



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

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

JUN 18 2010

Mr. Jim Powell
Transportation Development Group
2023 E. Sims Way Ste 372
Port Townsend, WA 98368

Ref. No.: 10-0072

Dear Mr. Powell:

This responds to your letter regarding the requirements under the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) as they apply to your product – a “disposable fuel device” containing ethanol in solid form and packaged with safety matches for use in standard charcoal barbeque grills. You ask the following questions:

- Q1. You state, as a result of your telephone conversations with the “DOT”, it was determined that a solid form of ethanol would best be described as “UN3175, Solids, containing flammable liquid, n.o.s., 4.1, PG II.” You ask, would the proper shipping name “Flammable solid, n.o.s.” be more appropriate to describe your product?
- A1. You did not provide sufficient information (e.g. hazard characteristics, material safety data sheet (MSDS), etc.) for this Office to make a determination concerning the appropriate classification of and shipping description for your “disposable fuel device”, containing ethanol in solid form. It is the shipper’s responsibility to properly classify a hazardous material. This Office does not perform that function.
- Q2. Can the “disposable fuel device” be reclassified and renamed as a Consumer commodity, ORM-D?
- A2. See “A1” above.
- Q3. Can the small quantity packaging exception in §173.4 be utilized when shipping the “matches”?
- A3. The answer is yes, provided the maximum quantity of material per inner receptacle or article is limited to 30 g or 1 oz.

According to your letter, the book of matches that is included with your “disposable fuel device” would be placed inside a cardboard slipcover that would act as an “inside packaging.” Safety matches or wax “Vesta” matches must be tightly packed in securely closed inner packagings to prevent accidental ignition under conditions normally incident to transportation and further packed in outer fiberboard, wooden, or other equivalent-type packaging. Matches packaged in this way that are contained in outer packagings not exceeding 23 kg (50 pounds) gross weight are not subject to any other requirement of the HMR, except marking. Further, the matches may be packed in the same outer packaging with materials not subject to the HMR. Therefore, you **may not** attach the book of safety matches (using non-flammable adhesive) to the side of the “disposable fuel device” inner packaging, and then place the device and matches in the same outer packaging. See §173.186 of the HMR.

I hope this information is helpful. If we can be of further assistance, please contact us.

Sincerely,

A handwritten signature in black ink, appearing to read "Charles E. Betts". The signature is written in a cursive style with a large, stylized initial "C".

Charles E. Betts
Chief, Standards Development
Office of Hazardous Materials Standards

Engrum
172.101 & §173.4 & ORM-D
Small Quantity
10-0072



Transportation Development group

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INTERPRETATION REQUEST

US DOT PHMSA
Office of HM Standards
Attn PHH-10 East Building
1200 New Jersey Ave, SE
Washington, DC 20590
infocntr@dot.gov

This is a request for an interpretation on behalf of our client, Sologear LLC. If someone would like to call me to discuss this they can reach me at 1-800-949-4834, or email jim@dgtraining.com

Sologear LLC makes packages of disposable “fuel” for standard charcoal barbeque grills. These portable devices which would sit inside a conventional back-yard charcoal grill, take the place of the charcoal. Instead of opening a bag of charcoal briquettes and dropping them in the grill you would take one of these units, looking somewhat like a Jiffy-Pop container and place it in the bottom of the grill, and light it, just as you would conventional charcoal.

Except that this fuel consists of a solidified form of ethanol which is clean burning and works the same way a normal charcoal grill would operate.

Here are our questions:

1. **Classification.** After several phone conversations with the DOT, it was determined that a solidified form of ethanol would best be described as “UN3175, Solids, containing flammable liquid, n.o.s., Div 4.1, PG II.”

However there is no form of absorbed or free-flowing liquid involved, it is simply ethanol in a solid form.

Would the DOT feel that a Flammable Solid, n.o.s. description would be more appropriate for something as described above?



2. **Mixed Packaging.** My client intends to ship this product as a Consumer Commodity, ORM-D as we believe it meets the definition in 171.8 and the limits of 173.151.

My clients wants to include a book of safety matches in with the unit and we are intending to offer a “mixed packaging”

So inside this one combination package we would have one inner packaging of the ethanol briquettes (actually they have a consistency more like bars of soap) and one book of safety matches.

We would like to ship the matches under the 49 CFR 173.4 Small Quantity Exception, as the book of matches only weighs a few grams so we are within the limits of 173.4(a)(1)(ii) which allows for inner receptacles (or in our case each “article”) of up to 30g each.

The matches are encased in the book which is in turn glued (using non-flammable adhesive) to the side of the inner packaging for the solidified ethanol.



And the book of matches, attached to the container of solid ethanol fuel is then slid inside a cardboard slipcover which would act as an “inside packaging” as per 49 CFR 173.4(a)(4).

This completed “inside packaging” is then loaded with other similar inside packagings into a strong outer packaging.

It is our intention that the “strong outer packaging” will meet both the requirements of the small quantity exception in 49 CFR 173.4(a)(4) and the Consumer Commodity/ORM-D requirement for a strong outer packaging.

The completed packaging would be marked *both* as an ORM-D and as an excepted packaging/small quantity exception under 173.4 for domestic ground shipping.



AND

This package conforms to 49 CFR 173.4 for domestic highway or rail transport only.

We believe we have met the requirements for each as shown below:

DOT Small Quantity Exception 173.4 (Matches)	DOT Consumer Commodity Exception 173.151 (Solid Ethanol Barbeque Fuel)
Each “article” is less than 30 g	Each inner packaging is 1 kg or less
Each article is covered by a cardboard slipcover which will function as an “inside packaging”	-
Each inside packaging is then loaded in a strong outer packaging not over 29 kg G total weight.	Each inner packaging is loaded in a strong outer packaging not over 29 kg G total weight and thus is within both the 29kg limit and the 30 kg limit for limited quantities.

DOT Small Quantity Exception 173.4 (Matches)	DOT Consumer Commodity Exception 173.151 (Solid Ethanol Barbeque Fuel)
Each completed package is prototype tested according to 173.4(a)(6)	-
Each outer packaging is marked according to 173.4(a)(1)	Each outer packaging is marked with the proper shipping name "Consumer Commodity" and ORM-D.

So, do you see anything wrong with the logic here? It seems acceptable under the HMR to have a combination packaging of mixed contents, both the same hazard class (4.1) and dual mark that one package (not an overpack but a combination package) as both 173.4 Small Quantities for the matches and Consumer Commodity, ORM-D for the "briquettes". Again, this would be for ground shipping only.

(3) Last question – if we followed the requirements for domestic DOT air shipping (not ICAO) under 173.4a and the requirements for shipping ORM-D by Air, is there any reason we could not to that as well? Obviously we'd take into account the normal conditions of transport by air (changes in pressure, temperature, vibration, etc) and properly mark it as ORM-D Air and offer shippers certification for any air move.

Thank you very much for your help.



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