

DOT Hazardous Materials Marking and Labeling



Brooks Equipment Co., Inc.

C-2

Confused by the Department of Transportation's regulations for transporting hazardous materials?

Heard rumors of changes to the regulations concerning transportation of fire extinguishers? Unsure if you have met the DOT requirements for hazardous materials training? You are not alone! We have attended seminars, consulted with consultants, and spoken directly with the DOT and we have heard different stories from each. And, because there has been no formal interpretation from the US DOT, we don't know how these regulations are being interpreted and enforced on the local level.

One thing that we know for sure is that the DOT is constantly writing and rewriting regulations for the transportation of hazardous materials. Although it is sometimes like trying to hit a moving target, Brooks Equipment is constantly monitoring the activities of the DOT to bring you the most up to date information that will have an impact on your business. We have done our best to come up with a number of cost effective supplies, based on these interpretations, that you need to be on the safe side of the

current DOT requirements.

Remember that the only way to insure compliance with any DOT regulation is by obtaining and following the Code of Federal Regulations, 49 CFR parts 100-177 (Brooks parts number DOT1). Once you have a copy, you can use the references in this booklet to find the appropriate sections in the DOT regulations that apply to your business and training needs.

Brooks Part
#DOT1

Hazardous Materials Marking And Labeling

All packages or cylinders of hazardous materials that are transported or offered for shipment must be identified as hazardous materials. These are the hazards classes, identification ("UN") numbers, proper shipping names and labels for Brooks products and other common products.

REMEMBER: These marking and labels **MUST** appear on all packages or cylinders (unless exempted) that are transported or offered for shipment. Also, DOT requires all drivers to have a supply of labels to replace lost or destroyed labels on packages. (49 CFR part 177.815)

Hazard class	"UN" Number	Proper Shipping Name	Label
<u>New (in the original box with original packings) dry chemical fire extinguishers</u>			
2.2	UN1044	FIRE EXTINGUISHER	NON-FLAMMABLE GAS
<u>Carbon dioxide fire extinguishers, cylinders and nitrogen cartridges -</u>			
2.2	UN1013	CARBON DIOXIDE	NON-FLAMMABLE GAS
<u>Dry chemical fire extinguishers and water extinguishers charged with nitrogen, nitrogen cylinders and nitrogen cartridges-</u>			
2.2	UN1066	NITROGEN, COMPRESSED	NON-FLAMMABLE GAS

Dry chemical and wet chemical -

Not regulated - list only principle ingredients

Halon 1211 fire extinguishers (charged with nitrogen) -

2.2 UN1956 COMPRESSED GAS NOS NON-FLAMMABLE GAS
(CHLORODIFLUOROBROMO-METHANE,
NITROGEN

1211 recharge cylinders (NOT charged with nitrogen)

2.2 UN1974 CHLORODIFLUORO- BROMOMETHANE NON-FLAMMABLE GAS

Halon 1301 system cylinders (charged with nitrogen) -

2.2 UN1956 COMPRESSED GAS, NOS NON-FLAMMABLE GAS
(BROMOTRIFLUORO METHANE,NITROGEN)

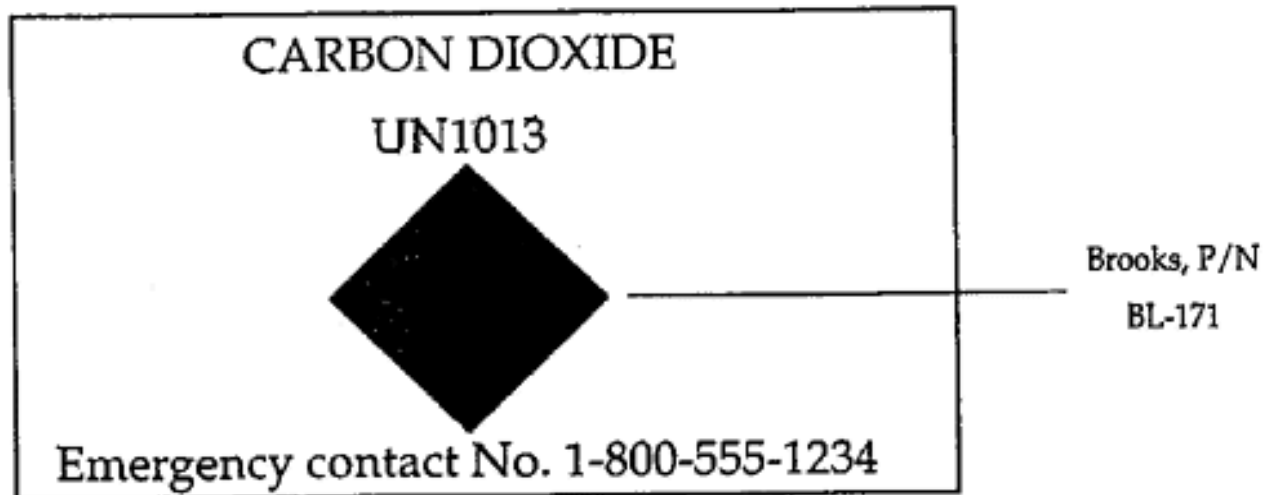
Halon 1301 recharge Cylinders (NOT charged with nitrogen)

2.2 UN1009 BROMOTRIFLUORO METHANE NON-FLAMMABLE GAS

Water fire extinguishers charged with air, SCBA and SCUBA cylinder and compressed air -

2.2 UN1002 AIR COMPRESSED NON-FLAMMABLE GAS

Example



You can draw the markings on the packages (see example) but you must use a green printed diamond label (like Brooks part number BL-171 "Non-Flammable Gas") for packages containing non-flammable gases. See 49CFR part 172.101.

Optional Markings For Compressed Gas Cylinders

All compressed, gas cylinders must be marked according to DOT specifications. It is permissible to mark these cylinders with a single label or tag (labels and markings for compressed gas cylinders may be placed on securely affixed tags per 49 CFR 172.304 and 172.406) that includes the following information:

1. The proper shipping name.
2. The "UN" identification number, and
3. The diamond label with the hazard class.

You can use Brooks "neck" labels or new "compressed gas repair tags" to properly mark carbon dioxide, nitrogen, compressed air, Halon 1211 and 1301 cylinders. **SEE EXAMPLES ON PAGE 3**

Also, the name of the chemical manufacturer, importer, or company that filled or is responsible for the cylinder must be included on the cylinder or label. See 49 CFR part 172.400 and CGA (Compressed Gas Association) pamphlet C-7 Appendix A.

DOT LABELS & TAGS

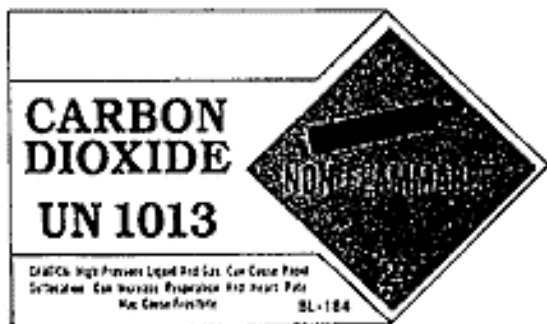
(AS REQUIRED BY DOT 49CFR 172.304 AND 172.406)



BL-173, BL-179, BL-180, BL-181



BL-177, BL-178



BL-184



BL-171

Sold in rolls of 500 only
 #BL-171 4" x 4"
 1-3 @ \$15.95 per roll
 4+ @ \$14.95 per roll

PART NO.	DESCRIPTION	1-49	50-99	100+
BL-173	Carbon Dioxide	15¢	12¢	9¢
BL-177	Nitrogen	15¢	12¢	9¢
BL-178	Halon 1211 & Nitrogen	15¢	12¢	9¢

BL-177	Nitrogen	15c	12c	9c
BL-178	Halon 1211 & Nitrogen	15c	12c	9c
BL-179	Halon 1301 & Nitrogen	18c	15c	13c
BL-180	Compressed Air	15c	12c	9c
BL-181	Oxygen	28c	25c	23c
BL-184	CO2 Cartridge	18c	15c	13c

HAZARDOUS MATERIAL REPAIR TAGS



Front

- ✓ Meets DOT requirements
- ✓ Perforated claim check
- ✓ Sold in pack of 100 each
- ✓ Comes with string attached

PART NO.	DESCRIPTION	1-4 PK.	5-9 PK.	10+PK.
HMT1	Carbon Dioxide - UN1013	9.95	6.95	5.95
HMT2	Nitrogen - UN1066	9.95	6.95	5.95
HMT3	Halon 1211 & Nitrogen - UN1958	9.95	6.95	5.95
HMT4	Halon 1301 & Nitrogen - UN1956	9.95	6.95	5.95
HMT5	Compressed Air - UN1002	9.95	6.95	5.95
HMT6	Fire Extinguisher - UN1044	9.95	6.95	5.95

C-6

Back

Hazardous Materials Shipping Papers

All hazardous materials that are transported or offered for shipment must be accompanied by shipping papers that indicate that the materials are hazardous.

If you are carrying hazardous materials in your service truck (including fire extinguishers) to or from a work site you must have shipping papers that at all times are "readily available to, and recognizable by, authorities in the event of accident or inspection" (49 CFR part 177.817). Brooks part number HMSP50 is a pad of 50 pre-printed daily hazardous material shipping papers.

Also available is Brooks part number HMSP-DE, which is a reusable, "wipe-off" form which is easily changed at each pick-up or delivery. Use permanent markers (Brooks part number PMP or PMF) to fill in your company name and red dry erase pens (Brooks part number RDEP) or green dry erase pens (Brooks part number GDEP) to change the quantity of hazardous materials carried.

If you offer a hazardous material for shipment you must use the shipping papers required by that carrier. For UPS air and ground shipments there are special forms that must be obtained from UPS. Forms for motor freight can be obtained from the air cargo companies. Air express carriers such as Federal Express and others use their own special forms. Check with the carriers, these forms are sometimes provided free of charge. Pre-printed forms (which include your company name and other information of your choice) can be purchased from several suppliers.

GDEP	Green Dry Erase Pen	1.09	.95	.89
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SHIPPING PAPERS DOOR POUCH

- ✓ SNAPS FOR DOOR ATTACHMENT PROVIDED
- ✓ HOLDS SHIPPING PAPERS
- ✓ SEWN PADDED VINYL
- ✓ 10 1/2"W X 15"L

177.817e...

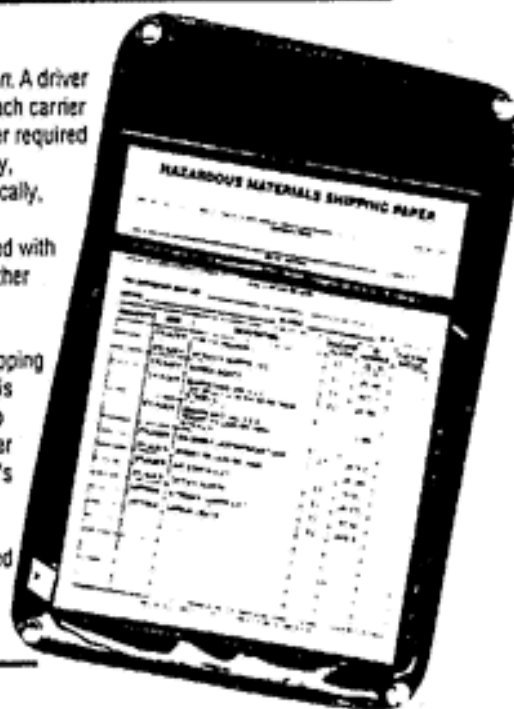
(e) *Shipping paper accessibility—accident or inspection.* A driver of a motor vehicle containing hazardous material, and each carrier using such a vehicle, shall ensure that the shipping paper required by this section is readily available to, and recognizable by, authorities in the event of accident or inspection. Specifically, the driver and the carrier shall:

(1) Clearly distinguish the shipping paper, if it is carried with other shipping papers or other papers of any kind, by either distinctively tabbing it or by having it appear first; and

(2) Store the shipping paper as follows:

(i) When the driver is at the vehicle's controls, the shipping paper shall be: (A) Within his immediate reach while he is restrained by the lap belt; and (B) either readily visible to a person entering the driver's compartment or in a holder which is mounted to the inside of the door on the driver's side of the vehicle.

(ii) When the driver is not at the vehicle's controls, the shipping paper shall be: (A) in a holder which is mounted to the inside of the door on the driver's side of the vehicle; or (B) on the driver's seat in the vehicle.



C-B

PART NO.	DESCRIPTION	1-5	6-11	12+
VDP	Vehicle Door Pouch	8.95	7.50	6.95

Material Safety Data Sheets (MSDS)

Service trucks that carry hazardous materials (either being transported to the customers' location or that are used in the service truck and on the job sites) must carry either a copy of the Material Safety Data Sheet (MSDS) for each hazardous material or the DOT Emergency Response Guidebook that covers all hazardous materials (Brooks part number ERGB). Either the MSDS or the Guidebook must be kept with the hazardous materials shipping papers and separate from the hazardous materials. MSDS are available upon request for all Brooks hazardous materials.

See 49CFR part 172.602.

REMEMBER: Emergency response information must be readily available to responders in the event of an accident or emergency and also available to DOT officials during an inspection. Order a Guidebook for each truck to be sure!

Emergency Response Number

AR shipping papers, including those carried in a service truck, must have an emergency response number printed, stamped or written on them. (Some carriers require the emergency response telephone number to be on the packages in addition to the shipping papers.) When hazardous materials are shipped, this telephone number must be staffed 24 hours per day, 365 days per year by persons that can respond immediately to questions about the hazardous materials in the shipment. See 49CFR part 172.604.

There are several services available that will be able to provide your company with this service. They

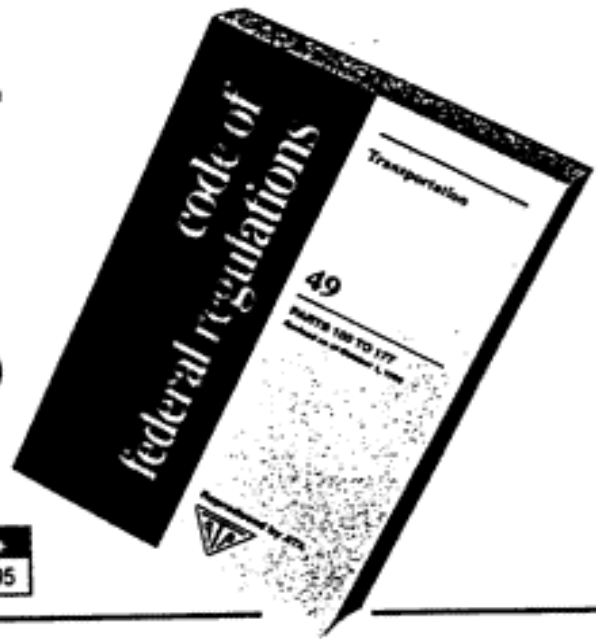
are:

Fire Protection Consultants	202-835- 0272
CHEMTREC	202-887- 1255
CHEMTEL	813-979- 0626
INFOTRAC	800-535- 5053

NOTE: There is a fee for this service and you may be required to provide MSDS for all hazardous materials that you are transporting or offering for shipment.

CODE OF FEDERAL REGULATIONS

- ✓ Required for all DOT shops
- ✓ Contains regulations for transporting hazardous materials (fire extinguishers)
- ✓ Fines can range from \$250 to \$25,000 per violation per day



PART NO.	DESCRIPTION	1-4	5-10	11+
DOT1	Code of Federal Regulations	26.95	23.95	22.95

EMERGENCY RESPONSE GUIDEBOOK

(MEETS REQUIREMENT BY DOT 49CFR 172.602)

- ✓ USE IN PLACE OF MATERIAL SAFETY DATA SHEETS ON EACH VEHICLE
- ✓ POCKET SIZE 4" X 5 1/2"



PART NO.	DESCRIPTION	1-9	10-24	25+
ERGB	Emergency Response Guidebook	3.50	2.75	2.50

FEDERAL MOTOR CARRIER SAFETY REGULATIONS

(PARTS 383, 387, 390-399)

✓ APPLIES TO:

- Any vehicle required to placard or
- Any vehicle with a gross weight rating of 10,000 lbs. or higher

✓ Necessary to meet driver training requirements • DOT 49CFR 177.816

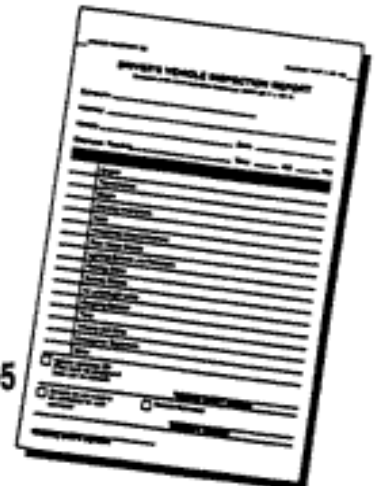


PART NO.	DESCRIPTION	1-4	5-10	11+
FMCSR	Federal Motor Carrier Safety Regulations	3.50	2.95	2.50

DRIVERS VEHICLE INSPECTION REPORT

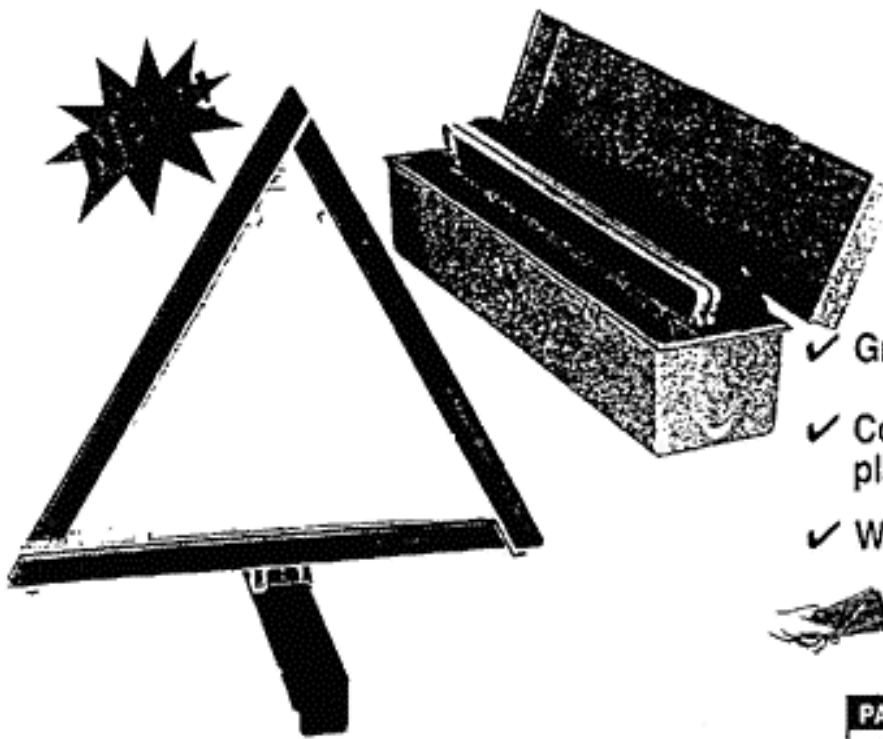
(REQUIRED BY DOT 49CFR 396.11 & 396.13)

- ✓ 3 Part Carbon Form
- ✓ Consecutively Numbered
- ✓ 100 Per Package
- ✓ 5 2/3" X 9 1/2"
- ✓ Fits in Form Holder #5795




PART NO.	DESCRIPTION	1 PKG.	2 PKGS.	3 PKGS.
VIR100	Vehicle Inspection Report	6.95	5.95	4.95

C-10



REFLECTOR TRIANGLE KITS

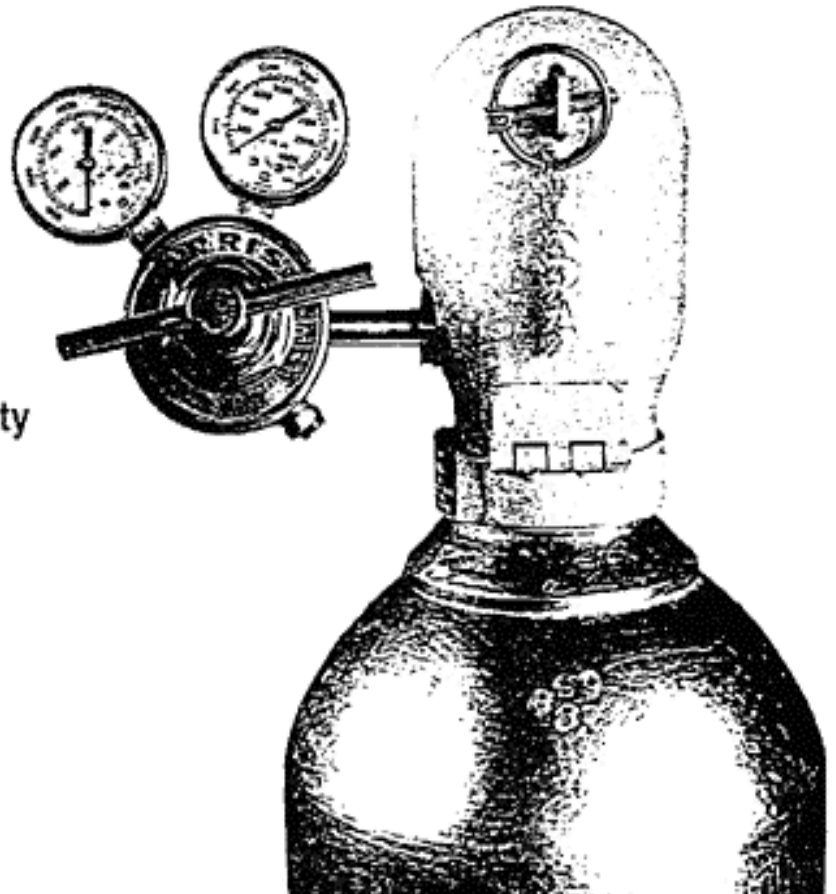
- ✓ Required BY DOT 49CFR 393.95
- ✓ Great profit item to sell to your customers
- ✓ Consists of three (3) triangles in a plastic storage box
- ✓ Weighs 15 lbs. per kit

 Order 4 kits (1 case) and SAVE!

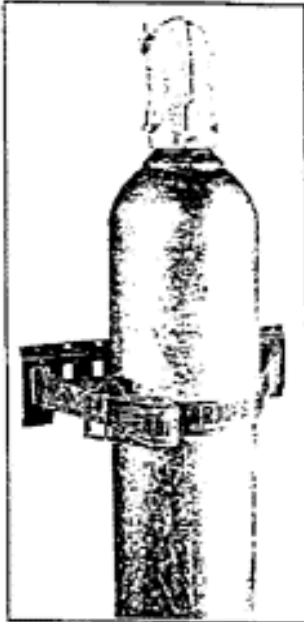
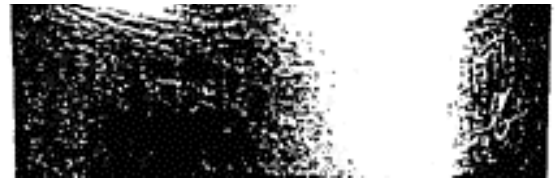
PART NO.	DESCRIPTION	1-3	4+
3TK	3 Piece Triangle Kits	16.95	14.95

PROTECT YOUR CYLINDER VALVES

- ✓ No need to remove regulator
- ✓ Don't get caught without valve protection
- ✓ Meets DOT, OSHA and MSHA requirements
- ✓ Size: 3 1/8" x 11 threads per inch
- ✓ Can be padlocked for extra safety



PART NO.	DESCRIPTION	PRICE EACH
GT11	Cylinder Valve Guard	33.95



CYLINDER RACK SYSTEM

(MEETS DOT49CFR 177.840 REQUIREMENT FOR TRANSPORTING COMPRESSED GAS CYLINDERS)

*Series E Track
Horizontal*



Finish: Iron phosphate,
green primer

*2" Logistic Straps with Ratchet Buckle
& Spring Loaded Fittings*



← Fixed →

← Adjustable →

PART NO.	DESCRIPTION	1-4	5-9	10+
ETK	5' Section E-Track	15.95	13.95	12.95
CB1	Cylinder Belt - 23' Fixed x 6"	25.95	23.95	22.95
CB2	Cylinder Belt - 6' Fixed x 3"	25.95	23.95	22.95

PLACARD

- ✓ DOT49CFR 172.504 requires placarding if you carry more than 1,000 pounds aggregate gross weight of hazardous materials.
- ✓ Includes backing plate with oxygen, flammable gas, non-flammable gas and one blank legend.
- ✓ Made of Aluminum



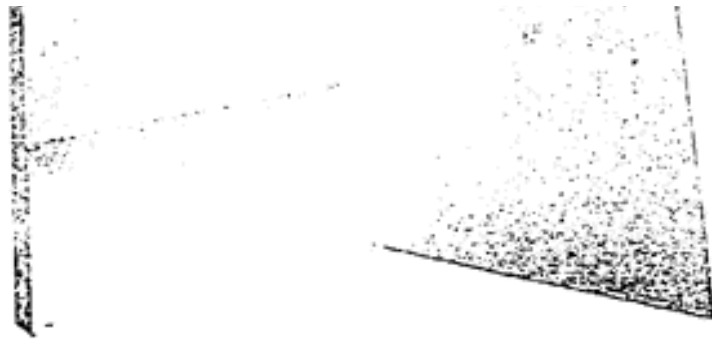
PART NO.	DESCRIPTION	1-3	4+
VHP1	Placard	21.50	19.95

FORM HOLDERS

Open it's a book, closed it's a box. This very popular holder accommodates loose forms, sets or sales books. Simply place the forms in the swivel bar clip, insert the smooth writing plate under the set and start writing. A hinged aluminum strap holds copies securely in place, and the entire holder folds into a compact protective box to keep forms safe while on the move.

✓ TWO SIZES AVAILABLE





protective box to keep forms safe while on the move.

- ✓ TWO SIZES AVAILABLE
- ✓ ORGANIZE YOUR PAPERWORK
- ✓ MADE OF HEAVY ALUMINUM
- ✓ LOOK PROFESSIONAL

PART NO.	DESCRIPTION	1-4	5-9	10+
FH5795	5 7/8" X 9 1/2" Form Holder	16.95	14.50	13.95
FH6512	8 1/2" X 12" Form Holder	23.95	20.95	19.95

C-12

Important Telephone Numbers

Brooks Equipment Co., Inc. (To order 49 CFR Parts 100-177 and other important materials)	800-826-3473
United States Department of Transportation: (Main number for general information)	202-366-4000
U.S. DOT Office of Hazardous Materials Initiatives and Training: (For training resources)	202-366-4900 202-366-2301
U.S. DOT Office of Hazardous Materials Standards:	202-366-4488
U.S. DOT Office of Hazardous Materials Enforcement:	202-366-4700
Compressed Gas Association: (To order CGA pamphlets)	703-412-0900

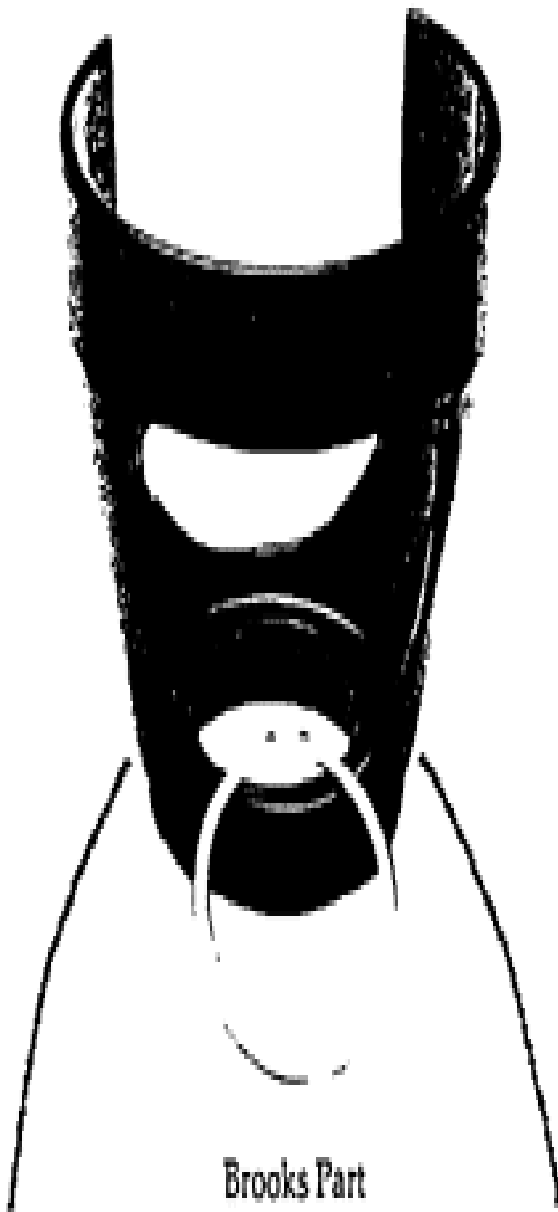
Safety Considerations For Shipping Or Transporting Compressed Gas Cylinders

All cylinders that are shipped or transported must be properly prepared and secured for transportation.

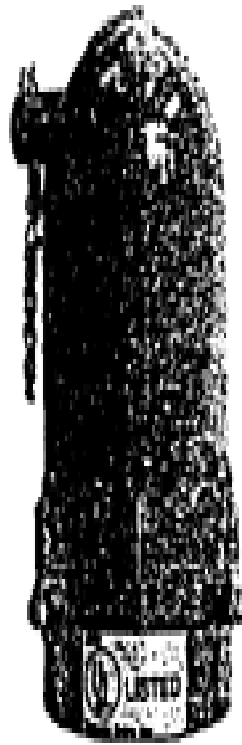
Examples of proper loading include lashing in an upright position, (call for prices on Brooks "E" track strapping system) loading into securely attached racks, packing in boxes or crates sized to prevent their overturning or horizontal loading. In addition, cylinders must be loaded to minimize the possibility of damage to their valves. See 49 CFR parts 177.834 and 177-840.

According to 49 CFR part 173.301, all cylinders containing flammable, corrosive or noxious compressed gases must be shipped with the valve protected against damage. The Brooks valve guard (part number GT-11) is ideal for cylinders where it is desirable to keep the regulator attached and still protect the valve at all times (for example, on the nitrogen cylinder used for recharging fire extinguishers in your service trucks), Commercial aluminum carbon dioxide cylinders may be shipped with carry handles that also

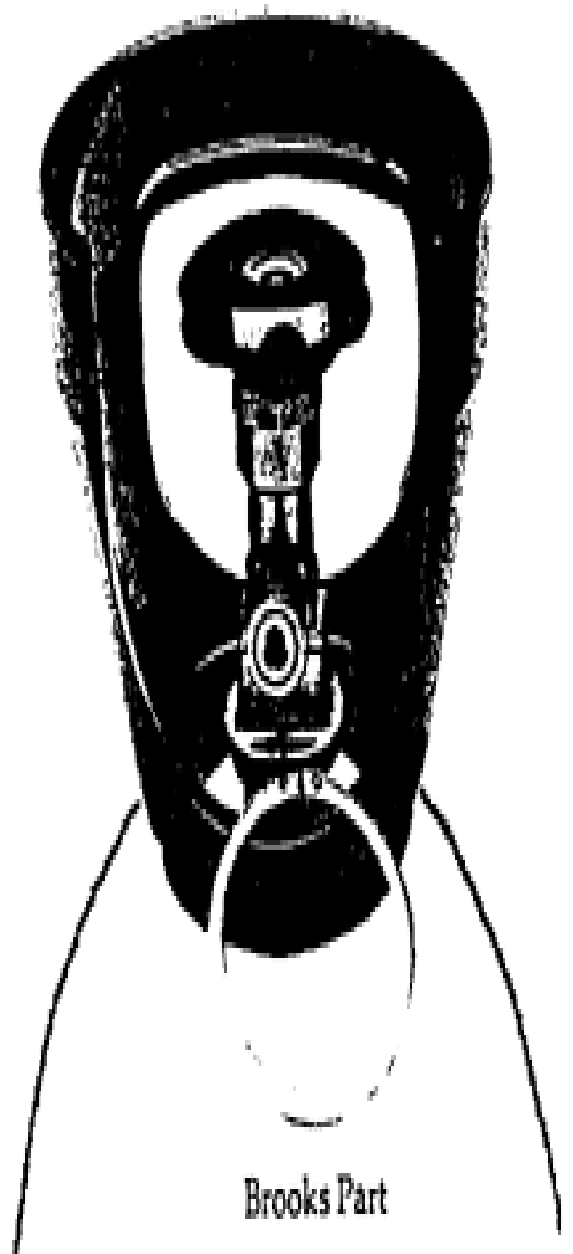
serve as valve protectors. Use Brooks part number CCH (with CCH-Ring) on Luxfer aluminum cylinders and CCHK (with CCHK-Ring) on Kidde aluminum cylinders.



Brooks Part
#CCH



Brooks Part
#GT11



Brooks Part
#CCH-K

C-14

TRAYING OUTLINE

HM-126F

General Awareness and Familiarization Training

1. Introduction

- Review definitions and DOT requirements for training
- Review who requires training
- Review the nine hazard classes and their divisions. Stress the hazard classes that your operation is the most involved in.

2. Hazardous Material Table (Section 172.101)

- The table lists the materials that the DOT has determined, "may pose an unreasonable risk to health and safety or property when transported in commerce". The table provides the requirements for shipping hazardous materials.
- Explain that the training will provide the shipping information for the materials that are normally handled by the company. If an employee is not sure about a specific material they should contact someone in authority who can look the material up in the table.

3. The use of shipping papers

- Review the fines issued by the DOT for improper shipping papers.
- Review the proper format for the shipping paper.
- Entries must be printed in English.

4. Proper labeling and marking of non-bulk hazardous materials

- The proper label is required on all cylinders and packages of hazardous materials being transported. The label is the diamond with the proper wording and symbols.

- Markings identifying the contents by proper shipping name and number must be on each package.
- The CGA style cylinder label meets the requirements for the products that we normally transport.
- Most new fire extinguishers in their boxes are exempted from labeling.
- DOT specifications cylinders must be properly stamped as part of their markings.

5. Proper loading and storage techniques

- Review the "Hazardous Materials Load and Segregation Chart".

6. Proper Placarding

- Explain the different placards that may be require for your operation.
- Placards are required for loads of 1001 pounds or more aggregate gross weight of hazardous materials.
- If your policy is not to placard review actions that can be taken to limit weight of hazardous materials. This can include removing cartridges from extinguishers and pre-engineered systems, and removing the nitrogen cylinder from wheeled units.
- Remember that "Limited Quantity" Fire Extinguishers, UN1044, are exempted from placarding when properly identified on the shipping paper.

7. Dealing with hazmat emergencies

- What emergency response phone should be used?
- How to properly use a fire extinguisher.
- Is a list of emergency phones numbers available?
- Where is emergency response information kept?
- Review the Emergency Response Guidebook

Function Specific Training

Function specific training is intended to teach the skills for a specific hazardous materials job function. For our industry this can be everything that a service technician does. This training must be geared for your specific operation and must include training for drivers for all of their non-driving duties. Some of the areas that need to be reviewed include:

- Proper load securement in vehicles
- Proper storage of materials in the shop
- Hydrostatic testing procedures and requirements
- Correct filling procedures
- Shipping papers
- Placarding requirements
- Proper package marking
- Handling of compressed gas containers
- Review the proper way to fill out a Bill of Lading
- Verify hydrostatic test dates
- Verify cylinder compatibility with the agent and/or gas used in recharging.
- Review the requirements for proper shipping containers for hazardous materials that you transport, eg. gasoline

Safety Training

1. Safety training must be provided to ensure that employee knows how to respond to a hazardous material emergency. This training is not intended to make an employee a hazardous materials response expert.

2. Include basic safety training for all employees

- How to use a fire extinguisher

- Whom to call in case of emergency
- Review the importance of properly handling compressed gas cylinders (fire extinguishers).

3. Review the Emergency Response Guidebook

- Yellow Pages list hazardous materials by ID number
- Blue pages list hazardous materials alphabetically
- Orange pages contains the emergency response information listed by guide number
- Green pages contain the initial isolation and protective action distances

4. Review the personal protective equipment provided or required by your company

- This includes such items as safety shoes, hard hats, back belts, respirators, safety glasses, self contained breathing apparatus, etc.

5. Discuss your company's emergency response plans

- Do all employees know whom to contact in case of an emergency?
- Do you have a building evacuation plan?
- What are employees supposed to do if a cylinder is leaking?
- Review common safety practices
- Avoid inhalation of fumes or gases from any cylinder
- Review location of MSDS for your operation

Driver Training

1. Introduction

- Review that drivers are responsible to comply with federal and local driving regulations

2. Pre-trip safety inspections

- Safety starts before you turn on the key
- The purpose of a pre-trip inspection is to find any defect or problems that could affect the

safe operation of the vehicle

- Tires must be inspected before every trip (in addition vehicles with dual tires must inspect the tires every two hours or 100 miles, whichever comes first).

3. Vehicle operation and controls

- Do all of the vehicle controls work properly?
- Verify that each vehicle has warning reflective triangles, My charged and properly rated fire extinguisher, an Emergency Response Guide, and a properly prepared shipping paper with an emergency response phone number.

4. Vehicle operation

- Review driving basics such as turning, backing, parking and other expected road conditions.
- Review procedures for adverse driving conditions, such as wet pavements, standing water, snow and ice, etc.
- Review parking and railroad grade crossing regulations
- The driver must be attendance and the engine must be off when the vehicle is being fueled

5. Smoking

- No smoking is permitted on or within 25 feet of any vehicle carry explosives, flammable or oxidizers
- Review the company procedure for the reporting of accidents

6. Loading and Unloading

- Review the Load and Segregation Chart
- Review requirements for the proper securement of loads of hazardous materials

7. Driver's Vehicle Inspection Report

- Review the requirement for a written daily vehicle inspection report

8. Driver's Log

- If required by your operation, review the driver's daily time log requirements.

WHAT CAN YOU DO WITH HAZMAT TRAINING ON A CD-ROM?

INDIVIDUAL TRAINING

The Hazmat Training Modules on CD-ROM make it easy to conduct individual training for your employees. The visual presentation is a self-paced tutorial which provides the user with a basic understanding of the Hazardous Materials Regulations (HMR).



GROUP TRAINING

The Hazmat Training Modules on CD-ROM include files for color prints, transparencies and slides which may be used for group training presentations. Instructor and student manuals (including tests and answer keys) may be easily printed from files available for use with IBM-PC compatibles and Macintosh.



2 CD'S include 6 HAZMAT MODULES

- MOD 1 - The Hazardous Materials Table
- MOD 2 - Shipping Papers
- MOD 3 - Packaging
- MOD 4 - Marking and Labeling
- MOD 5 - Placarding

MOD 6 - Carrier Requirements (Highway)



REVISED AS OF MAY 1995

The Hazmat Training Modules on CD-ROM were revised to include the most recent hazmat regulation changes contained in the 49 CFR, including HM-215A.

IT'S NOT EXPENSIVE

Train your employees for only a few dollars per module. For only \$25 you'll receive a set of CD-ROMs which contain visual presentations, and files for printing instructor and student manuals. In addition, you will receive files for producing transparencies, slides and color prints for group presentations.



HOW TO ORDER

Copies of the Hazmat Training Modules on CD-ROM, other training materials or safety-related information, are available for purchase by check or credit card.

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Hazmat Initiatives and Training, DHM-50
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