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Agency

Solid Waste
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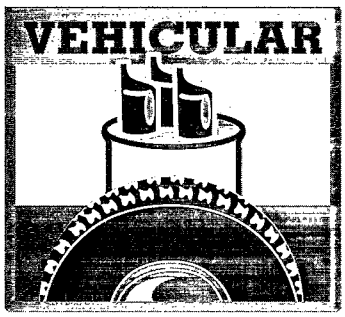
EPA

ECO PURCHASING

1997 Buy-Recycled Series
Vehicular Products



If you're a fleet manager, buying recycled products can take you a long way down the road toward protecting the environment and saving resources. Cost-effective, reliable, and high quality recycled vehicular products, such as re-refined oil, retreaded tires, and recycled engine coolants, are being used with success by many government agencies nationwide.

To make it easier to buy recycled, the U.S. Environmental Protection Agency (EPA) updates the Comprehensive Procurement Guidelines (CPG) each year. Through the CPG, EPA designates items that must contain recycled content when purchased by federal, state, and local agencies or by government contractors using appropriated federal funds. Among these items, EPA has designated several vehicular products. EPA's research shows that the items designated in the CPG are safe, of high quality, widely available, and cost-competitive with virgin products. EPA also issues a non-regulatory companion piece—the Recovered Materials Advisory Notice (RMAN)—that recommends levels of recycled content for these items.

You might be unfamiliar with buying re-refined oil, retreaded tires, or recycled engine coolant. But studies and experience have shown that these products can meet and exceed your quality standards. What's more, buying recycled can cut your expenses while reducing solid waste and providing markets for recyclable materials collected nationwide.

EcoPurchasing means considering attributes such as

❖

recycled content
toxicity
reusability
durability
repairability

❖

before you buy a product.

Printed on paper that contains at least 20 percent postconsumer fiber.

What Is The CPG?

The CPG requires federal agencies to buy items made from recovered materials.

Recycling is more than just dropping off your cans, bottles, and newspapers at the curb or at a local collection facility. Diverting recyclables from the waste stream is only the first step in the recycling process. The second step occurs when companies use these recyclables to manufacture new products. The third step comes when you purchase products made from recovered materials. That's how we close the loop.

To encourage the purchase of recycled products, the Resource Conservation and Recovery Act (RCRA) requires agencies to buy recycled products. In addition, President Clinton signed Executive Order 12873 in October 1993, which called for an increase in the federal government's use of recycled-content products. Developed in response to these directives, the CPG requires federal agencies to give preference to EPA-designated items made with recovered materials. This, in turn, supports recycling markets and allows recycling to continue to expand.

Issued in May 1995, the first CPG designated 19 new products and incorporated 5 previously designated items (including re-refined oil and retreaded tires) in 7 product categories that procuring agencies are required to purchase with recycled content. (A procuring agency is any federal, state, or local agency or government contractor that uses appropriated federal funds to purchase products.) A CPG update (CPG II) was published in November 1997, but designated no new vehicular products. This fact sheet updates the information provided in the 1996 Buy Recycled Series.

If your agency spends more than $10,000 per year on a product designated in the CPG, you are required to purchase it with the highest recycled-content level practicable. The CPG also applies to lease contracts covering designated items.

By May 1, 1996, your agency was required to develop an affirmative procurement program (or modify its existing program) to incorporate buy-recycled requirements for re-refined oil, retread tires, and engine coolants. It is not too late to develop your affirmative procurement program if you have not already done so. This effort might involve reviewing your specifications for these products and eliminating provisions that pose barriers to procuring them with recycled content (such as aesthetic requirements unrelated to product performance).

The CPG acknowledges, however, that specific circumstances might arise that preclude the purchase of products made with recovered materials. You may purchase designated items that do not contain recovered materials if you determine that: (1) the price of a given designated item made with recovered materials is unreasonably high, (2) there is inadequate competition (not enough sources of supply), (3) unusual and unreasonable delays would result from obtaining the item, or (4) it does not meet your agency's reasonable performance specifications.

How Do I Purchase Recycled-Content Vehicular Products?

To help agencies comply with the buy-recycled requirements, EPA also issues guidance in RMANs, which are designed to make it as easy as possible to buy the designated items. The RMANs recommend recycled-content levels to look for when purchasing vehicular products, as shown in the chart below. Following the RMANs' recommended levels will help ensure that your affirmative procurement program and standards meet the buy-recycled requirements.

Rather than specifying just one level of recycled content, the RMANs recommend ranges that reflect actual market conditions. The recommendations are based on market research identifying recycled-content products that are commercially available, are competitively priced, and meet buyers' quality standards.

Refer to EPA's *Vehicular Products Containing Recovered Materials* for sources of the designated items.

The RMAN recommends recycled content ranges at which the designated items are generally available in the market place.

EPA's Recommendations for Purchasing Vehicular Products

Vehicular Product	Recommendations
Re-Refined Oil	Use 25 percent or more re-refined oil base stock for engine lubricating oils, hydraulic fluids, and gear oils.
Retread Tires (excluding airplane tires)	Purchase retread tires or tire retreading services to the maximum extent feasible.
Engine Coolants	Reclaim engine coolants on site or contract for off-site reclamation services. Also, request reclaimed engine coolant when having vehicles serviced at commercial service centers and buy it when making direct purchases.

Myths and Facts About Recycled-Content Vehicular Products

People are often reluctant to try new technologies. Recycled-content products are no exception. Out-of-date and incorrect information about the uses and benefits of recycled-content products lead people to believe that they do not work as well as virgin products. Several agencies using recovered-content products, however, have proven that these products work well and that they are cost-effective. Some of the common myths about recycled-content vehicular products are dispelled below. At the end of this fact sheet, you can find an extensive list of additional resources for more information.

Re-Refined Oil

MYTH 1: **Re-refined lubricating oil is inferior to new lubricating oil.**

FACT: Re-refined oil is subject to the same stringent refining, compounding, and performance standards as virgin oil. Extensive laboratory testing and field studies conducted by the National Bureau of Standards (now the National Institute of Standards and Technology), the U.S. Army, the U.S. Department of Energy, the U.S. Postal Service (USPS), and EPA concluded that re-refined oil is equivalent to virgin oil, passes all prescribed tests, and **can even outperform virgin oil.** The American Petroleum Institute (API) has licensed qualified re-refined oil products, which display the API starburst and/or donut symbol.

MYTH 2: **Using re-refined oil voids manufacturers' warranties.**

FACT: All three of the major U.S. automobile manufacturers (Ford, General Motors, and Chrysler) now recognize that re-refined oil meets the performance criteria specified in their warranties. Each has issued a written statement explaining that the use of re-refined oil will not void warranties. Warranty requirements are based on performance criteria and not on the origin of the base oil. As long as the purchased oil meets the warranty requirements, the warranty must be honored.

CASE STUDIES: U.S. Postal Service

USPS is using re-refined oil-based lubricants in more than 100,000 vehicles (more than half its fleet). USPS also implemented a closed loop recycling program, whereby its used oil is collected, re-refined, and sold back to the service. After numerous vehicle miles, a chemical analyses of re-refined and virgin oil samples taken from USPS vehicles showed that using re-refined oil was no different from using virgin oil-based lubricants. For more information, contact Richard Harris of USPS at 202 268-3576.

The Santa Ana, California, USPS district uses a closed loop system for re-refining used oil. In its fleet of nearly 4,500 vehicles, the district uses more than 22,000 quarts of motor oil per year and saves more than $1,300 each year by re-refining its used oil. For more information, contact Jon Martin of USPS at 714 842-2528.

CASE STUDY: U. S. Department of Defense

Defense Supply Center Richmond (DSCR) has initiated a progressive program called "Closed-Loop." When customers order re-refined oil, the vendor will pick up their used oil when fulfilling the order. The collected oil goes to a re-refiner for recycling, completing the recycling loop. Not only does this program eliminate the administrative burden of managing a separate contract for used oil disposal, but it also provides environmental benefits and saves customers money. DSCR intends to offer both 10W30 and 15W40 grades in accordance with a Commercial Item Description, and 15W40 in accordance with Military Specification Mil-L-2104. This program makes it even easier to maximize the recycling of used oil and will increase implementation of Executive Order 12873. For more information, contact Robin Champ of DSCR at 804 279-4908.

***MYTH 3:* Re-refined oil costs more than virgin oil.**

FACT: In most cases, re-refined oil prices are comparable to those for equivalent virgin oil products. WAL-MART, a national distributor of vehicular oils, is currently selling a re-refined oil for 10 percent less than virgin oils. Re-refined oil product pricing is affected by a number of variables, however, including the availability of used oil. The best method for determining price is through the marketplace.

Retread Tires

***MYTH 1:* Retreads are less safe than new tires.**

FACT: Statistics compiled by the U.S. Department of Transportation show that nearly all tires involved in any tire-related accidents were underinflated or bald. Properly maintained tires, both new and retreaded, do not cause accidents. Retreaded tires have been safely used on school buses, trucks, cars, fire engines, and other emergency vehicles for years.

***MYTH 2:* Retreads have a higher failure rate than new tires.**

FACT: Rubber on the road comes from both new tires and retreaded tires, primarily from truck tires that are overloaded, underinflated, or otherwise abused. New or retreaded tire failures can be greatly reduced by following all the rules of good maintenance, including proper mating with regard to diameter and tread depth and design, as well as maintaining proper air pressure.

Recycled Engine Coolants

***MYTH 1:* Recycled engine coolant is inferior to new engine coolant.**

FACT: Testing shows that recycled coolant meets nationally recognized performance specifications for new coolant, such as those established by the American Society for Testing and Materials (ASTM) and the Society of Automotive Engineers. The recycling process reduces the chlorides that come from hard water so that recycled antifreeze may actually be purer than virgin coolant.

CASE STUDY: Fort McCoy

After noticing poor tire performance in new tires, the fleet inspector at Fort McCoy, Wisconsin, tested 20 retreaded tires in 1990. Pleased with the results, he purchased 60 retreaded tires the following year and about 600 retreads in 1995. The fleet inspector found that retreads provided superior handling and failed less often than new tires. Beginning in 1995, retreads have also saved the facility about $20,000 per year. The operation also services approximately 700 vehicles a year with re-refined oil. For more information, contact Jerry Cooper, U.S. General Services Administration Fleet Inspector, at 608 269-4429.

CASE STUDY: U.S. Postal Service

In 1992, USPS operated 179,000 vehicles and retreaded 50,000 tires. In 1994, the fleet grew to 202,000 vehicles and used 76,000 retreads. USPS vehicles travel in all kinds of weather on both paved and unpaved roads. This 52 percent growth in the number of retreads over 2 years reflects USPS's belief that retreads meet their performance and quality needs. For more information, contact Richard Harris of USPS at 202 268-3576.

The Southeast area of USPS implemented an on-site coolant recycling program. Most facilities in the region made the switch. They reclaim about 7,000 gallons (75 percent) of concentrated coolant each year, which substantially reduces the amount of new products purchased. Many postal vehicle maintenance facilities in the Southeast are using commercial vacuum distillation machines for the recycling process. For more information, contact Bob Martin of USPS at 901 747-7635.

The USPS Huntington Beach, California, vehicle maintenance facility uses an in-house extraction and recovery process for its engine coolants. The units recover virtually all of the ethylene glycol left in the spent coolant. Recovering the coolant reduces total waste stream volume and saves money by reducing costs for disposal and for purchasing new coolant. For more information, contact Jon Martin of USPS at 714 842-2528.

MYTH 2: **Recycled coolant costs more than new coolant.**

FACT: Recycled coolant may cost less than new coolant if you select the right recycling process for your shop. You must consider the cost of new coolant and your current disposal costs and compare these to the cost of on-site or off-site recycling.

MYTH 3: **Spent coolants are hazardous waste and those handling them must follow hazardous waste regulations.**

FACT: Spent coolants are not listed by EPA as a hazardous waste. Some older test data indicated used coolant sometimes had levels of lead requiring it to be managed as a hazardous waste. Most new vehicle radiators are made with aluminum cores and plastic tanks, so there is less opportunity for lead contamination of coolant today than in the past. Still, some states consider coolant to be hazardous. Contact your state environmental agency for further information.

MYTH 4: **Recycled coolant will void manufacturers' warranties.**

FACT: Coolant recyclers have worked with automotive and truck engine original equipment manufacturers (OEMs) to get their approval on coolant recycling processes. Check with your recycler for a list of OEM approvals.

CASE STUDY: American Automobile Manufacturers

General Motors (GM) endorses several coolant recycling systems and states that "The warranty of General Motors will be unaffected if engine coolant recycling is performed as described by the manufacturer and with GM-approved recycling equipment." Ford expressly authorizes the use of certain engine coolant recycling processes and chemicals that meet its specifications. Chrysler allows any coolant to be used (virgin or recycled) as long as it meets Chrysler's and ASTM's specifications for ethylene glycol. For more information, call Richard Paul at the American Automobile Manufacturers' Association at 313 872-4311.

Coolant Recycling Processes

The RMAN recommends that procuring agencies establish a program for engine coolant reclamation and reuse either on site or through a service contract. There are three general types of coolant recycling processes: filtration, distillation, and ion exchange. Since variations exist among the various processes, check with the system manufacturer for specifics regarding coolant produced by the system.

Filtration is the most common type of coolant recycling process. It has the lowest initial investment but has high operating costs. Coolants often contain dissolved solids and filtration systems often require pre- and post-filter treatment as well.

Distillation evaporates and recondenses the coolant. This is a slow process with a high initial investment, but it requires less operator time and lower operating costs. Solids and other chemicals are left behind as a residue that must be managed according to applicable laws.

Ion exchange removes solids and other chemicals from the coolant as it passes through a resin bed. Periodically this bed must be regenerated to remove the buildup. Equipment costs are higher than most other systems. Operating costs are comparable to filtration systems.

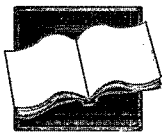
How Can I Get More Information?

Information Available From EPA

This fact sheet and the following publications on buying recycled products are available in electronic format on the Internet at **http://www.epa.gov/epaoswer/non-hw/procure.htm**. Use Internet e-mail to order paper copies of documents. Include the requestor's name and mailing address on all orders. Address e-mail to: **rcra-docket@epamail.epa.gov**. Text of the following *Federal Register* notices can be found at **http://www.epa.gov/fedrgstr/search.htm**. Search by specific day, by keywords, or by accessing the Government Printing Office database.

Paper copies also may be ordered by calling the RCRA Hotline. Callers within the Washington Metropolitan Area must dial 703 412-9810 or TDD 703 412-3323 (hearing impaired). Long-distance callers may call 800 424-9346 or TDD 800 553-7672. The RCRA Hotline operates weekdays, from 9:00 a.m. to 6:00 p.m., EST.

- ***Federal Register (FR)*** notices promulgating CPG I (60 FR 21370/EPA530-Z-95-006) and RMAN I (60 FR 21386/EPA530-Z-95-007), May 1, 1995. *Federal Register* notices promulgating CPG II (62 FR 60961/EPA530-Z-97-009) and RMAN II (62 FR 60975/EPA530-Z-97-010), November 13, 1997.
- ***EPA Issues Comprehensive Procurement Guideline*** (EPA530-F-95-010). This 4-page fact sheet provides general information about the CPG and the development of affirmative procurement programs.
- ***Environmental Fact Sheet–Purchasing and Maintaining Retread Passenger Tires*** (EPA530-F-95-019), September 1995. This EPA and GSA fact sheet provides information on waste prevention, proper tire maintenance, and tire retreading for fleet managers and vehicle operators.
- ***Vehicular Products Containing Recovered Materials*** (EPA530-B-97-005). This list contains sources of vehicular products containing recovered materials.
- ***A Study of State and Local Government Procurement Practices that Consider Environmental Performance of Goods and Services*** (EPA742-R-96-007). This report provides important program elements and case studies of state and county agencies purchasing environmentally preferable products and services. For a copy of the report or more information on EPA's Environmentally Preferable Purchasing (EPP) program, contact the Pollution Prevention Information Clearinghouse at 401 M Street, SW. (7409), Washington, DC 20460. Phone: 202 260-1023. Fax: 202 260-4659. Visit the EPP homepage at **http://www.epa.gov/opptintr/p2home**.



Other Sources of Information—General

- **Buy Recycled Business Alliance.** The Alliance includes over 3,200 companies and organizations committed to increasing their use of recycled-content products and materials in their day-to-day operations. The Alliance offers educational materials, a quarterly newsletter, and product-specific guides. Public purchasing entities can join free of charge. For more information, contact Bonnie Fedchock, National Recycling Coalition, 1727 King Street, Suite 105, Alexandria, VA 22314-2720.
Phone: 703 683-9025, Ext. 209. Fax: 703 683-9026.
- ***DLA Environmental Products Catalogue.*** This document is an important source of supply information for environmental products from the Defense Logistics Agency (DLA). It includes items from all DLA inventory control points containing recycled material or having other environmental benefits. For more information, call 800 352-2852 or fax 800 352-3291. Military customers can call DSN 695-5699 or fax DSN 695-5695. For information on the CD-ROM version of the catalogue, contact the DLA Service Center at 616 961-4459 or DSN 932-4459. Homepage: **http://www.dscr.dla.mil.**
- **General Services Administration (GSA).** GSA publishes various supply catalogs, guides, and schedules for recycled-content products available through the Federal Supply Service. For copies of the following documents and other information, contact GSA, Centralized Mailing List Service (7CAFL), 4900 Hemphill Street, P.O. Box 6477, Fort Worth, TX 76115-9939. Phone: 817 334-5215. Fax: 817 334-5227. You can also access *GSA Advantage!*, GSA's Internet-based online ordering system, to order any GSA product at **https://www.fss.gsa.gov/cgi-bins/advwel**.
  - ***Environmental Products Guide.*** This guide, published by GSA, is a handy reference companion to the GSA Supply Catalog and Federal Supply Schedules. It provides information on the acquisition of engine coolant reclamation systems. The guide also is available on GSA's Multi-User File for Interagency News (MUFFIN), an electronic bulletin board. For computer support help with MUFFIN, call 703 305-7200.
  - ***Tires, Pneumatic for Passenger, Light Truck, Medium Truck/Bus, and Retread Services, Federal Supply Schedule, Group 26, Part 1.*** Lists a variety of retread tires available for purchase.
- **National Institute of Governmental Purchasing (NIGP).** NIGP maintains a library of product specifications and sample bid documents for both virgin- and recycled-content products, including oil products and retread tires. It also offers procurement training workshops for members. For more information, contact Fuad Abu-Taleb, 11800 Sunrise Valley Drive, Reston, VA 22091. Phone: 703 715-9400, Ext. 241. Fax: 703 715-9897.
- ***Official Recycled Products Guide.*** This document is a comprehensive directory of recycled-content products and contains more than 5,000 listings of manufacturers and distributors, including those of re-refined oil, retread tires, and engine coolants. Contact: Recycling Data Management Corporation, P.O. Box 577, Ogdensburg, NY 13669. Phone: 800 267-0707. Fax: 315 471-3258.
- **Office of the Federal Environmental Executive (OFEE).** The OFEE offers a number of resources, listed below, to help government agencies learn about CPG-designated products. Contact: Office of the Federal Environmental Executive, 401 M Street, SW. (MC 1600), Washington, DC 20460. Phone: 202 260-1297. Fax: 202 401-9503. Homepage: **http://www.ofee.gov**.
  - ***Closing the Circle News.*** This newsletter reports on the government's progress towards an environmentally conscious and friendly approach to recycling, acquisitions, and procurement. The fall 1995 issue contains an article entitled "OFEE Helps Negotiate an End to Gridlock on Re-Refined Oil."
  - ***Roadmap to Buying Recycled Vehicular Products.*** This video was produced by the Office of the Federal Environmental Executive and the USPS. It highlights availability, performance, and warranty issues of re-refined oil, retread tires, and reclaimed engine coolant. It features a message from the Federal Environmental Executive and insight from experiences of fleet management personnel from five federal agencies. It is available free of charge.

— ***Greening of the Government: A Guide to Implementing E.O. 12873.*** This document provides detailed information on establishing and implementing federal affirmative procurement plans and is available free of charge. Updated in the summer of 1997, it contains information on oil and tires, including automobile manufacturers' warranty-related statements on re-refined oil.

Internet Sites

- **California Recycled-Content Product Database: http://www.ciwmb.ca.gov/mrt/rcp/rcp.htm.** This site contains information on why to buy recycled-content products, how to procure them, and provides access to a database with information on products, as well as manufacturers, distributors, reprocessors, mills, and convertors across the country who procure or produce these products.
- **King County Recycled Product Procurement Program: http://www.metrokc.gov/oppis/recyclea.html.** This site describes the tools and techniques developed by King County, Washington, agencies for purchasing recycled products.
- **Reduce, Reuse, Recycle...Through Procurement: http://www.epa.gov/epaoswer/non-hw/procure.htm.** This site describes EPA's effort to facilitate the procurement of products containing recovered materials, including information on CPG, RMANs, and the Buy Recycled Series.
- **The Procurement Assistance Jumpstation: http://www.fedmarket.com/procinet.html.** This site contains links to many sites containing procurement information.

Other Sources—Re-Refined Oil

- ***Re-refined and Commercial Motor Oils.*** This brochure, developed by the DLA General Supply Center, provides ordering information for a variety of re-refined oil products, including a new product line that meets military specifications. For a copy of the brochure, contact Robin Champ, Defense Supply Center Richmond, Attn: DSCR-XA, 8000 Jefferson Davis Highway, Richmond, VA 23297-5762. Phone: 800 345-6333 or DSN 695-4908.
- Copies of GSA's guidance on the use of re-refined oil in Interagency Fleet Management Systems Vehicles can be obtained from Larry Frisbee, Fleet Management Division, GSA, Washington, DC 20406. Phone: 703 305-6837. Fax: 703 305-7158.
- Three cases of re-refined oil are available free to federal entities and local governments of more than 30,000 people by contacting the U.S. Conference of Mayors, 1620 Eye Street, NW., Washington, DC 20006. Phone: 202 293-7330. Fax: 202 429-0422. Private sector companies with a minimum of 50 service fleet vehicles can contact the Buy Recycled Business Alliance, a program of the National Recycling Coalition, for three free cases at 1727 King Street, Suite 105, Alexandria, VA 22314-2720. Phone: 703 683-9025. Fax: 703 638-9026.
- The Office of the Federal Environmental Executive has a list of 940 WAL-MART locations that offer re-refined oil with their "Tire and Lube Express" services. This is available in hard copy and on disk. (Most WAL-MARTs offer re-refined oil off the shelf.) Contact the Office of the Federal Environmental Executive at 401 M Street, SW. (MC 1600), Washington, DC 20460. Phone: 202 260-1297. Fax: 202 401-9503. Homepage: **http://www.ofee.gov.**

Other Sources—Retread Tires

- ***Retread Tire Buyers Guide.*** This guide lists contact information for all Tire Retread Information Bureau (TRIB) member retreaders and tire dealers in North America and includes the type of retreading available from each listing. For additional information about tire retreading and tire repairing, including videos such as ***The Use of Retreaded Tires on Government Vehicles***, contact TRIB at 900 Weldon Grove, Pacific Grove, CA 93950. Phone: 408 372-1917; toll free in the U.S. and Canada: 888 473-8732. Fax: 408 372-9210. E-mail: retreads@aol.com.
- **International Tire and Rubber Association**, Marvin Bozarth, Executive Director, P.O. Box 37203, Louisville, KY 40233-7203. Phone: 800 426-8835. Fax: 502 964-7859.
- **National Tire Dealers and Retreaders Association**, John F. Buettner, Sr., Director, Tire Retreading Institute, 7601 West Mockingbird Court, Fairland, IN 46126. Phone: 317 861-9170. Fax: 317 861-9214.

Other Sources—Recovered Engine Coolants

- **The Society of Automotive Engineers'** paper number 921634, *An Evaluation of Engine Coolant Recycling Technologies,* offers information about recovered engine coolants. The paper is available by calling 412 776-4841.
- For information on USPS' testing and approval of recycled engine coolant, call Vincent Tung, Mechanical Program Engineer, USPS, 8403 Lee Highway, Merrifield, VA 22082-8101. Phone: 703 280-7052. Fax: 703 280-8402.

In addition, contact your state solid waste management agency for information about local and regional businesses that produce or distribute recycled-content products.

EPA

United States
Environmental Protection Agency
401 M Street, SW. (5306W)
Washington, DC 20460

Official Business
Penalty for Private Use
$300