



TIPS FOR HANDLING AND USING TREE-MARKING PAINT

by

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HANDLING TREE MARKING PAINT

Each year Forest Service employees use thousands of gallons of specialized paint to designate trees and cutting unit boundaries in their forest management activities. This paint contains unique chemical tracers to deter and detect timber theft, and is specially formulated to minimize health risks, while at the same time provide adequate performance when stored and used in adverse weather conditions.



Figure 1—Forest Service employee marking a tree.

This Tech Tip provides general guidelines for the procurement, storage, handling, and use of Forest Service Tree-Marking Paint. Figure 1 illustrates a Forest Service (FS) employee marking a tree. For the most current information on tree marking paint check the FS intranet website for San Dimas Technology and Development Center (SDTDC) at:

<http://fsweb.sdtdc.wwo.fs.fed.us>

Ordering

All orders for tree marking paint must be made through General Services Administration (GSA). National Stock Numbers (NSNs) can be found in the GSA catalog, figure 2. Be sure to double check the NSN before transmitting your order to GSA. Large amounts of the wrong color or type of paint could be received if the NSN is input

incorrectly. Paint orders are shipped directly from the Light House for the Blind (LHB) packaging facility in St. Louis, Missouri.



Figure 2—GSA catalog.

Storage

The two main things to keep in mind when storing tree marking paint with tracer are safety and security. Forest Service tree-marking paint is a flammable liquid and must be stored properly to decrease the fire risk.

Flammable liquid storage cabinets are available from most safety supply companies. The local fire department can verify that the storage facility complies with local codes and regulations.

For security purposes, tracer paint must be stored in a locked area away from other paints that do not contain tracer. Tracer paint must be kept in a locked tool box when transported, unattended, or not being used. Locks keyed differently from standard Forest Service locks must be used to secure tracer



paint. Used cans with paint residue must be secured to protect the tracer until the residue has hardened. Cleanup solutions will end up with some tracer in it, and must also be kept locked up until it can be disposed of properly.

Organize the paint in a way that allows it to be inventoried quickly and easily. The inventory must also be carefully maintained. If an inventory form is not being used one should be prepared.

Shelf Life

Forest Service Tree-Marking Paint is formulated to have a one-year shelf life. Plan orders to avoid exceeding this limit. Paint that has been in storage for more than a year requires additional shaking or stirring before use. Remember that once the paint is applied it is intended to last six years under exposure to harsh environments. This means that not only must the mark stay visible and recognizable, but the tracer systems in the paint must also be functional. By using old paint its effectiveness may be lost when it may be needed the most.



Figure 3—The SDTDC can puncturer.

Aerosol Can Puncturing

To protect the tracers in the paint from unauthorized use, the used aerosol cans must be punctured to allow the paint residue to be collected and reused or allowed to dry before disposing of the cans. SDTDC modified an off-the-shelf beverage can crusher for this purpose, see figure 3. The Tech Tip, *New Aerosol Can Puncturer For Tree Marking Paint* 9824 1309—SDTDC describes the modifications is available on the FSWeb at:

<http://fsweb.sdtc.wo.fs.fed.us>

USING TREE MARKING PAINT

Health & Safety

Forest Service Tree-Marking Paint contains solvents. These solvents can pose a health hazard if the user is overexposed to them. Markers must take certain precautions to avoid overexposure. These precautions are found in the Job Hazard Analysis (JHA), which can be downloaded from the FSWeb at:

http://fsweb.r1.fs.fed.us/hr/6700_health_and_safety/index_safety2.html

Tracers

Forest Service Tree-Marking Paint contains two tracer systems. One is a field tracer system which allows the paint to be positively identified in the field, see figure 4. A drop of liquid reagent chemical is placed on the suspect paint and, Forest Service paint is identifiable by a specific color change of the reagent.

The second system uses a laboratory tracer which requires sophisticated laboratory equipment to identify the paint.

Both tracer systems are intended to aid in the detection and deterrence of timber theft, and consequently the specific details of the tracer ingredients and detection methods are carefully controlled.

Standard Color Scheme

The Forest Service is developing a standard color scheme for the designation of timber. There are plans to have a transition period for complete standardization nationally.

Spray Techniques

Spray technique can have a significant effect on exposure to the paint and its components. To minimize exposure, keep in mind the following tips from experienced markers.



Figure 4—Field identification of tracer paint.

- **First and foremost:** pay attention to the wind direction.
- Work towards the upwind direction to keep exposure to vapors and mist to a minimum.
- Make stump marks first to avoid bending over and coming in contact with mist from the trunk mark.
- Do not stand further than five feet from the tree.
- The closer the marker is to the tree the less paint is suspended in the air, and more is applied to the tree. Less paint is wasted and there is not a haze of paint mist in the air which increases exposure to vapors and other paint ingredients.
- Pulling the trigger too fast and too hard increases the paint velocity and tends to break up the stream and causes misting, see figure 5.

Experiment with the gun to find a spraying technique that prevents or minimizes stream breakup and paint atomization. SDTDC is conducting some experiments with nozzle shapes and stream velocities in an attempt to optimize spray pattern and minimize misting. Simple tips like these might seem trivial, but when marking trees full-time, these small steps that decrease your exposure can make a big difference.

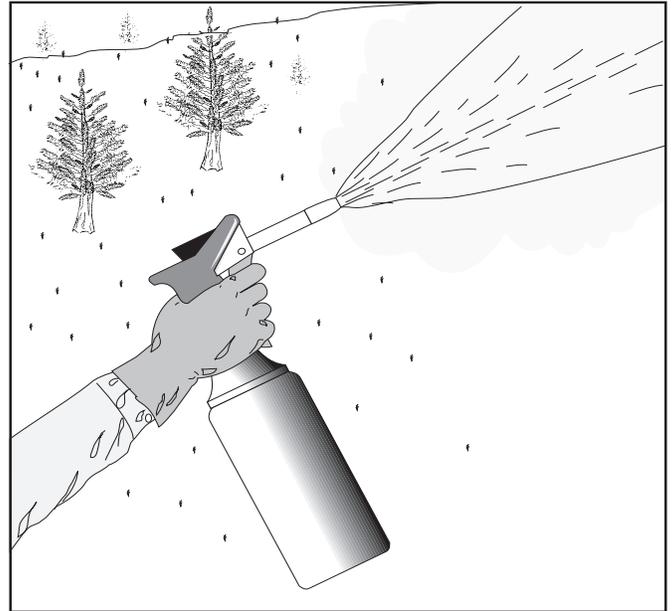


Figure 5—Mist from paint stream.



Figure 6—Three tree-marking paint guns, Panama back pack system is not shown.

Application Options

Several traditional type marking guns are on the market. Nelspot, TreCoder, Idico, and the Panama back pack system are examples shown in figure 6.

Those people who have a higher sensitivity to the paint might want to experiment with different methods of application. One option might be to use a pressurized backpack system with a longer, wand-type sprayer that allows the marker to get the nozzle closer to the tree and further from the face.



Figure 7—Do not use WD-40 or gasoline for cleanup.

Cleanup

Do the cleaning outside when possible. Do not use solvents or products intended for other purposes such as WD-40, gasoline, etc., see figure 7. These products increase the risk of adverse health effects. Refer to the current JHA for the required personal protective equipment.

Remove paint that has come in contact with your skin before the paint has had a chance to dry. Waterless hand cleaners seem to work well and can be used at the job site. Follow-up with a soap and water washing at the office or at home. Do not use solvents for personal cleanup. The new water soluble formulations currently being field tested require only water for cleanup, thus reducing exposure to solvents. It is best to try to avoid skin contact by using gloves, long sleeves, etc.

Record Keeping

Documentation of how a timber sale is marked is critical when it comes to an investigation by law enforcement. Markers need to record the paint color and batch number, and keep a small dried sample of each paint used on the sale stored in a locked file. This will make forensic analysis much easier if necessary at a later date. Examples of a cruiser’s tally card and paint inventory form are included in the appendix.

Law Enforcement Training

Forest Service Law Enforcement has a four-module training program that will soon be available to Forest Service employees.

Module 1 is titled “Timber Theft Prevention” and is intended for timber management personnel, and law enforcement personnel.

Module 2 is titled “Basic Timber Theft Investigation and Detection” and is intended for law enforcement officers and timber sale administrators.

Module 3 is titled “Advanced Timber Theft Investigation” and is intended for experienced special agents.

Module 4 is titled “Timber Theft for Managers” and is intended for line officers, district rangers, and forest supervisors.

For additional information regarding this training program, contact Kim Thorsen, law enforcement advisor to the National Tree-Marking Paint Committee at 703-235-5918.

NATIONAL COMMITTEE

The National Tree Marking Paint Committee is a subcommittee of the Forest Management Technology Committee, and is established and organized to provide a forum for the interchange of information and knowledge from various disciplines supporting tree-marking activities. The committee also provides a structure and mechanism for achieving improvements in tree-marking paint technology as they relate to timber sale preparation.

Each region of the Forest Service has a representative on the national committee. When you cannot find answers or need help with tree-marking issues on your forest, contact your regional representative.

R1	Doug Jones	208-347-0336
R2	George Broyles	605-642-4622
R3	Richard Stephens	520-527-3650
R4	Doug Jones	208-347-0336
R5	Karen Jones	916-587-5405
R6	Frank Duran	503-808-2970
R8	R.E. Vann	706-632-3031
R9	Larry Mellstrom	906-852-3500
R10	Bob Simmons	907-228-6312

R9-NATIONAL TIMBER SALE CRUISE PROGRAM TALLY SHEET

FOREST _____ DISTRICT _____ SALE No. _____ P.U. No. _____ DAY ___ / ___ / ___ SHEET ___ OF ___

SALE NAME _____ CRUISERS _____

PAINT BRAND _____ BATCH NO. _____ COLOR _____

Line No.	Stratum No.	Plot Card No.	Tree/Line No.	Species	DBH	Sample Group	Tree Count	Sawlogs		Total		Live/Dead	Cul/Leave	Tree Grade
								HT 8 Bolts	DEF	Ht 8 Bolts	DEF			
1														
2														
3														
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