



U.S. Department
of Transportation

**Pipeline and Hazardous
Materials Safety
Administration**

JAN 19 2018

1200 New Jersey Avenue, SE
Washington, DC 20590

Antonio Ruiz
Carbotainer SL
P. INDEPENDENCIA, 8 DUPLICADO.
2ª PLANTA
Zaragoza 50003
Spain

Reference No. 17-0062

Dear Mr. Ruiz:

This letter is in response to your June 5, 2017, email requesting clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) applicable to carbon fiber composite cylinders. You state that Carbotainer SL is a Spanish manufacturer of International Organization for Standardization (ISO) Standard 11119-2 carbon fiber composite cylinders with an aluminum liner and ask what steps (e.g., hazard communication and general requirements) are necessary to use these cylinders in the United States.

United Nations (UN) standard fibre-reinforced, composite gas cylinders with a load sharing metal liner must be designed and constructed in conformance with the applicable requirements prescribed in 49 CFR 178.70 and 178.71 for an ISO Standard 11119-2. Cylinders that fully conform to ISO Standard 11119-2 may be transported to, from, or within the United States and require a U.S. Department of Transportation competent authority approval (CA) per 49 CFR 178.69 and 178.70.

Manufacturers must mark these cylinders in conformance with 49 CFR 178.71(q), (r), and (s) to certify they are an authorized UN standard packaging. This includes a "USA" marking indicating the United States as a country of approval in conformance with 49 CFR 178.69 and 178.70. Once these requirements are met, the cylinders may be refilled in conformance with 49 CFR 173.301, 173.301b, and 173.304b; and must be periodically retested in conformance with 49 CFR 180.207.

Aluminum and steel liners allow for different materials to be transported. Certain materials, such as those with N86 in Column (7) of the Hazardous Materials Table in 49 CFR 172.101, forbid the use of aluminum alloy UN pressure receptacles.

I hope this information is helpful. Please contact us if we can be of further assistance.

Sincerely,

A handwritten signature in black ink, appearing to read "T. Glenn Foster". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

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

Dodd, Alice (PHMSA)

Wolcott
\$ 178.70
Cylinders
17-0062

From: Foster, Glenn (PHMSA)
Sent: Tuesday, June 13, 2017 7:03 AM
To: Dodd, Alice (PHMSA); Goodall, Shante CTR (PHMSA)
Subject: Letter of interpretation composite cylinders ISO 11119.2
Attachments: 140123 (003).pdf

Alice / Shante,

What is the Interp No. for this incoming, and to which Specialist was it assigned?

Thanks,
Glenn

From: Foster, Glenn (PHMSA)
Sent: Monday, June 05, 2017 10:12 AM
To: Dodd, Alice (PHMSA) <Alice.Dodd@dot.gov>; Goodall, Shante CTR (PHMSA) <shante.goodall.ctr@dot.gov>
Subject: Letter of interpretation composite cylinders ISO 11119.2

Alice / Shante,

Please process the attached as a request for a letter of interpretation and assign to a Specialist.

Thanks,
Glenn

From: Antonio Ruiz [<mailto:aruiz@carbotainer.es>]
Sent: Monday, June 05, 2017 9:42 AM
To: Foster, Glenn (PHMSA) <Glenn.Foster@dot.gov>
Subject: Letter of interpretation composite cylinders ISO 11119.2

Dear Mr. Foster,

I am addressing you on behalf of Carbotainer SL, a Spanish manufacturer of composite cylinder for compressed gases.

We are considering our introduction in the US market, we have obtained the ISO 11119.2 standard and we would like to have a letter of interpretation which could help us with the commercialization and reassure our potential customers regarding filling and handling of composite cylinders in the US.

Please find enclosed a similar letter issued by your department. One difference is that the liner of our cylinders is made of aluminum and not of steel.

We would appreciate your information about the documents you would require, the appropriate channel of communication (email, contact person, etc) and the next steps from our side.

Thanks in advance for your kind response.

Sincerely,

Antonio Ruiz
Sales Manager
Mob. +34 660 982485
Tel. +34 976 144992

Fax. +34 976 144412



www.carbotainer.com



Libre de virus. www.avast.com



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of Transportation

Pipeline and Hazardous
Materials Safety
Administration

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

NOV 03 2014

Mr. Gio Islas
Guerrilla Air/Tiberius Arms
2717 West Ferguson Road
Fort Wayne, IN 46809

Reference No. 14-0123

Dear Mr. Islas:

This is in response to your recent e-mail to the Pipeline and Hazardous Materials Safety Administration (PHMSA) Hazardous Materials Information Center requesting clarification on how to properly handle and fill United Nations (UN) International Organization for Standardization (ISO) Standard 11119-2 carbon fiber composite cylinders with a steel liner under the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180). Specifically, you ask if PHMSA can explain the handling and filling requirements this cylinder must comply with under the HMR.

You state your company imports these ISO cylinders into the United States and some of your customers use them when scuba diving. You also state some of your customers reported they have difficulty getting these cylinders refilled because some workers at refill facilities state they are not familiar with these cylinders. In addition, you state your customers report cylinder refillers state they will refill your customers' cylinders only if they are marked with a Department of Transportation Special Permit (DOT-SP) or Competent Authority (CA) number. Further, you included a photograph of the following markings on a UN ISO Standard 11119-2 carbon fiber cylinder:

0.625x 18UNF TW AMS BB01058
PW310 PH465BAR 0.95 KG 1.10L 0029
USA/M0812 IA18
Ⓜ ISO11119-2 B Ⓜ 2011/12
Canada SU 10070
Equivalency [*Obscured text*] icate

A cylinder designed and constructed in conformance with the applicable requirements prescribed in 49 CFR 178.70, 178.71(a) and 178.71(l) for an ISO Standard 11119-2 is a UN standard fibre-reinforced, composite gas cylinder with a load sharing metal liner. Cylinders that are fully in conformance with ISO 11119-2 do not require a DOT-SP or CA Approval. To certify that these cylinders are an authorized UN standard packaging, manufacturers mark them in conformance with § 178.71(p), (q), and (r). The mark you provided complies with

this requirement, except we note that it does not appear to include the "UW" mark prescribed in §§ 173.301b(g), 178.71(l)(2) and (p)(18) for composite cylinders certified to ISO-11119-2 intended for underwater use. Customers who intend to use these types of cylinders for underwater use should be made aware of this requirement. An ISO Standard 11119-2 cylinder that varies from this design is not an authorized packaging in the United States until its variations are reviewed and approved by PHMSA's Associate Administrator for Hazardous Materials Safety in the form of a DOT-SP or CA. The cylinder must be marked with the DOT-SP or CA number if the DOT-SP or CA requires that it be marked with that number; otherwise, the marking of that number is not required. In addition, the HMR require ISO Standard 11119-2 cylinders to be refilled in conformance with §§ 173.301, 173.301b, 173.304b; and periodically retested in conformance with § 180.205.

I hope this satisfies your request.

Sincerely,

A handwritten signature in cursive script, reading "T. Glenn Foster". The signature is written in dark ink and is positioned above the printed name and title.

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

Edmonson
17871
Specifications for
UN Pressure Receptacles
#14-0123

Dodd, Alice (PHMSA)

From: INFOCNTR (PHMSA)
Sent: Friday, June 20, 2014 4:12 PM
To: Hazmat Interps
Subject: FW: Guerrilla Air System
Attachments: 68-45K ISO11119-2.png

I spoke with this caller, and he would like this letter submitted as a formal letter of interpretation. Thanks, Victoria

From: Gio [mailto:gislas@tiberiusarms.com]
Sent: Friday, June 20, 2014 2:20 PM
To: INFOCNTR (PHMSA)
Cc: 'guns'; 'Info'; 'Dianne Jugan'
Subject: RE: Guerrilla Air System

Hello,

My name is Gio with Guerrilla Air / Tiberius Arms.

As of right now we are an importer of UN ISO certified Carbon Fiber tanks in the United States for the past 2 years. Every once in a while we have customer with our UN tanks and they are not able to get their tank fill since the shop/field is not familiar with UN certifications. Most paintball shops, or scuba shops cannot fill a tank if they do not see a DOT number. To avoid this issues and educate shops I require your help.

Is it possible if you can write a letter stating the status, and procedures in handling a UN certified tank?

It is a UN ISO11119-2

Third party DOT approval number is M0812

See attached image for reference.

Please advise and let me know if you have any questions or require additional information.

Thank You

GIO ISLAS



2717 W Ferguson Road
Fort Wayne, IN 46809
T: 260-478-2500 x 252
F: 260-572-2210
SKYPE: gio.islas24

From: Dianne Jugan [mailto:djugan@y-kiki.com]
Sent: Thursday, June 05, 2014 3:09 PM
To: Gio Islas

Cc: guns; Info

Subject: Re: Guerrilla Air System

Gio,

I will need a letter from your contact at DOT addressed to me stating that I can fill this tank. Do not send links to a bunch of different websites. I will retest and fill these tanks only if I get a letter from DOT.

Thank you,
Mark Jugan

On Thu, Jun 5, 2014 at 9:36 AM, Gio Islas <gislas@tiberiusarms.com> wrote:

Augie,

I haven't heard back from Mark.

Mark feel free to call me for any questions.

260-478-2500 x252

Thank You

GIO ISLAS



2717 W Ferguson Road

Fort Wayne, IN 46809

T: 260-478-2500 x 252

F: 260-572-2210

SKYPE: gio.islas24

From: guns [<mailto:guns@cruxsystems.com>]

Sent: Thursday, June 05, 2014 10:28 AM

To: 'Gio Islas'; info@y-kiki.com
Subject: RE: Guerrilla Air System

Hi All,

Has there been any update on this?

Thanks,

Augie

From: Gio Islas [<mailto:gislasp@tiberiusarms.com>]
Sent: Thursday, May 29, 2014 11:30 AM
To: info@y-kiki.com
Cc: guns@cruxsystems.com
Subject: RE: Guerrilla Air System

Mark,

Please let me know your contact at the Department of Transportation. We would really like to help this customer of ours.

Information below is sufficient, and not sure why your contact at the DOT is not complying.

I called the DOT of transportation and by referencing UN ISO 11119.2, he knew right away of what I was talking about. For more information he provided the following links.

<http://www.gpo.gov/fdsys/granule/CFR-2011-title49-vol3/CFR-2011-title49-vol3-sec178-71>

Under section 178.71 it states the following.

<http://www.gpo.gov/fdsys/pkg/CFR-2011-title49-vol3/pdf/CFR-2011-title49-vol3-sec178-71.pdf>

More documentation.

<http://www.gpo.gov/fdsys/pkg/CFR-2011-title49-vol3/pdf/CFR-2011-title49-vol3-sec178-70.pdf>

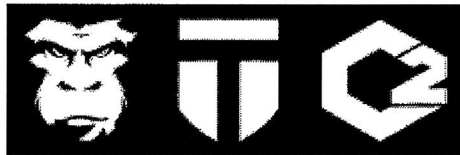
As you can see our tanks have the correct markings, specifications and proper approval.

We have imported thousands of these types of tanks into the US since 2012, and with the proper information on educating shops.

Please advise your thoughts.

Thank You

GIO ISLAS



2717 W Ferguson Road

Fort Wayne, IN 46809

T: 260-478-2500 x 252

F: 260-572-2210

SKYPE: gio.islas24

From: Gio Islas [<mailto:gislasp@tiberiusarms.com>]

Sent: Friday, May 23, 2014 5:08 PM

To: 'info@y-kiki.com'

Cc: 'guns@cruxsystems.com'

Subject: Guerrilla Air System

Hello Mark,

The Guerrilla Air/AMS cylinders are qualify to be filled.

Our manufacture DOT approved number is M0812

Sources:

http://www.phmsa.dot.gov/portal/site/PHMSA/menuitem.920aaa011db032e5ea19d71708558a0c/?vgnextoid=4a38272cb3eae010VgnVCM1000008055a8c0RCRD&vgnextchannel=4a38272cb3eae010VgnVCM1000008055a8c0RCRD&as_q=M0812+

http://www.amsys.com.tw/images_share/dot/DOT-640.jpg

After speaking to a representative over at the Department of Transportation, an ISO tank can be tested and be qualified as well.

Sources he gave me:

<http://www.ecfr.gov/cgi-bin/text-idx?c=ecfr&SID=2f9049c3006d245186655fc1d43a61c9&rgn=div8&view=text&node=49:3.1.1.1.3.3.1.4&idno=49>

http://phmsa.dot.gov/staticfiles/PHMSA/DownloadableFiles/Files/ISO11119_2DOTCFFC.pdf

You will see the UN ISO 11119-2 mark on the tank

If you have any additional questions, please feel free to contact the DOT.

https://ntl.custhelp.com/app/answers/detail/a_id/22/kw/DOT%20cylinder/session/L3RpbWUvMTM1NzkzMzgXNy9zaWQvbjFpX0oyZ2w%3D

Please advise and let me know if you have any questions.

Thank You

GIO ISLAS



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