DEPARTMENT OF THE ARMY TECHNICAL BULLETIN

UNIT LEVEL PROCEDURES FOR HANDLING SERVICE SUPPLIES, HAZARDOUS MATERIALS AND WASTE

HEADQUARTERS, DEPARTMENT OF THE ARMY

31 August 1992

Approved for Public Release; Distribution is Unlimited

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SECTION I. INTRODUCTION

1-1. Purpose. This bulletin explains how unit level is affected by the hazardous materials and waste program.

1-2. Scope. This bulletin contains information on handling, storing, using, transporting and disposing of every day motorpool supplies, hazardous materials and waste.

1-3. Suggested Improvements. You can help improve this bulletin. If you find any mistakes or if you know of a way to improve the procedures, please let us know. Mail your letter or DA Form 2028 to:

Commander
US Army Materiel Command
ATTN: AMCLG-MD
5001 Eisenhower Avenue
Alexandria, VA 22333-0001

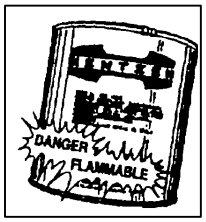
1-4. General. Things are changing in the motor pool. No longer can you treat every day supplies and materials you use to perform scheduled services in an every day way. Every item must be handled with care. Engine and transmission fluid, cleaning solvents, paint and the like can be hazardous to the environment--if you spill them or dispose of them in the wrong way.

These items can be flammable, explosive, corrosive or toxic.

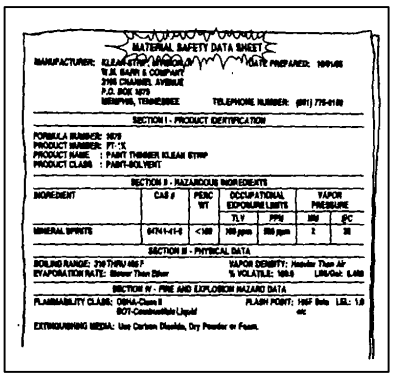
SECTION II. HOW TO IDENTIFY

2-1. Ways to Identify Hazardous Items. The first step of a good hazardous material plan is to identify which items are hazardous. There are several ways to identify these materials. Here are three ways:

a. Check the label on the container for cautions and warnings. These clue you that the product is hazardous.



b. Look for a Material Safety Data Sheet (MSDS). The manufacturer is required to send an MSDS with every item that can be hazardous material to the installation supply people. In turn, the supply people send a copy of the MSDS to the unit. Hang on to this MSDS. You'll need to make a copy of it when you turn in the material as hazardous waste.


MATERIAL SAFETY DATA SHEET

MANUFACTURER: W.M. BARR & COMPANY
P.O. BOX 1879
MEMPHIS, TENNESSEE
TELEPHONE NUMBER: (901) 775-0100

SECTION I - PRODUCT IDENTIFICATION

FORMULA NUMBER: 1879
PRODUCT NUMBER: PT-1X
PRODUCT NAME : PAINT THINNER KLEAN STRIP
PRODUCT CLASS : PAINT-SOLVENT

SECTION II - HAZARDOUS INGREDIENTS

INGREDIENT	CAS #	PERC WT	OCCUPATIONAL EXPOSURE LIMITS		VAPOR PRESSURE	
			TLV	PPM	MM	@C
MINERAL SPIRITS	8474-11-1	<100	100 ppm	500 ppm	2	38

SECTION III - PHYSICAL DATA

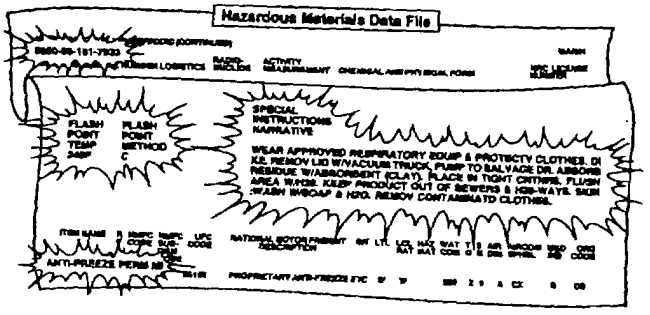
BOILING RANGE: 210 THRU 400 F
EVAPORATION RATE: Slower Than Ether
VAPOR DENSITY: Heavier Than Air
% VOLATILE: 100.0

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY CLASS: OSHA-Class II
DOT-Combustible Liquid
FLASH POINT: 105F Setа
LEL: 1.0
etc

EXTINGUISHING MEDIA: Use Carbon Dioxide, Dry Powder or Foam.

c. Order a set of microfiche called the Hazardous Materials Data File. It's distributed quarterly by the Catalog Data Activity. These microfiche show the hazardous items listed by the NIIN (the last 9 digits of the NSN) with hazardous data, description, freight data and proper shipping name.



You can get a set of these microfiche by writing:

USAMC
Catalog Data Activity
ATTN: AMXCA-DL
New Cumberland, PA 17070-5010

Or calling:

DSN 977-6741/6608
Commercial (717)770-6741/6608

2-2. Common Hazardous Items. Here are some of the common hazardous materials used at unit level:

Operation or Process	Hazardous Material
Painting	Thinners; heavy metals; polyuretanes; waste epoxy; paint strippers; paints
Supplies for vehicle maintenance	Used oil; lubricants; coolants; petroleum; alcohols; solvents; asbestos (brake linings)
Cleaning, degreasing	Solvents; detergents; ketones; freon
Electrical/electronic maintenance	Heavy metals; polychlorinated biphenyls (PCBs)
Battery shop operations	Acids; bases; cyanides; heavy metals
Industrial waste treatment	Sludges; spent carbon ion exchangers; filters
Washracks and motor pools	Used oil; solvents; heavy metal; contaminated sludges
Disaster/NBC preparedness	Bleach (STB); decontaminating gases (ethylene oxide) and liquids (DS-2, DANC)

SECTION III. SHIPPING HAZARDOUS ITEMS

3-1. Shipping Rules Changed. The big news for shippers of hazardous materials (including the Army) was the adoption of tougher packaging guidelines.

Effective 1 Jan 91, performance oriented packaging recommendations adopted by the United Nations (UN) became International law.

The UN requirements involve changing from detailed construction specifications to packaging certified and marked as having passed specified and uniform performance tests.

While these requirements are aimed primarily at packaging manufacturers, shippers and transporters of hazardous material must obey them also. Which means, you need help any time you prepare to ship or transport anything that is or can be considered hazardous material.

3-2. Where To Get Help.

a. Locally from your environmental control office, your installation safety office, your Directorate of Logistics (DOL) or others. If you can't find a reference in your local phone book for environmental concerns, contact your Logistics Assistance Office.

b. The Army Materiel Command Packaging, Storage and Containerization Center (PSCC) in Tobyhanna, PA, is the Army policymaker on packaging.

Questions that cannot be answered locally may be addressed to PSCC by calling DSN 7957070/7147. You may also write to them at:

Director, AMC Packaging,
Storage and Containerization Center
ATTN: SDSTO-TT
Tobyhanna, PA 18466-5097

c. Or the US Army Safety Center, DSN 558-2450. The Safety Center address is:

Commander
US Army Safety Center
ATTN: CSSC-SPI
Ft Rucker, AL 36362-5363

3-3. Know Before You Go. Remember this: As long as you're on a military installation, Department of Defense and UN regulations apply. Once you leave the installation, local and state rules also apply. These rules may be even more restrictive than the new UN rules. You must know how to package before you ship or transport. If you don't know, find out from your local environmental people before you go.

SECTION IV. PERSONAL PROTECTION

4-1. General. You need to protect yourself from absorbing harmful chemicals through your skin or breathing in hazardous particles, vapors or gases.

Never rely on smell as a guide to whether you need to use protective equipment or not. Just because you can't smell the material doesn't mean that it's harmless.

4-2. Pub You Need. Look over DA Pam 385-3 for types of protective clothing and equipment you need to protect yourself from different hazardous materials.

4-3. Types of Personal Protection. Rubber-framed goggles without ventilation holes or plastic face masks can protect your eyes from the mist and sprays or splashes of liquids such as acids or alkali solutions.

Make sure your face mask or goggles are free of scratches before you use them. Scratched lenses block your vision.

Use a respirator designed to keep out paint fumes if you're working with paint or paint thinners. These respirators should be fitted by your medical folks. Use the respirator only in well-ventilated areas.

Full-facepiece dual cartridge

Half-mask, facepiece-mounted cartridge

Be sure to wear clothing that covers as much skin as possible.

Wear gloves, hoods, aprons, sleeves, suits and boots for protection.

4-4. Clean equipment. Always clean your equipment before putting it away. Keep the inside of gloves, boots and goggles clean. If the inside becomes contaminated, clean it immediately.

SECTION V. MATERIAL SAFETY DATA SHEETS

5-1. Know Which Items are Hazardous. To know which materials you need to worry about before you use them, you need the latest information on which ones are considered hazardous to the environment.

Material Safety Data Sheets (MSDSs) must be available for each item, list any special precautions or procedures needed, as well as first-aid measures.

5-2. Where To Find MSDS Information.

a. Access the database called Fast Action Safety Data Transmission (FAST). The General Services Administration (GSA) now has about 4,000 hazardous material items that require a MSDS on the FAST database.

To access this database you'll need the following equipment: * IBM/IBM-compatible personal computer.

- 2400, 1200 or 300 baud modem.
- Communication software package.

If you have the right equipment, you'll need to set your modem parameters to:

- Speed: 2400, 1200, 300

- Duplex: Full
- Parity: None
- Stopbit: 1
- Data: 8

Use these phone numbers to access the database:

DSN 327-2710
COMMERCIAL (703) 305-6360
TOLL FREE 1-800-795-7925

After you dial the telephone number, the system will ask for your login. At this time, type bbs in lower case letters. After the login prompt, the system is menu driven. However, if you need additional help, call commercial (404) 331-5855.

If you get garbage when you first connect with the FAST database, you need to tell the FAST modem to slow down. To do this, send a communications package BREAK command.

The system will let you transfer a copy of a file/MSDS to the user's hard disk by downloading or directly from the FAST computer to the user's FAX machine.

To get an MSDS for a GSA item that's not on the database, send the following information to GSA and they'll provide you a copy.

- NSN
- Manufacturer Name
- Batch or Product Number
- Mil-Spec Number
- Your Name and Title
- Agency/Address
- Commercial Telephone Number
- Commercial FAX Number

Mail this information to:

General Services Administration
Federal Supply Service (4FQ)
401 W. Peachtree St, NW,
Suite 3021
Atlanta, GA 30365-2550

Or fax it to:

Commercial (404) 331-2066

b. If the item is managed by some other agency besides GSA, check with your local environmental control or safety people for a copy of the MSDS.

SECTION VI. HANDLING MOTORPOOL SUPPLIES

6-1. Practice Good Housekeeping. You have to be more careful how you handle motorpool service supplies, too. The smart way is to practice good housekeeping.

6-2. Housekeeping Tips. Here are a few good housekeeping tips:

- Keep floor dry.

- Remove anything that would cause some one to trip.

- Make sure work areas are cleaned up as soon as work is completed.

- Keep access clear to fire extinguishers protective equipment and eyewash stations.

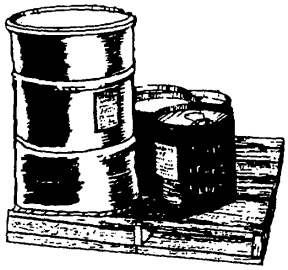
SECTION VII. STORING SUPPLIES

7-1. Storing Hazardous Waste. After use service supplies and materials become waste. It'" important that you handle and store waste oil and the like safely so it does not damage the environment.

7-2. Tips on Storing Waste. Stock up on these tips on storing waste.

- Store waste in containers that are in good condition. Check the containers for rust or dents.

- Keep the waste containers off the ground where moisture will cause them to rust and maybe cause a spill.



- Mark containers with the words HAZARDOUS WASTE. Put a label on the outside of the container that identifies the type of waste inside.

- Make sure the waste containers are away from the traffic flow so that accidental spills won occur. Isolate containers with flammable or reactive waste.

- Put different types of hazardous waste in separate containers. Don't mix hazardous and nonhazardous wastes together.

- Keep containers closed except when you fill or empty them.

- Make sure you have a secondary containment, such as sand bags, around the container that'll catch and contain spills.

SECTION VIII. REDUCE WASTE

8-1. Reduce Waste in the Work Place. You won't have to worry about disposing of a lot of waste if you cut down on the amount you generate.

8-2. Reduce Hazardous Waste in the Work Place. Here are some ways to reduce the amount of hazardous waste generated in your work area:

DON'T: Stockpile hazardous materials. Order only what you'll use and use only what you need.

DO: Rotate stock to use the oldest item first.

DON'T: Use a hazardous product if you can change it for one that's nonhazardous. For example, use a soap and hot water parts cleaner instead of a vapor degreaser.

DO: Recycle used waste oil, solvents, antifreeze and other wastes when possible.

DON'T: Mix hazardous and nonhazardous wastes together.

DO: Store materials properly to prevent deterioration of containers.

DON'T: Leave the waste container open except when you fill or empty it.

DO: Keep in touch with your local environmental people for other ways to reduce hazardous waste.

SECTION IX. HANDLING SPILLS

9-1. Spills Happen. We all get upset about a big spill like when an oil tanker springs a leak. But even a small spill causes big trouble. If oil--for instance--leaks onto the ground, it can seep down into the water table and contaminate the water.

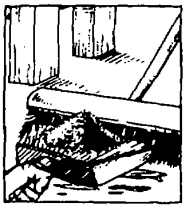
9-2. Handling Spills. When an accidental spill occurs contain it and then clean it up immediately.

Be prepared for accidental spills. Make sure your unit has a spill plan that lists emergency telephone numbers.

Here are five things to remember when a spill occurs:

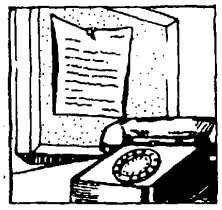
1. PROTECT YOURSELF. Know where protective equipment is kept, whether it has been properly cleaned and maintained and how to use it.

2. STOP THE FLOW, if possible. If the spill is out of your control, evacuate the area and call the installation spill response team and let them handle the situation.



3. CONTAIN THE SPILL. Floor dry (floor sweep) material, NSN 7930-00-269-1272, is the most effective material to contain and clean up small spills.

4. REPORT THE SPILL. Check your SOP for reporting procedures. Usually this means to notify your supervisor. However, if your supervisor isn't handy and it's a real emergency situation, call the installation response team.



5. KNOW WHO TO CALL. Make sure you know whom to call with questions about hazardous waste or materials. Make out a list with POCs and post it. The primary POC usually is your local environmental officer.

SECTION X. TRAINING

10-1. Training. It's important that every one involved in handling hazardous materials or waste gets special training in this area.

In fact, OSHA hazardous communication standard 29 CFR 1910.1200 requires that all persons be advised of all hazardous chemicals in the workplace. Supervisors are responsible in providing information to their employees about the chemicals to which they are exposed.

10-2. Training Video Available. There's a training video available on handling and controlling hazardous materials and waste in the motor pool.

You can get it by requesting it from your training and audiovisual people. The name of the video is "Every Little Bit Hurts". The training people will order this video using PIN 709223DA.

10-3. Local Training Plan. A local training program must be in place to describe the plan, how

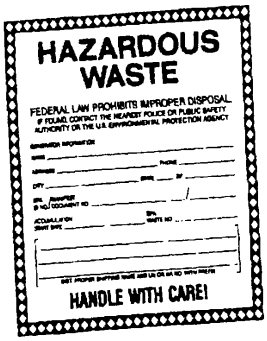
to read a MSDS and how to properly handle the chemicals in your workplace. Check with your environmental officer or training people for more information about this plan.

SECTION XI. WASTE DISPOSAL

11-1. Identify Hazardous Waste. Some waste, such as used motor oil, can be recycled. However, if the oil is contaminated with things like antifreeze, the recyclers can't use it. Then it becomes hazardous waste.

Keep wastes from being mixed by using separate containers that are clearly marked.

If an item's not identified properly or packaged correctly, it could lead to spills that jeopardize life and the environment. You could also be charged with environmental and transportation violations.



The containers are required to be marked with a hazardous waste label or marking that includes the name of the unit, address, space for the manifest document number (which is added before transporting the product off post), and the hazardous waste statement.

Warning labels are also required for products that contain asbestos. The labels must include this statement:

DANGER. CONTAINS ASBESTOS FIBERS. AVOID CREATING DUST. CANCER AND LUNG DISEASE HAZARD.

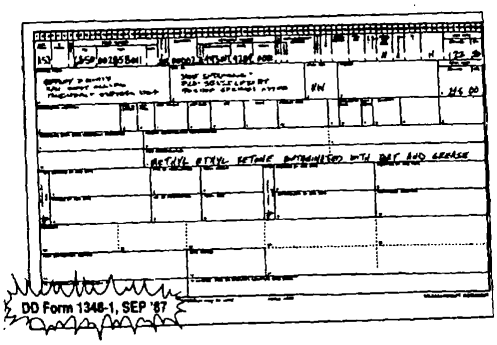
Contact your local environmental officer for other state or federal requirements on identifying hazardous waste.

11-2. How to Turn In Hazardous Waste. Hazardous waste turned in to your local Defense Reutilization and Marketing Office (DRMO) must be placed in Department of Transportation (DOT) authorized containers. The containers should be non-leaking and sturdy enough to withstand normal handling or your turn-in could be rejected. See Appendix B for some DOT authorized container NSNs.

Here's how to turn in hazardous property:

a. Make out a DD Form 1348-1 turn in document with complete and accurate information.

You'll also need a copy of the MSDS to send along with your turn in document.



b. Double check that the hazardous property container is marked with the NSN and chemical name.

c. Check with your local DRMO people to make sure that they can take your hazardous property.

There are many different reasons why the DRMO might not be able to receive your property. The most common is that their hazardous property storage area is full and until the area is cleared they cannot accept any more hazardous waste.

For additional information on managing hazardous materials and hazardous waste, check out AR 420-47 and AR 700-141.

APPENDIX A
PUBLICATION LIBRARY

AR 200-1	Environmental Protection and Enhancement
AR 420-47	Solid and Hazardous Waste Management
AR 700-141	Hazardous Material Information System (HMIS)
DA Pam 385-3	Protective Clothing and Equipment
OSHA Standard	OSHA Hazard Communication Standard 1910.1200

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APPENDIX B
DEPARTMENT OF TRANSPORTATION
AUTHORIZED CONTAINERS

DOT SPECIFICATION	NSN	DESCRIPTION
6A & 6B	8110-00-366-6809	Drum, shipping and storage: 30 gallon capacity; sheet metal material; reusable; 18 USS sheet metal gage; removal cover closure method; locking ring closure fastening; PPP-D-736
17C	8110-00-030-7780	Drum, shipping and storage: 55 gallon capacity; sheet metal material; not reusable; 16 USS sheet metal gage; removable cover closure method; locking ring closure fastening; DOT 17C55-16
17E	8110-00-597-2353	Drum, shipping and storage: ;55 gallon capacity; steel material; reusable; 16 USS sheet metal gage; bung end; PPP-D-729 type IV
17H	8110-00-823-8121	Drum, shipping and storage: 55 gallon capacity; steel material; reusable; 18 USS sheet metal gage; removable cover closure attachment; locking ring fastening; PPP-D-729 type IV

By Order of the Secretary of the Army:

GORDON R. SULLIVAN
General, United States Army
Chief of Staff

Official:

MILTON H. HAMILTON
Administrative Assistant to the
Secretary of the Army
02945

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THEN...JOT DOWN THE DOPE ABOUT IT ON THIS FORM. CAREFULLY TEAR IT OUT, FOLD IT AND DROP IT IN THE MAIL.

SOMETHING WRONG WITH PUBLICATION

FROM: (PRINT YOUR UNIT'S COMPLETE ADDRESS)

DATE SENT

PUBLICATION NUMBER	PUBLICATION DATE	PUBLICATION TITLE

BE EXACT PIN-POINT WHERE IT IS

PAGE NO.	PARA-GRAPH	FIGURE NO.	TABLE NO.

IN THIS SPACE, TELL WHAT IS WRONG AND WHAT SHOULD BE DONE ABOUT IT.

PRINTED NAME, GRADE OR TITLE AND TELEPHONE NUMBER	SIGN HERE

DA FORM 1 JUL 79 2028-2

PREVIOUS EDITIONS ARE OBSOLETE.

P.S.--IF YOUR OUTFIT WANTS TO KNOW ABOUT YOUR RECOMMENDATION MAKE A CARBON COPY OF THIS AND GIVE IT TO YOUR HEADQUARTERS.

The Metric System and Equivalents

Linear Measure

1 centimeter = 10 millimeters = .39 inch
1 decimeter = 10 centimeters = 3.94 inches
1 meter = 10 decimeters = 39.37 inches
1 dekameter = 10 meters = 32.8 feet
1 hectometer = 10 dekameters = 328.08 feet
1 kilometer = 10 hectometers = 3,280.8 feet

Weights

1 centigram = 10 milligrams = .15 grain
1 decigram = 10 centigrams = 1.54 grains
1 gram = 10 decigram = .035 ounce
1 decagram = 10 grams = .35 ounce
1 hectogram = 10 decagrams = 3.52 ounces
1 kilogram = 10 hectograms = 2.2 pounds
1 quintal = 100 kilograms = 220.46 pounds
1 metric ton = 10 quintals = 1.1 short tons

Liquid Measure

1 centiliter = 10 milliters = .34 fl. ounce
1 deciliter = 10 centiliters = 3.38 fl. ounces
1 liter = 10 deciliters = 33.81 fl. ounces
1 dekaliter = 10 liters = 2.64 gallons
1 hectoliter = 10 dekaliters = 26.42 gallons
1 kiloliter = 10 hectoliters = 264.18 gallons

Square Measure

1 sq. centimeter = 100 sq. millimeters = .155 sq. inch
1 sq. decimeter = 100 sq. centimeters = 15.5 sq. inches
1 sq. meter (centare) = 100 sq. decimeters = 10.76 sq. feet
1 sq. dekameter (are) = 100 sq. meters = 1,076.4 sq. feet
1 sq. hectometer (hectare) = 100 sq. dekameters = 2.47 acres
1 sq. kilometer = 100 sq. hectometers = .386 sq. mile

Cubic Measure

1 cu. centimeter = 1000 cu. millimeters = .06 cu. inch
1 cu. decimeter = 1000 cu. centimeters = 61.02 cu. inches
1 cu. meter = 1000 cu. decimeters = 35.31 cu. feet

Approximate Conversion Factors

To change	*To*	*Multiply by*	*To change*	*To*	*Multiply by*
inches	centimeters	2.540	ounce-inches	Newton-meters	.007062
feet	meters	.305	centimeters	inches	.394
yards	meters	.914	meters	feet	3.280
miles	kilometers	1.609	meters	yards	1.094
square inches	square centimeters	6.451	kilometers	miles	.621
square feet	square meters	.093	square centimeters	square inches	.155
square yards	square meters	.836	square meters	square feet	10.764
square miles	square kilometers	2.590	square meters	square yards	1.196
acres	square hectometers	.405	square kilometers	square miles	.386
cubic feet	cubic meters	.028	square hectometers	acres	2.471
cubic yards	cubic meters	.765	cubic meters	cubic feet	35.315
fluid ounces	milliliters	29,573	cubic meters	cubic yards	1.308
pints	liters	.473	milliliters	fluid ounces	.034
quarts	liters	.946	liters	pints	2.113
gallons	liters	3.785	liters	quarts	1.057
ounces	grams	28.349	liters	gallons	.264
pounds	kilograms	.454	grams	ounces	.035
short tons	metric tons	.907	kilograms	pounds	2.205
pound-feet	Newton-meters	1.356	metric tons	short tons	1.102
pound-inches	Newton-meters	.11296			

Temperature (Exact)

°F	Fahrenheit temperature	5/9 (after subtracting 32)	Celsius temperature	°C

PIN: 070689-000