



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

1200 New Jersey Ave, S.E.
Washington, D.C. 20590

AUG 14 2009

Mr. Craig M. Sanborn
President, MDM Ltd. & Black Mag Industries
RR 1 Box 405, 67 Private West 2
Maidstone, Vermont 05905

Ref. No. 09-0015

Dear Mr. Sanborn:

This responds to your January 9, 2009 letter regarding the applicability of the Hazardous Materials Regulations (HMR; 49 CFR Parts 100-185) to the packaging and transportation of smokeless powder for small arms. Your letter indicates that this material is manufactured by General Dynamics and approved as:

-- "Propellant, solid, 1.3C, UN0499" under approval number EX2003030244, and then reclassified as:

-- "Smokeless powder for small arms (100 pounds or less), 4.1, NA3178," under approval numbers EX2003030241 (Black Mag Solid Propellant in one pound plastic containers), and EX2003030241A (Black Mag w/Additive [P/N 90030-714] in one pound plastic containers), subject to the requirements and conditions set forth in the approvals and 49 CFR § 173.171.

Your questions are paraphrased and answered below.

Q1: May these products, when reclassified as "Smokeless powder for small arms, 4.1, NA3178, I," be shipped under the small quantity exceptions provided in § 173.4 of the HMR?

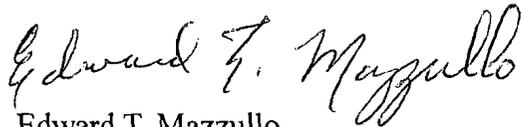
A1: No. The small quantity exceptions in § 173.4 do not apply to explosive materials. When an explosive material (propellant, solid, 1.3C, UN0499) is reclassified as "Smokeless powder for small arms (100 pounds or less), 4.1, NA3178, PG I" under the terms of an approval, the requirements and conditions of the approval and § 173.171 control. Accordingly, when reclassified as a Division 4.1 material, this material may be transported by motor vehicle, rail car, vessel, or cargo-only aircraft, in accordance with the provisions provided therein. The approval only allows transport of a Division 1.3C explosive in specified small quantities as a Division 4.1 flammable solid. No other packaging, hazard communication, or classification exceptions are provided and the material is forbidden for transport on passenger aircraft.

- Q2: May “Smokeless powder for small arms, 4.1, NA3178, I” be shipped utilizing the exceptions provided Class 4 hazardous materials in § 173.151?
- A2: No. As stated in A1 above, when examined and approved for classification as a Division 1.3C explosive and reclassified as “Smokeless powder for small arms (100 pounds or less), 4.1, NA3178, PG I,” the packaging specified in the approval must be used to transport the smokeless powder. No other packaging, hazard communication, or classification exceptions are provided. The “None” in the entry “Smokeless powder for small arms, 4.1, NA3178, I,” in Column 8A of the HMT clearly indicates that the exceptions in § 173.151 for limited quantities and consumer commodities may not be utilized.
- Q3: May “Smokeless powder for small arms, 4.1, NA3178, I” be shipped as a Consumer Commodity eligible for the exceptions authorized Division 4.1 hazardous materials in § 173.151?
- A3: No. See A2.
- Q4: May “Smokeless powder for small arms, 4.1, NA3178, I” be shipped as “Cartridges, small arms, ORM-D?”
- A4: No. “Cartridges, small arms,” as defined in § 173.59, means ammunition consisting of a cartridge case fitted with a center or rim fire primer and containing both a propelling charge and solid projectile(s). They are designed to be fired in weapons of caliber not larger than 19.1 mm. Shotgun cartridges of any caliber are included in this description. The term excludes “Cartridges, small arms, blank,” and some military small arms cartridges listed under “Cartridges for weapons, inert projectile.”
- Q5: When transporting “Smokeless powder for small arms, 4.1, NA3178, I,” what packaging should be used?
- A5: As authorized by approvals EX2003030241 and EX2003030241A, this classification is only valid when the smokeless powder for small arms (100 pounds or less) is shipped according to the requirements of § 173.171 and packaged as follows:
- Inner Packaging – Bottles, heavy-wall static-resistant plastic with plastic screw cap, each containing not more than one pound of smokeless propellant for small arms.
- Outer Packaging – Specification 4G fiberboard box, each containing not more than twenty-four (24) inner packagings in up to two layers of twelve with fiberboard dividers separating each inner packaging in a layer and fiberboard spacer between layers.
- Further, the completed packages must be of the same type that had been examined as required in § 173.56.
- Q6: May UPS set additional conditions or assess a hazmat fee for shipments of “Smokeless powder for small arms, 4.1, NA3178, I?”

A6: Yes. As a common carrier, UPS may set its own conditions or requirements for transporting hazardous materials, so long as those conditions or requirements do not prevent compliance with the HMR, and it may assess a fee for the transportation of hazardous materials. These fees are neither mandated nor regulated by PHMSA.

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

Sincerely,

A handwritten signature in black ink that reads "Edward T. Mazzullo". The signature is written in a cursive style with a large, stylized initial "E".

Edward T. Mazzullo
Director, Office of Hazardous
Materials Standards

MDM

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Nickels
\$173.4
\$173.151
\$173.63
Exceptions
09-0015

January 9, 2009

E24-314
Office of Hazardous Material
Standards
PHH-10
Attn: Mr. Edward Mazzullo, Director

Dear Mr. Mazzullo,

Let me introduce myself, Craig Sanborn, president of Millennium Designed Muzzleloaders, dba MDM. We have been in the muzzleloading business since 1997. In May of 2008 we invested in MagKor Corporation and established a new company called BlackMag Industries. The intent of this newly formed company is to manufacture the patent protected material referred to as BlackMag powder. Part of the transaction included all the powder in inventory which was manufactured by General Dynamics for MagKor to the referenced classifications listed below. The business plan was to distribute the powder as currently packaged by General Dynamics, introduce the patent pending Consumable Muzzleloading Cartridge and ship sample quantities as allowed by 49CFR.

I have been prompted to write this "Letter of Interpretation" by both Robert Lynch, Sr. and Harprett Singh as a follow-up to Robert's sight visit to our operations located in Maidstone, Vermont. I believe that the visit was driven by a complaint that we are shipping product via UPS ground, classifying it as an ORM-D and not as a Hazmat product.

We believe our shipping method is clearly defined by your regulations and allowable under 49CFR, 173.4 Small Quantity Exceptions, 173.151 Exceptions for Class 4 and 173.63 Packaging exceptions to include 172.101 Hazardous Materials Table. This ORM-D method of classification was presented to UPS, our only means for distributing this product, and reviewed by our district account representative, Justin Kipp. He confirmed and authorized this shipping method and established competitive rates and assisted in the process of allowable shipping via UPS, both ground and air. To this date we have only shipped via ground.

We are requesting your written approval, and classification if required to continue the ORM-D shipping of this product in two forms. The Lightning Loads as defined and also the Consumable Muzzleloading Cartridge as defined. Please see attachment for packaging materials and inserts.

Let me start by identifying the classification of the powder as tested by Dr. W.S. Chang. His original approval, number EX2003030244, classified the powder as 1.3C. He further tested and became classified as a 4.1, approval number EX2003030241 and EX2003030241A. We are using the 4.1 classification in support of this packaging method. We are also using the powder supplied to MagKor by General Dynamics as shipped as a 4.1 classified material and distributed accordingly.

173.4 Small quantity exceptions:

Section (a) identifies exception of 4.1 classification and states that it is “not subject to any other requirements of this subchapter when”-

We are packaging a 4.1 material which is identified here as acceptable.

(1) “The maximum quantity of material per inner receptacle or article is limited to”-

(ii) “Thirty (30) g (1 ounce) for authorized solid material:”

We are packaging 5 tubes in a package with a qualified standard charge weighing an average of .161 ounces and a qualified magnum charge weighing an average of .213 ounces.

Both of these load charges are well below your authorized limit.

(2)(ii) “is constructed of plastic having a minimum thickness of no less than 0.2 mm (0.008 inch), or earthenware, glass, or metal:”

We are packaging the sample charges in clear waterproof sealed tubes which measure .021 inches thick, more than 2 ½ times the minimum requirement.

(3) “Each inner receptacle with a removable closure has its closure held securely in place with wire, tape, or other positive means;”

We package our inner receptacle in a welded plastic tube with a compression fit cap that fits over the outside of tube and is pressed down over the tube by more than ½ inch.

(4) “each inner receptacle is securely packaged in an inside packaging with cushioning and absorbent material that:”

(i) “Will not react chemically with the material”

We package our inner receptacle tubes in a plastic tray securely holding each tube in its own cavity with sufficient room to absorb impacts.

(5) The inside packaging is securely packaged in a strong outside packaging;

We then package each tray of 5 tubes in a heavy duty outer clamshell with compression snap closure design.

(6) The completed package, as demonstrated by prototype testing, is capable of sustaining-

(i) Each of the following free drops made from a height of 1.8 m (5.9 feet) directly onto a solid unyielding surface without breakage or leakage from any inner receptacle and without a substantial reduction in the effectiveness of the package:

(A) One drop flat on bottom:

(B) One drop flat on top:

(C) One drop flat on the long side:

(D) One drop flat on the short side:

And

(E) One drop on a corner at the junction of three intersecting edges: and

(ii) A compressive load as specified in 178.606© Of this subchapter.

We tested a single package of 5 tube receptacles packaged in the inner trays and enclosed it a heavy duty clamshell as defined above. This packaging method withstood this defined testing procedure without breakage or leakage from any inner receptacle and without a substantial reduction in the effectiveness of the package.

We then continued to test and repeated all required procedures for all the different packaging methods of master packages that we use for shipment of the 5-packs which was tested above:

(1) We tested 2 packs; packaged in a flat cardboard envelope and shipped in a Tyvek envelope.

(2) We tested 4 packs: packaged in a fiberboard box.

(3) We tested 8 packs; packaged in a fiberboard box.

(4) We tested 24 packs; packaged in a fiberboard box.

All of these packaging methods withstood the above defined testing procedures without breakage or leakage from any inner receptacle and without a substantial reduction in the effectiveness of the package.

(7) Placement of the material in the package or packaging different materials in the package does not result in a violation of 173.21:

This further supports the same packaging for our consumable muzzleloading cartridge and the same packaging for compressed charges.

(8) The gross mass of the completed package does not exceed 29 kg (64 pounds):

All our packaging and shipments to date do not exceed 6 pounds gross weight which is only 9% of the allowable weight as per 49 CFR specifications.

(9) The package is not opened or otherwise altered until it is no longer in commerce; and

(10) The shipper certifies conformance with this section by marking the outside of the package with the statement "This package conforms to 49CFR 173.4."

The packaging process in current use prepares all shipments with proper sealant tapes and a clear shipping envelope encloses the shipping document which is adhesively affixed to package. Our marking of the outside of package in order to be in compliance with 49 CFR 173.4 is using the standard printed label from Hazmat Source labels, CONSUMER COMMODITY ORM-D. It would be our further intent to use their standard printed label to identify CARTRIDGES, SMALL ARMS ORM-D for our Consumable Muzzleloading Cartridge.

Mr. Mazzullo, I am very concerned about this entire site visit, the time frame in which it was conducted and mainly the sole reason why a competitor of ours can trigger this type of investigation. At the onsite visit of Mr. Lynch he generated a phone call made to Mr. Singh. During the middle of their phone discussion the phone was passed to me and for what reason I am still not sure. I started to explain my shipping procedure to Mr. Singh and I was promptly cut short with his response: "**Don't you think that your shipping methods would be used by HODGDEN POWDER COMPANY if it was acceptable?**" I was speechless, upset and appalled to think that a government agency would have one line of defense alluding to the fact that our major competitor was controlling DOT and we could not be a little more creative in our marketing and distribution because it had not been contemplated by the folks at Hodgden. In further discussions Mr. Lynch seemed to accept our method of shipment as ammunition but suggested that ours would be considered "HOME MADE AMMUNITION" and this is what your agency is trying to regulate and control.

My belief has always been that government agencies provide assistance and support for commerce in a productive manner; however, it now seems apparent that your agency has other motives based on some level of duplicity - one such aim appears to be shutting our operations down.

Furthermore, your surprise visit was conducted right during the height of our busiest time of year, yet we have been advertising the products under review for two years on our web sites, brochures, through national media publications and on a number of television outdoor programs.

I am still uncertain whether we were expected to cease all shipping (or not) because we never received any written communication, but the bottom line is that not shipping our products has resulted in substantial revenue loss which, as I am sure you understand, has been a tremendous financial strain during this time of great recession.

I would appreciate being provided with a complete review of product that we believe are allowed shippable without Hazmat cost. Also, I would welcome discussion regarding the manner in which we have been treated, as well as the factual reason(s) for the investigation.

Please contact me directly if I can be of any additional assistance, answer any questions or supply you with any of our product and / or packaging materials.

Thank you for your time and I would appreciate your promptness with some direction as we are making these products available nationally and internationally at upcoming trade shows. We have gone to great lengths with very time-consuming research and investigation in order to meet your published shipping requirements and beyond to provide safe packaging and transportation and would like to continue with the full support of your agency.

Sincerely,

Craig M. Sanborn
President, MDM Ltd. and BlackMag Industries

cc: Mr. Robert Lynch, Sr. Investigator
General Council / MDM Ltd.

Encl: 2

Lightning Load sheet

ThunderCharge sheet

Both of these enclosures can be viewed on our web site @
www.MDM-muzzleloading.com