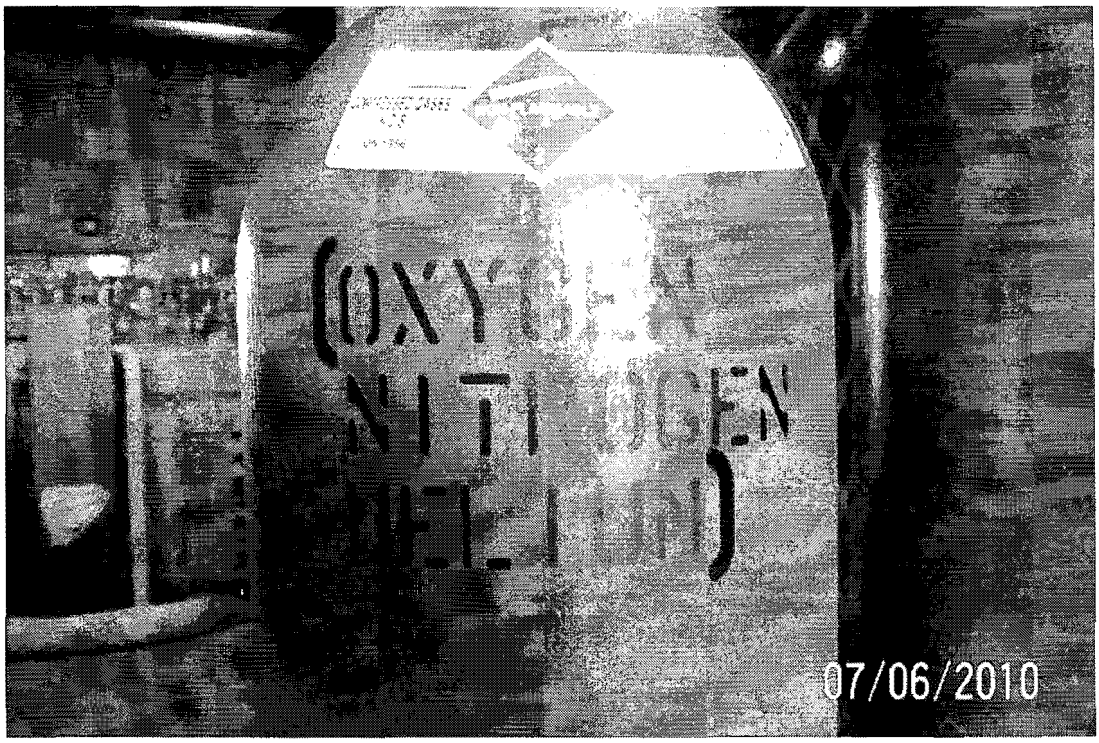
Thank you for your consideration. Let me know if you require any other information to address this issue.

Ralph Diaz
Air Liquide America Specialty Gases LLC
2700 Post Oak Blvd
Houston, Texas 77056

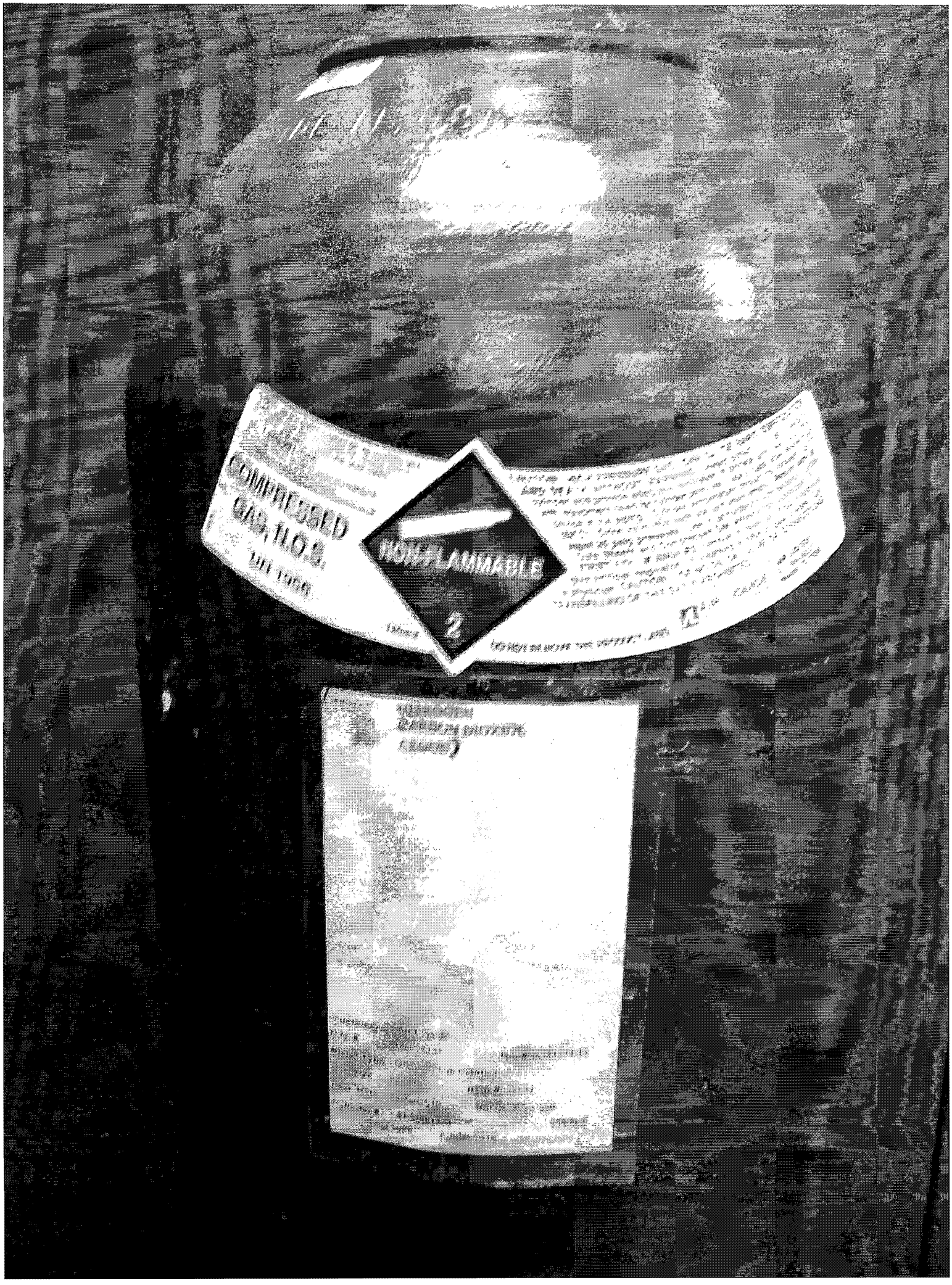
(713) 499-6867


NITROGEN

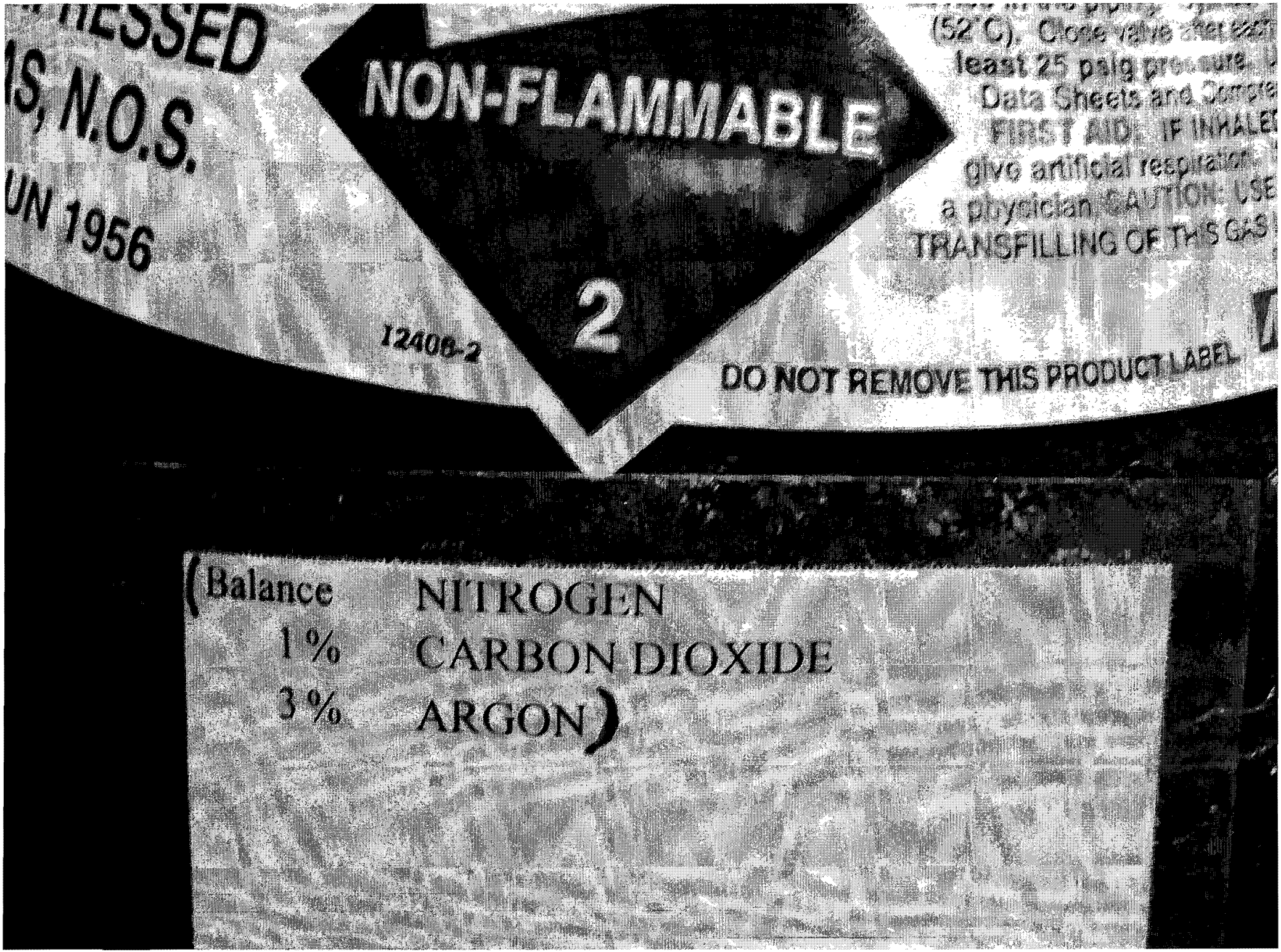

07/06/2010


07/06/2010


HELIUM
NITROGEN
NITROGEN
HELIUM
HELIUM
NITROGEN
07/02/2010


COMPRESSED
GAS, N.O.S.
NON-FLAMMABLE
2


DO NOT HANDLE CYLINDER OR USE CONTENTS UNTIL
FOR MORE READ AND UNDERSTAND THE MATERIAL SAFETY
DATA SHEET FOR THIS PRODUCT. FOR MORE COPIES
CALL 1-800-231-1366
IT CONTAINED IN USE CYLINDER AND CONTENTS
NOTIFY EMERGENCY PROCEDURES
COMPRESSED
GAS, N.O.S.
UN 1956
12406-2
NON-FLAMMABLE
2
CAUTION: HIGH PRESSURE GAS. CAN CAUSE RAPID SUFFOCATION
AND DEATH WITHOUT WARNING.
cylinder and provide adequate ventilation in
with equipment rated for cylinder pressure.
device in the piping. Cylinder temperature
(52°C). Close valve after each use and
least 25 psig pressure. Use in
Data Sheets and Compressed Gas
FIRST AID: IF INHALED, remove to
give artificial respiration. If breathing is
a physician. CAUTION: USE NO OIL ON VALVE
TRANSFILLING OF THIS GAS IS PROHIBITED.
AIR LIQUIDE
DO NOT REMOVE THIS PRODUCT LABEL.
THIS CYLINDER CONTAINS GASES MARKED ☑
[✔ OXYGEN; CAS #7782-44-7] 5 %
[☐ NITROGEN; CAS #7727-37-9] ____ %
[☐ ARGON; CAS #7440-37-1] ____ %
[✔ HELIUM; CAS #7440-59-7] 95 %
[☐ HYDROGEN; CAS #1333-74-0] ____ %
[☐ CARBON DIOXIDE; CAS #124-38-9] ____ %
[☐ ____] ____ %
[☐ ____] ____ %
DO NOT REMOVE THIS LABEL.


RESSED
S, N.O.S.
UN 1956
NON-FLAMMABLE
2
12406-2
(52°C). Close valve
least 25 psig pressure
Data Sheets and
FIRST AID: IF INHALED
give artificial respiration
a physician. CAUTION: USE
TRANSFILLING OF THIS GAS
DO NOT REMOVE THIS PRODUCT LABEL
(Balance NITROGEN
1% CARBON DIOXIDE
3% ARGON)