



U.S. Department  
of Transportation

**Research and  
Special Programs  
Administration**

400 Seventh Street, S.W.  
Washington, D.C. 20590

JUN - 7 1999

Ms. Alberta Millar  
Willett Labeling Company  
6314-A Airport Freeway  
Fort Worth, TX 76117-5332

Ref. No. 99-0078

Dear Ms. Millar:

This is in response to your fax dated March 25, 1999, and subsequent telephone conversation with Eric Nelson of our staff regarding the classification of pressurized canisters of MEK based ink under the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180). Specifically, you ask for advice in classifying these canisters.

Under § 173.22 of the HMR, it is the shipper's responsibility to properly classify a hazardous material. We are sorry that we can not further assist you in the classification of your product as the information provided to us in your fax and subsequent telephone conversation is inadequate. Generally, manufacturers have the knowledge to properly classify the materials and products they produce, although it may be necessary to enlist an outside laboratory to assist in the classification process, as testing may have to be conducted to see how a product compares to the criteria for various hazard classes.

I hope this satisfies your request.

Sincerely,

Thomas G. Allan  
Acting Director, Office of Hazardous  
Materials Standards



990078

173.22



THE WORLD'S CODING  
AND LABELING COMPANY

6314-A Airport Frwy.  
Fort Worth, TX 76117-5322  
tel: (817) 222-2233  
fax: (817) 222-0466

FACSIMILE MESSAGE

No. Pages 1

---

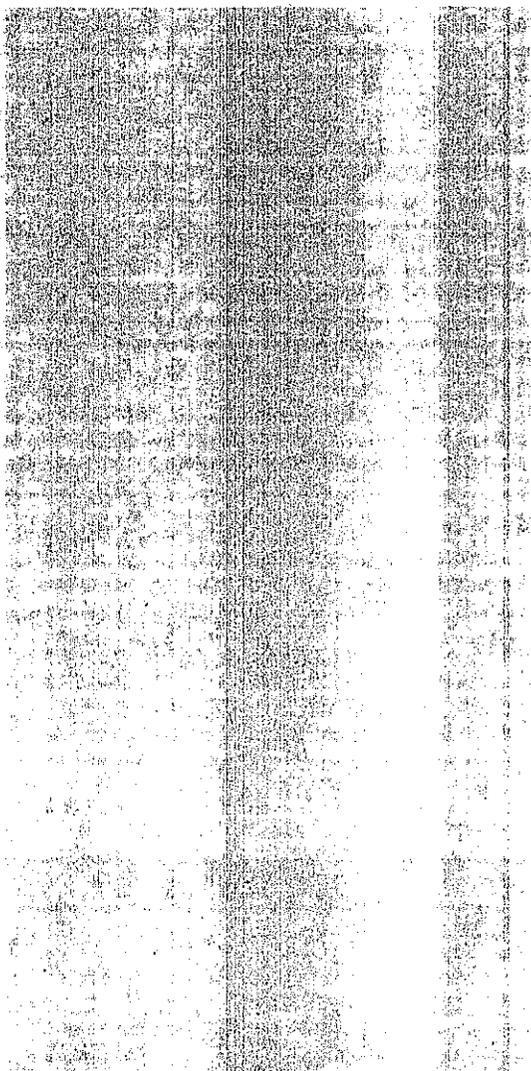
Date: March 25, 1999  
To: Hazardous Materials Regulations Information  
From: Alberta Millar - Consumables Product Manager  
Subject: Classification enquiry

---

Please find to follow my question.  
I look forward to hearing from you soon.

Kind regards

Alberta Millar



For our new Willett printer we supply pressurised canisters that contain a small bag of MEK based ink. We are having problems with the classification of this product for transport by air. At the moment on the canisters we have the UN number for a flammable liquid and on the box carrying the canisters the UN number is for a flammable gas. The canisters are not aerosols as there is no nozzle on the top of the canister to atomize the ink and the pressurised air (Propellant) is not expelled with the product. The canister fits into a printer and the ink is not released into the atmosphere until the bag is collapsed by the compressed media around it, in turn feeding the ink to a system where it is printed via separate means. (in the form of large droplets which are formed by solenoid valves inside the printhead.)

During can assembly, the bag inside the can is empty and the can itself is pressurised with air. During the filling, 297ml of MEK based ink is put into the bag, at this time the increase in the internal volume inside the can pressurises further the air inside the can. The initial pressure of the air is 54psi and the final pressure is 140psi. Therefore, at this stage the canister cannot be classed as containing a flammable gas.

The bag the ink is in is generally impermeable, however, we suspect that MEK vapours can actually diffuse through the bag, potentially allowing a mixture of MEK and air making a flammable mixture of gases. However, at some point, the level of MEK vapours inside the can will reach saturation point and will therefore become non-flammable without the addition of air. If the can is punctured, the MEK vapours would be released into the atmosphere, again at some point reaching the LEL associated with MEK, creating a flammable mixture of gases.

Please could advise us on the correct classification for these canisters.

It can be noted that similar types of product are in the domestic market, such as shaving foams marketed by Gillette as "shaving gel", these products however use a flammable compressed charge to collapse the internal bag such as a Butane derivative.

what temp is 140 psi indicated? (130°F) <sup>173.302</sup> DOT 2P hot water bath test

ASTM E 681-85

107, 105  
at 130 psi

