U.S. Department of Transportation

Pipeline and Hazardous Materials Safety Administration

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

JUN 07 2011

Ms. Carrie Wayne
Honeywell International, Inc.
101 Columbia Road
Morristown, NJ 07962

Ref. No.: 11-0088

Dear Ms. Wayne:

This responds to your April 11, 2011 letter requesting clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) applicable to Class 2 materials. Your questions are paraphrased and answered below.

Q1: You ask whether a material must meet all three provisions in § 173.115(b)(1) through (b)(2) to be a classified as a Division 2.2 material?

A1: The answer is no. As specified in § 173.115(b), the HMR define a Division 2.2 (non-flammable, nonpoisonous compressed gas - including compressed gas, liquefied gas, pressurized cryogenic gas, compressed gas in solution, asphyxiant gas and oxidizing gas) as any material or mixture that "exerts in the packaging a gauge pressure of 200 kPa (29.0 psig/43.8 psia) or greater at 20 °C (68 °F), is a liquefied gas or is a cryogenic liquid, and does not meet the definition of Division 2.1 or 2.3."

To be considered a Division 2.2 material, a material would only need to meet one of the provisions in § 173.115(b)(1) (i.e. exerts a gauge pressure ≥200 kPa at 20 °C, is a liquefied gas or is a cryogenic liquid) and not meet the definition of Division 2.1 or 2.3 material.

Q2: You ask whether a liquefied gas, irrespective of its pressure, meets the definition of a Division 2.2 material?

A2: The definition of a Division 2.2 gas includes all liquefied gases, irrespective of their pressures. This is due to the fact that certain liquefied gases that pose no pressure hazard at ambient pressures and temperatures may exhibit a pressure hazard under conditions normally encountered in transport, such as increased temperature.

Q3: You ask whether your hazardous material (gas) must be "compressed" in order to be described as a refrigerant gas?

A3: As specified in § 173.115(j), the terms "Refrigerant gas and Dispersant gas" apply to all nonpoisonous refrigerant gases; dispersant gases (fluorocarbons) listed in § 172.101 of the HMR and §§173.304, 173.314(c), 173.315(a), and 173.315(h) and mixtures thereof; and any other compressed gas having a vapor pressure not exceeding 260 psia at 54 °C (130 °F), used only as a refrigerant, dispersant, or blowing agent.

If your gas exerts any pressure, meets the criteria of a compressed gas having a vapor pressure not exceeding 260 psia at 54 °C (130 °F), and is used only as a refrigerant, dispersant, or blowing agent, it could be referred to as a Refrigerant gas and Dispersant gas.

I trust this satisfies your inquiry. Please contact us if we can be of further assistance.

Sincerely,

T. Glenn Foster

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

Honeywell

Nickels
§173.115
Definitions
11-0088

Honeywell
P.O. Box 1057
Morristown, NJ 07962-1057

April 11, 2011

Mr. Charles E. Betts
Director, Office of Hazardous Materials Standards
U.S. DOT/PHMSA
ATTN: PHH-10
East Building
1200 New Jersey Avenue, SE,
Washington, DC 20590-0001

Dear Mr. Betts,

In the requirements found in 49 CFR 173.115, the HMR's state "a non-flammable, non-poisonous compressed gas means any material (or mixture) which exerts in a packaging a gauge pressure of 200 kPa or greater at 20 degrees C, is a liquefied gas or is a cryogenic liquid, and does not meet the definition of a Division 2.1 or 2.3". Please clarify whether the material must meet all three requirements or only one in order to be considered a non-flammable, non-poisonous compressed gas? In other words, would it have to have a gauge pressure of 200 kPa at 20 degrees C and be a liquefied gas (or cryogenic liquid) that does not meet the definition of Division 2.1 or 2.3, or would it be considered a Division 2.2 if it did not meet the pressure requirement but was a liquefied gas not in Division 2.1 or 2.3? In reading the current IATA regulations, it appears that liquefied gases, even if they don't meet the pressure status, would be regulated. If the HMR's are harmonizing with that, it seems our regulations would be the same.

Also, please clarify how Refrigerant or Dispersant gas applies to liquefied gases having a vapor pressure not exceeding the 260 psia specified? We believe that two of our refrigerant and blowing agents which are not listed in 172.101, 173.304, 173.314 and 173.315, would be better described as a Refrigerant gas, but we are confused by the reference in 173.115(j) to "any other compressed gas". Must these gases be "compressed" in order to be described as "refrigerant gas"?

For ease of reference, the two materials that are of concern right now have the following physical properties:

Material	Flammable?	Boiling Point	Vapor Pressure	Liquefied Gas?
245fa	No	15C (59F)	18.5 psia @ 20C	Yes-Low pressure
1233zd	No	19C (66.2F)	15-16 psia@ 20C	Yes-Low pressure

If you have any questions regarding this request please do not hesitate to contact me at the number below. Thank you for your assistance.

Sincerely,

Carrie Wayne

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cc: Claire Matlon