

# HAZARDOUS MATERIALS

## REFERENCES

- 49CFR, Part 100-185 Hazardous Materials Section
- 29 CFR, Part 1910 OSHA Requirements
- NWCG National Fire Equipment System Catalog, NFES 0362
- Pocket Guide to Hazardous Materials; Compliance Information for Drivers
- Federal Motor Carrier Safety Regulations
- Emergency Response Guidebook, DOT, North American, NFES 2150
- Clues and Decide Wallet Card, NFES 2148
- Do's and Don'ts of Hazardous Materials Wallet Card, NFES 2149
- Hazardous Materials Classification Wallet Card
- Northern Rockies Fire Cache Hazardous Material Haul-back Policy
- Interagency Aviation Transport of Hazardous Materials Handbook, NFES 1068
- Other agency specific manuals and handbooks

### SPECIFIC EXCERPTS

*Per 49 CFR 171.8 (05/04), **Hazardous Material** means a substance or material, that the Secretary of Transportation has determined is capable of posing an unreasonable risk to health, safety, and property when transported in commerce, and has been designated as hazardous under section 5103 of Federal hazardous materials transportation law (49 U.S.C. 5103). The term includes hazardous substances, hazardous wastes, marine pollutants, and elevated temperature materials, materials designated as hazardous in Hazardous Materials Table (see 49 CFR 172.101), and materials that meet the defining criteria for hazardous classes and divisions in part 173 of subchapter C of this chapter.*

*Per 49 CFR 172.200, **Shipping Papers** (03/05) (a) Description of hazardous materials required. Except as otherwise provided in this subpart, each person who offers a hazardous material for transportation shall describe the hazardous material on the shipping paper in the manner required by this subpart.*

*Per 49 CFR 172.300, **Marking** (03/05) (a) Each person who offers a hazardous material for transportation shall mark each package, freight container, and transport vehicle containing the hazardous material in the manner required by this subpart.*

*Per 49 CFR 172.400, **Labeling** (03/05) Each person who offers for transportation or transports a hazardous material in any package or container, shall label the package or container with labels specified for the materials in the 172.101 table in 49 CFR.*

*Per 49 CFR 172.700, **Training** (05/03) (b) Scope. Training as used in this subpart means a systematic program that ensures a HAZMAT employee has familiarity with the general provisions of this subchapter, is able to recognize and identify hazardous materials, has knowledge of emergency response information, self-protection measures and accident prevention methods.*

*Per 29 CFR 1910.1200 (12/00), **Hazard Communication** (a) Purpose. (1) The purpose of this section is to ensure that hazards of all chemicals produced or imported are evaluated, and that information concerning their hazards is transmitted to employers and employees. This transmittal of information is to be accomplished by means of comprehensive hazard communication programs, which are to include container labeling and other forms of warning, material safety data sheets and employee training.*

## **BFK and other caches are not hazardous materials disposal facilities.**

It is the responsibility of the incident to properly dispose of unused and waste fuel as well as any other hazardous material, as prescribed by applicable laws, rules, and regulations. Hazardous material shipments are regulated by Department of Transportation. OSHA regulates the storage, usage, and employer requirements. Special precautions and documentation requirements must be adhered to when shipping and handling hazardous materials. Anyone shipping or handling hazardous material that is not familiar with the requirements should contact the agency hazardous materials specialist for instructions. Noncompliance may result in civil penalties up to \$27,500 being assessed to the individual shipping the hazardous material.

### **IT IS AGAINST THE LAW NOT TO NOTIFY THE CARRIER ABOUT HAZARDOUS MATERIAL BEING SHIPPED.**

Any such material received by the cache will be disposed in accordance to applicable laws, rules and regulations. The cost of which will be charged to the responsible incident.

When purchasing items request the material safety data sheet (MSDS) for any hazardous materials. It is best to mark the item with the date of purchase, especially for paints. If you do not know if the item is classified as a hazardous material, ask the vendor or check with your agency hazardous materials specialist.

When shipping hazardous materials, make sure to complete all required paperwork. This includes a description of the item including proper shipping name, class/division, identification number, packing group, and weight of items.

The training requirements in 49 CFR 172 are applicable to Federal employees because the term employer is defined in the regulations to include United States Departments and Agencies when shipping in commerce.

Hazardous materials are very serious and should be treated as such, with the responsibility of any mishaps resting on the individual rather than that of the government. Important preventions to remember are: stay alert, know what you are handling, and ask for help from the recognized experts.

**Remember, any fueled equipment and fuel containers (except propane) must be empty and mechanically purged BEFORE shipping. DO NOT use liquid purge. See steps for mechanically purging on page 36.**

It is best to transport empty fuel containers in an open-air, non-enclosed vehicle. If this cannot be done, then here are the **Common Transport Rules to Remember:**

1. Only packaging described in CFR 49 is to be used.
2. Secure supplies with packaging to prevent damage.
3. Packaging is secured in transport vehicle to prevent movement.
4. No sharp projections within the cargo hold area of the transport vehicle.
5. Ensure no risk exists for puncture, damage, and/or ignition.
6. Make sure multiple classes of materials may or may not be shipped together.
7. Load hazardous materials in the rear of transport vehicle.
8. Ensure the total weight/volume of all hazardous materials in transport vehicle does not exceed allowable limits for any one type.

## **SAFETY IS EVERYONE'S RESPONSIBILITY**

### **Safety First, Every Job, Every Time**

There are many dangers in modern incident camps, in addition to the expected first aid accidents. Below is a list of a few of these dangers more serious than first aid accidents:

- Hazardous Materials
- Bloodborne Pathogens from contact with Bio-hazards such as body fluids
- Hantavirus disease caused by exposure to rodent excreta

To help limit exposure, use protective attire, such as latex gloves, leather gloves, dust masks, long sleeve shirts, and helmets when handling used equipment. This is especially important when handling potentially contaminated items.

Hazardous material management is a team effort required by law. Key points:

- Employer Knowledge of Chemical Hazards
- Training
- Chemical Inventory
- Labeling
- MSDS (Always request and read them)
- Chemical information availability (read containers, etc.)
- Hazardous communication implementation plan (right-to-know)
- Emergency Planning

#### **Four Methods of Employee Protection:**

- Safe work practices
- Engineering control (remove, minimize hazards)
- Administrative control (conditions of employment, training, etc)
- Personal protective equipment (PPE)

#### **5 R's of Safety**

#### **Routes of Exposure**

- |             |            |
|-------------|------------|
| ➤ Recognize | Inhalation |
| ➤ Retreat   | Ingestion  |
| ➤ Report    | Injection  |
| ➤ Record    | Absorption |
| ➤ Restrict  |            |

***NUMBER ONE CONTRIBUTOR TO ACCIDENTS IS FAILURE TO FOLLOW  
ESTABLISHED POLICIES AND PROCEDURES. REGULATIONS ARE IN PLACE TO PREVENT  
ACCIDENTS AND SAVE LIVES.***

Contact your safety officer at the incident or local agency for more information.

BLM	Karilynn Volk	Montana State Office	Billings, MT	406-896-5190
BIA	Rick Stefanic	Rocky Mtn. Regional Office	Billings, MT	406-247-7911
USFS	Bob Kirkpatrick	Regional Office	Missoula, MT	406-329-3420
USFS	John Kastner	Custer National Forest	Billings, MT	406-657-6205, ext. 211
FWS	Jim Behrmann	Regional Office	Denver, CO	303-236-8116, ext. 279
DES (Montana State)	Bill Miller		Helena, MT	406-444-6743
DNRC (Montana State)	Jan Wheeler		Billings, MT	406-247-4400

# HAZMAT ITEMS

Hazardous materials that may be encountered are: aerial ignition devices (ping-pong balls), fuels, wet batteries, battery acid, aerosol paint, paint thinners, cleaning products, small engines that may contain fuel after use, propane, fuses, and used fuel hoses. Below are examples of the most common hazardous material that Incidents and BFK ship:

Oxygen, compressed: NFES 1727, 1728, & 1835 (Oxygen Therapy Kits) 3 Cylinders in 1835 Kit

Proper shipping name: **OXYGEN, Compressed, 2.2 (5.1), UN1072**

Marking & Label: NON-FLAMMABLE GAS AND OXIDIZER LABEL, OR OXYGEN LABEL ONLY.

Requires approved bottle with relief valve and packed in a strong shipping box

Suggested quantity limit per load: 12 Cylinders (CY) @ 8 Lbs. Each, (96 Lbs.)

Extinguisher, Fire: 20 A:120 BC: NFES 0307

Proper shipping name: **FIRE EXTINGUISHER, 2.2 UN1044**

Marking & Label: UP ARROWS AND NONFLAMMABLE GAS LABEL.

173.309 contain exceptions from labeling & placarding when shipping by ground and packed in a strong shipping box. (Cardboard container is suitable).

Suggested quantity limit per load: 21 Cylinders (CY), 20 LB tank, @ 38 Lbs. Each, (798 Lbs.)

Fusee, signal device, hand: NFES 0105.

Proper shipping name: **FUSEE, 4.1, NA1325, PG II**

Marking & Label: FLAMMABLE SOLID LABEL, KEEP FIRE AWAY,

173.184 – must be packed in 4G UN POP fiberboard box

Commercial air restricted; additional requirements apply

Suggested quantity limit per load: 21 BX @ 38 Lbs. Each, (798 Lbs.)

Tank, Propane: NFES 0491.

Proper shipping name: **PETROLEUM GASES, LIQUEFIED, 2.1 UN1075**

Marking & Label: FLAMMABLE GAS LABEL

Commercial air restricted; additional requirements

Quantity limit per load: 21 Cylinders (CY), 20 Lb. Tanks, @ 38 Lbs. Each, (798 Lbs.)

CAN, Gasoline, 5 Gal, DOT style. NFES 0606 is HAZMAT if **NOT** in a carton or **NOT** drained and purged.

The CAN is **NOT HAZMAT** if it is drained and mechanically purged and in a carton.

Proper Shipping Name if it is not drained and purged: **GASOLINE, 3, UN1203, PG II**

Label required on can: FLAMMABLE LIQUID

Marking on can: GASOLINE, UN1203

Suggested quantity limit per load: 50 EA @ 5 Lbs. EA, gas must be < 1 oz. in each can, (250 Lbs.)

AERIAL IGNITION DEVICE, Ping-pong ball: NFES 3411, (NOT Regulated by 49 CFR if labels are removed)

**IF LABELS** - Proper Shipping Name: **POTASSIUM PERMANGANATE, 5.1, UN1490, PG II**

Marking and Labels: 173.4 for small Quantity Exception. NO labels required. The shipper must certify conformance with this section by marking the outside of each package with the statement: "This package conforms to 49 CFR 173.4". If labels are on each box and not removed, then certify as HAZMAT.

Quantity Limits: NO limit, if 173.4 applies. If shipped as HAZMAT, limit is 25 BX @ 8 Lbs. (200 Lbs.)

The above limits were set by Northern Rockies' Haul-Back Policy at 80% of maximum allowable quantity to provide for a safe margin of error so the Placard exception in 49 CFR 172.504 ( c ) applies. By limiting the total HAZMAT gross weight to less than 1,001 lbs. (total aggregate gross weight), the exception applies and a CDL driver with HAZMAT endorsement or Placards are **not** required for transporting the lower limits of HAZMAT. Refer to HAZMAT guide in the National NFES catalog for additional information and Waybill example.

## EXAMPLE OF WAYBILL WITH HAZMAT ITEMS

<b>Date:</b> Sept. 1, 2003 <b>Time:</b> 1600		<b>INTERAGENCY INCIDENT WAYBILL</b>		<b>Page</b> <u>1</u> <b>of</b> <u>1</u>	
<b>Ship To:</b> Billings Fire Cache 551 Northview Dr. Billings, MT 59105			<b>Shipped From:</b> ROUGH DRAW FIRE LIVINGSTON, MT		
<b>Incident name:</b> ROUGH DRAW FIRE			<b>Driver's signature:</b>		
<b>Incident number:</b> MT-GNF-024			<b>Carrier/Driver name:</b> LONNIE HINZ		
<b>Accounting/Mgmt Code:</b> MT-925-2821-HU-Q291			<b>Vehicle number:</b> I-123456		<b>Trlr number:</b> N/A
<b>Contact name:</b> JAMES CHAPMAN			<b>Pieces:</b> 11		<b>Weight:</b> 718 LBS.
<b>Contact phone:</b> 406-896-2872			<b>ETD:</b> 09/01/03 1730		<b>ETA:</b> 09/01/03 2000

### HAZARDOUS MATERIALS DECLARATION

Proper Shipping Name	Hazard Class	Identification Number	Packing Group	Total Quantity Units / Gross weight
<b>FIRE EXTINGUISHERS</b>	<b>2.2</b>	<b>UN1044</b>		<b>1 CY / 38 LBS.</b>
<b>FUSEE</b>	<b>4.1</b>	<b>NA1325</b>	<b>II</b>	<b>1 BX / 38 LBS.</b>
<b>GASOLINE</b>	<b>3</b>	<b>UN1203</b>	<b>II</b>	<b>1 EA / 5 LBS.</b>
<b>OXYGEN, COMPRESSED</b>	<b>2.2(5.1)</b>	<b>UN1072</b>		<b>3 CY / 25 LBS.</b>
<b>PETROLEUM GASES, LIQUEFIED</b>	<b>2.1</b>	<b>UN1075</b>		<b>1 CY / 38 LBS.</b>
<b>POTASSIUM PERMANGANATE</b>	<b>5.1</b>	<b>UN1490</b>	<b>II</b>	<b>1 BX / 8 LBS.</b>

**This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in the proper condition for transportation according to the applicable regulations of the Department of Transportation.**

*SHIPPER: "National Interagency Support Cache"*

(HAZMAT TRAINED PERSON)

1-800-424-9300

**Signature of Shipper**

**Emergency Response Phone Number**

Item #	NFES #	Quantity	U/I	Item Description	Property Number / Remarks
1	0307	1	EA	<b>EXTINGUISHER, Fire, 20A:120-BC, 20 LB.</b>	<b>RFI, NOT USED, must be in a carton.</b>
2	0105	1	BX	<b>FUSEE, signal device, hand</b>	<b>RFI, not opened</b>
3	0606	1	EA	<b>CAN, gas, safety, 5 gal. DOT approved</b>	<b>Used, drained, Not boxed or purged.</b>
4	1835	1	KT	<b>Kit, First Aid, 500 person</b>	<b>KT = 6 boxes, (3 CY of oxygen)</b>
5	0491	1	EA	<b>TANK, Propane, Fuel, LPG, 20# cylinder</b>	<b>RFI, full tank</b>
6	3411	1	BX	<b>AERIAL Ignition device, ping-pong balls</b>	<b>RFI, with Oxidizer Label on box</b>
<b>Received by (signature)</b>			<b>Position Title</b>		<b>Date/Time</b>

NFES 1472 **WAYBILL DISTRIBUTION:** (NOTE: If copy 3 & 4 is not legible, make copies from copy 1) BFK Example Form (9/03)

**INSTRUCTIONS FOR SHIPPING INTERNAL  
COMBUSTION POWERED ENGINE EQUIPMENT & FUEL CONTAINERS**

All internal combustion engines must be operated until starved of fuel. Engine fuel lines and fuel containers, **must be completely EMPTY** of all fuel and purged properly before shipping.

No fuel or flammable liquids are to be transported to the cache in any form, except propane. This includes gasoline, gasohol, kerosene, diesel, Avgas, Coleman fuel, etc.

- All fuel containers must be emptied and purged before shipping.
- A container with punctures or ineffective seals will not to be returned to the cache.

**PREFERRED MEANS OF PURGING IS MECHANICAL:** (Liquid purge is no longer recommended)

- Drain fuel tank or container into appropriate container for Incident/customer use or disposal.
- Operate engine until starved of fuel.
- Vent tank or container until dry if possible or as long as possible to eliminate most of the fumes. When dry, recap the tank or container. Tag all items that have been drained and purged.
- **Purging fluid, NFES #0700, is not available by local purchase or from the cache system.**

When transporting an item with an internal combustion engine equipped with a battery, the battery cables must be disconnected and secured to prevent sparks. Also applies to radio battery cables.

Generator fuel lines must be turned off before moving, even when moving around fire camp. If this is not done, damage to the engine may occur. Generators should be serviced after 50 hours of running time.

Engines or fuel containers that have been used on the incident should be shipped in an open-air, non-enclosed vehicle if possible. It is okay but not recommended to transport in an enclosed van. Ensure all empty containers are shipped in a secure, upright position and all lids are tightly closed.

All hazardous materials being shipped must be correctly identified on a Waybill per 49 CFR. See Waybill Example for correct HAZMAT DECLARATION INFORMATION from an Incident, on page 35.

All internal combustion equipment and fuel containers must be drained and mechanically purge or declared on shipping paper and provided to driver. Drivers should be present when the vehicle is loaded. It is the driver's responsibility to ensure a vehicle is properly loaded.

- ❖ Absolutely no Red Bio-Hazard Disposal Bags will be accepted or returned to the cache. The Medical Unit at the incident should handle all bio-hazards.

*These instructions are to be enclosed in all kits with internal combustion powered equipment where it can easily be referred to, such as on the inside of the box lid or flap.*