



U.S. Department
of Transportation

Pipeline and Hazardous
Materials Safety
Administration

1200 New Jersey Avenue, SE
Washington, DC 20590

OCT 17 2017

Mr. Jonathan Gurten
QA Manager
AccuBeat Ltd.
Ha-Marpe 5
Jerusalem 977405
Israel

Reference No. 17-0018

Dear Mr. Gurten:

This letter is in response to your February 16, 2017, email requesting clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) applicable to the classification of a hazardous material. Specifically, you indicate that your company designs, develops, and manufactures Rubidium oscillator/Atomic clocks containing less than one (1) gram of rubidium and ask if it meets the definition of a Class 4 hazardous material. You note that a previous PHMSA interpretation (Reference No. 08-0154) indicates that when less than one gram of rubidium is contained in an atomic clock it does not pose a risk during transportation and is not subject to the HMR. Furthermore, you conducted test data of both an impact and drop simulation, which was provided to us. The results of the test demonstrate no evidence of spontaneous combustion or damage to the capsule or the oscillator.

In accordance with § 173.22, it is the shipper's responsibility to class and describe a hazardous material in accordance with Parts 172 and 173 of the HMR. Note that previous interpretations were not a determination of whether rubidium is a Class 4 hazardous material but whether the amount and form in which it is transported presents an unreasonable risk to health and safety or property. This Office does not generally perform this function. However, based on the subsequent test data you have provided and previous PHMSA interpretation, it is the opinion of this Office that as long as the one gram or less of Rubidium in your atomic clock is hermetically sealed in glass, and the glass capsule is adequately protected from breakage and is an integral internal component of the atomic clock, and the atomic clock does not meet the definition of any other hazard class, it is not subject to the HMR.

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

Sincerely,

Dirk Der Kinderen
Chief, Standards Development
Standards and Rulemaking Division

17-0018

Baker
8173.124
Class
17-0018

Dodd, Alice (PHMSA)

From: INFOCNTR (PHMSA)
Sent: Thursday, February 16, 2017 5:01 PM
To: Hazmat Interps
Subject: FW: Request for Letter of Interpretation for AccuBeat Rubidium Oscillators
Attachments: 08-0154.pdf

Hi Shante/Alice,

Please submit this as a letter of interpretation. Please note there is not a mailing address, but this is an international requester.

Please let me know if you have any questions.

Thanks,
Jordan

From: Jonathan Gurten [mailto:Jonathan@accubeat.co.il]
Sent: Thursday, February 16, 2017 8:19 AM
To: INFOCNTR (PHMSA) <INFOCNTR.INFOCNTR@dot.gov>
Subject: Request for Letter of Interpretation for AccuBeat Rubidium Oscillators

Hello,

Please, help us.

AccuBeat Ltd is a leading designer, developer and manufacturer of Rubidium oscillators/Atomic clocks which are standards used as a frequency source.

These are accurate timing devices used in many applications such as wireless base stations, precision test and measurement equipment, network timing sources and military communications equipment. AccuBeat is the only company in Israel that manufactures these devices and is one of the few in the world.

These oscillator products contain a very small amount of Rubidium internally.

Specifically the products are AccuBeat model numbers AR133xx, AR40 and Nano Atomic Clock (NAC).

Technical details and performance specifications for these oscillators can be found on our website:

www.accubeat.com

AccuBeat is requesting a letter of interpretation to state that the oscillator products are not Class 4 hazardous items and can be safely transported domestically and internationally since the Rubidium content in these products is less than 1 gram.


The U.S. Department of Transportation (DoT) already have published an interpretative guidance statement for similar products from another US manufacturer - Symmetricom (Please refer to Document # 080154 which is attached) that states that frequency standards containing Rubidium below 1 gram are not regarded as Class 4 hazardous materials for commercial transportation.

AccuBeat would like to request a similar letter of interpretation for the AccuBeat Rubidium oscillators from the AR133xx, AR40 and NAC products.

For any questions or additional information related to this request, please contact me.

Thank you in advance.

Jonathan Gurten
QA Manager

 before printing this email , kindly think about the Environment

AccuBeat's Quality System is certified to be in conformance with Aerospace Standard AS9100 Rev.C and ISO9001:2008.

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From: Eckenrode, Andrew (PHMSA) [<mailto:andrew.eckenrode@dot.gov>] **On Behalf Of** Special Permits (PHMSA)

Sent: Thursday, February 16, 2017 2:52 PM

To: Jonathan Gurten

Subject: RE: Special Permits Feedback: Other Questions?

Mr. Gurten,

Please direct your interpretation request to infocntr@dot.gov and they will forward it to our Standards and Rulemaking Division.

Regards,

Andrew Eckenrode

From: PHMSA Webmaster

Sent: Thursday, February 16, 2017 1:09 AM

To: PHMSA HM Spec Permits <PHMSAHMSpecPermits@dot.gov>; PHMSA Webmaster <PHMSAWebmaster@dot.gov>

Subject: Special Permits Feedback: Other Questions?

Special Permits Questions Feedback

Name: Jonathan Gurten

Organization: AccuBeat Ltd

Street: Ha-Marpe 5

City: Jerusalem

State:

Country: Israel

Zip: 9777405

Email: jonathan@accubeat.co.il

Phone: +972-52-5229100

Fax Number: +972-2-5868550

Topic: Special Permits Feedback: Other Questions?

Question/Comment/Details: Request for Letter of Interpretation for AccuBeat Rubidium Oscillators

AccuBeat Ltd is a leading designer, developer and manufacturer of Rubidium oscillators/Atomic clocks which are standards used as a frequency source. These are accurate timing devices used in many applications such as wireless base stations, precision test and measurement equipment, network timing sources and military communications equipment. AccuBeat is the only company in Israel that manufactures these devices and is one of the few in the world. These oscillator products contain a very small amount of Rubidium internally. Specifically the products are AccuBeat model numbers AR133xx, AR40 and Nano Atomic Clock (NAC). Technical details and performance specifications for these oscillators can be found on our website: www.accubeat.com AccuBeat is requesting a letter of interpretation to state that the oscillator products are not Class 4 hazardous items and can be safely transported domestically and internationally since the Rubidium content in these products is less than 1 gram. The U.S. Department of Transportation (DoT) already have published an interpretative guidance statement for similar products from another US manufacturer - Symmetricom (Please refer to Document # 080154 which is attached) that states that frequency standards containing Rubidium below 1 gram are not regarded as Class 4 hazardous materials for commercial transportation. AccuBeat would like to request a similar letter of interpretation for the AccuBeat Rubidium oscillators from the AR133xx, AR40 and NAC products. For any questions or additional information related to this request, please contact the undersigned. Thank you in advance. Sincerely, Jonathan Gurten QA Manager

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

1200 New Jersey Ave., S.E.
Washington, DC 20590

JUN 25 2008

Mr. Gerald M. Beauchesne
Facility Manager
Symmetricom
34 Tozer Road
Beverly, MA 01915-5510

Ref. No. 08-0154

Dear Mr. Beauchesne:

This responds to your May 16, 2008 letter requesting an update of an interpretation you received from the Office of Hazardous Materials Regulation of the Research and Special Program Administration (RSPA), the predecessor agency to the Pipeline and Hazardous Materials Safety Administration, regarding the applicability of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) to a device containing rubidium. Specifically, you request clarification on an interpretation indicating the device containing rubidium does not pose a transportation hazard as a flammable solid and whether the interpretation can be extended to Class 4 hazardous materials.

You provide a copy of the letter your company received in November 1984 stating the opinion of the Office that "a frequency standard (device) containing less than one gram of rubidium does not pose a transportation hazard as a flammable solid and consequently is not regulated as such." You also indicate that your company continues to produce frequency devices with less than one gram of rubidium for use in atomic clocks. Finally, in telephone conversations with our Office, you state that tests conducted by your company on components of the devices in which the glass cells or lamps containing rubidium are broken do not show spontaneous ignition or flammability when exposed to air or water.

Based on the information provided and on previous interpretation by RSPA, it is the opinion of this Office that a frequency device containing less than one gram of rubidium for use in atomic clocks is not subject to the HMR as a Class 4 hazardous material.

I hope this information is helpful. Please contact us if you require additional assistance.

Sincerely,

John A. Gale,
Chief, Standards Development
Office of Hazardous Materials Standards

Symmetricom

34 Tozer Road
Beverly, MA 01915-5510
Tel: (978) 927-8220
Fax: (978) 927-4099

U.S. Department of Transportation PHH-10
1200 New Jersey Avenue, SE East Building, 2nd Floor
Washington, DC 20590
Attention: Mr. Edward T. Mazzullo

Dear Mr. Mazzullo:

We recently spoke to Dr. Ke, Offices of Hazardous Materials Technology - PHH-21-Sciences, about a letter our company received from DOT back in November 1984 (see attached). This letter states that our Rubidium product line, containing less than one gram of rubidium, does not pose a transportation hazard. Our discussion with Dr. Ke was centered around updating the statement outlined and the date of this letter. Dr. Ke stated that this document is still accurate but after a detailed discussion with Dr. Ke, and under his advisement, we are sending this letter to you to request an updated version on the following issues:

1. The original company name and address has changed. The original company was Ball Efratom Div out of Irving Cal, which is now:

Symmetricom
Corporate Headquarters
2300 Orchard Parkway
San Jose, CA 95131
USA


2. We would also like a clarification on the statement of a flammable solid. Dr. Ke's interpretation of this sentence is that we are covered for all divisions of Class 4. If this is indeed correct could we please get this changed from flammable solids to Class 4 (Flammable Solids) in total?

The amount of Rubidium in today's current product is the same as what was described in 1984, which is less than 1 gram of Rubidium.

Symmetricom is a manufacture of time and frequency devices using both Cesium and Rubidium in Atomic Clocks.

If you have any questions, please do not hesitate to call.

Sincerely,


Gerald M. Beauchesne

Facility Manager
978-232-1485 (ph)
978-265-2521 (cell)
978-927-4099 (fax)
E-mail: GBeauchesne@symmetricom.com
34 Tozer Rd, Beverly, MA 01915

Der kinderen
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RAM
08-0154
May 16, 2008