



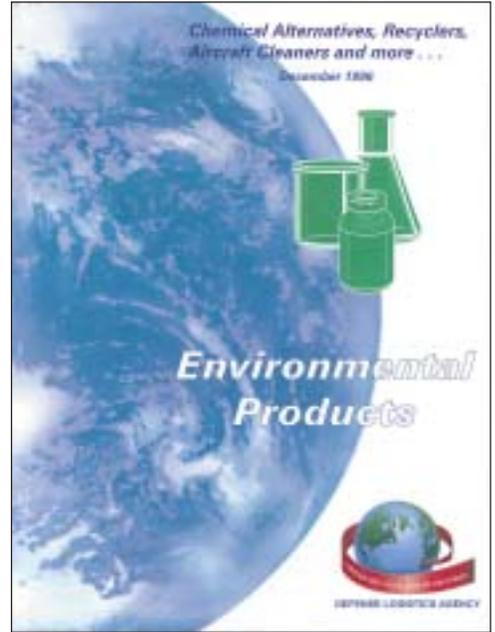
# Navy Environmental Quality Fact Sheet



## Do you need assistance in identifying solvent substitutes?

### Would you like to improve this process in the following areas?

- **Meet environmental compliance regulations.** Reduce use of chemical solvents and generation of hazardous solvent waste. Reduce air emissions associated with solvent use. Media areas include air and hazardous waste programs.
- **Improve workers' safety and health.** Reduce exposure to hazardous solvents.
- **Increase productivity.** May reduce labor hours for TRI and NESHAP reporting.
- **Save money.** Reduce hazardous waste disposal costs and regulatory liabilities.



Solvent Substitutes

*Chemical solvents containing hazardous compounds are widely used at Navy installations for a variety of operations including component/equipment cleaning, degreasing, paint stripping, parts washing and vehicle/equipment maintenance. Some of these compounds are photochemically reactive and cause air pollution, some are ozone depleting substances (ODS), and most are toxic. Use of many of these compounds is restricted under the Clean Air Act because of their volatility and/or toxicity. Non-hazardous substitutes for these toxic solvents may contain ingredients such as the following: Acetone, Acidic aqueous, Alkaline aqueous, Alcohol, Aqueous Additives, Dibasic esters, Ethyl lactate, Glycol ethers, Neutral Aqueous, N-methylpyrrolidone, Petroleum distillates, Terpenes, and pure water. Although no one substitute product may be recommended for a particular process, a variety of information sources are available to assist activities in selecting alternative products. These sources include: the Joint Service Pollution Prevention Opportunity Handbook; the Navy Shipboard Environmental Information Clearinghouse; the U.S. EPA (EPA publishes and updates ODS alternatives in the Federal Register) and the Defense Supply Center, Richmond (DSCR).*

### How can you achieve these improvements?

Refer to Navy, EPA and DLA sources of information on non-hazardous solvent substitutes.

### How does this practice work?

Alternative products are available to directly replace solvents containing hazardous and toxic chemicals; some minor modification to the process may be required.

### How will this practice save you money?

Non-hazardous solvent substitutes do not require special permits. Using substitutes reduces costs associated with reporting requirements and regulatory liabilities. Disposal costs of hazardous materials are eliminated.

## Typical Process Flow Diagram



How can solvent substitution eliminate or reduce pollution?

This P2 method replaces harmful chemical solvents with non-hazardous substitute products. Implementation will result in the following pollution reductions:

- Reduce use of hazardous chemical solvents and associated fugitive air emissions.
- Reduce the amount of hazardous waste generated.

Which shops can benefit most from solvent substitution?

Solvent substitutes can be used in processes that use solvents to remove paint, oil, and grease from parts or equipment. Typical shops include:

- Aircraft Parts Maintenance
- Aircraft Corrosion Control
- Automotive Parts Maintenance
- Facilities Parts Maintenance

How can this practice reduce regulatory compliance concerns?

This method eliminates the use of hazardous chemical solvents, thereby reducing VOC emissions and waste generation. Use will result in the following regulatory compliance benefits:

- Reduction in hazardous waste helps facility meet the requirement of waste minimization under RCRA, 40 CFR 262.41 (a) (6).
- May help facilities reduce their generator status and lessen the tasks required to comply under RCRA, 40 CFR 262 (i.e., recordkeeping, reporting, inspections, transportation, accumulation time and emergency measures).
- May reduce or eliminate local VOC requirements in ozone nonattainment and maintenance areas.

### Achieving Environmental Compliance Through Pollution Prevention

Every day the Navy faces the challenge of operating and maintaining the fleet while complying with environmental regulations. This burden can be reduced by using pollution prevention technologies and methods to reduce compliance requirements. This fact sheet is one in a series designed to encourage activities to use pollution prevention technologies and methods. The overall goal of this series is to promote sustained environmental compliance at the lowest life-cycle cost.

For additional information, contact:

Joint Service P2 Opportunity Handbook Data, Section 8 ([http://p2library.nfesc.navy.mil/P2\\_Opportunity\\_Handbook/section8.html](http://p2library.nfesc.navy.mil/P2_Opportunity_Handbook/section8.html)) and the DLA Environmental Products Catalog (<http://www.dscr.dla.mil/products/epa/eppcat.htm>)

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