

LMTCE-WIPT

NAVAIR Environmental Program



InfoBase: A Hazardous Materials
Identification Tool for Aircraft
Maintenance Manuals



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A product of the
Lead Maintenance Technology
Center for the Environment (LMTCE)
Working Integrated Product Team (WIPT)
(909) 542-0516, x-122

InfoBase is an interactive information system that searches for and establishes hyperlinks between targeted chemicals and hazardous materials in hypertext markup language (HTML)-formatted aircraft maintenance manuals. Personnel from the Naval Aviation Depot North Island and the Lead Maintenance Technology Center for the Environment (LMTCE) Working Integrated Product Team (WIPT) developed this web-enabled system to ease the burden of identifying and establishing links between Material Safety Data Sheets (MSDSs) of targeted items and selected commonly-used aircraft maintenance manuals.

The hypertext link feature of InfoBase allows managers of maintenance manuals to easily and efficiently navigate through documents to review environmental, safety and health (ESH) targets. InfoBase will also allow policymakers to make sound decisions regarding the pervasiveness of hazardous material references in maintenance manuals. InfoBase can efficiently and reliably search and flag virtually any number of chemicals or hazardous materials, whether listed explicitly or implicitly, in a text file. Once targeted hazardous materials are flagged, environmental and program managers can initiate efforts to minimize or eliminate the hazardous materials in question.

Why Is INFOBASE Needed?

InfoBase is capable of identifying targeted hazardous materials in aircraft maintenance products required in NAVAIR manuals. Once identified as an Environmental, Safety and Health (ESH) target, efforts to minimize or eliminate these materials may be initiated through Research, Development, Test & Evaluation (RDT&E) efforts. After alternative materials are certified, Hazardous Materials Authorized Use List (HMAUL) may be amended to include NAVAIR approved products.

InfoBase is able to display pages from manuals and Material Safety Data Sheets (MSDSs) of targeted materials simultaneously. This feature assists managers and engineers in easily identifying products and processes in large text documents. The common material identifier linking the targeted chemical to the required maintenance materials facilitates a more thorough and efficient investigation by cognizant field activities and ESH organizations.

What INFOBASE Does

InfoBase accomplishes three primary functions:

- InfoBase searches text files for specified chemical targets using a number of criteria including; Chemical Abstract Service (CAS) number, chemical nomenclature and its synonyms.
- InfoBase references Material Safety Data Sheet (MSDS) information offered in the

Hazardous Materials Information System (HMIS) using military specifications (Mil-Specs), Federal Specifications (Fed-Specs), National Stock Numbers (NSNs), & chemical names and their synonyms.

- InfoBase links the "hits" from the MSDSs with the specification(s) or names as they occur in the maintenance manuals. Hyperlinks are established whereby a browser can bring the user to targeted ESH materials as they appear in the text of the maintenance manual, as well as having the ability of viewing the applicable MSDSs.

Future Plans & Summary

Planned enhancements to InfoBase will enable users to link and analyze Depot and fleet industrial processes, such as Hazardous Material Authorized Use Lists (HMAULs), hazardous waste manifests, required maintenance actions, or emission records, to improve hazardous material and hazardous waste management practices across the Navy. InfoBase developers also plan to increase the number of manuals to further enhance the generation of targeted lists of hazardous materials. Plans to include Type/Model/Series (TMS) manuals to InfoBase are being considered.

Future challenges to the ongoing success of InfoBase include the following:

- Securing additional manuals in the proper html format,
- Incorporating manufacturer's part numbers and names into the InfoBase search routines,
- Maturing the technologies used to construct InfoBase, and
- Overcoming the hardware and software limitations implicit within the InfoBase user community.



Primary Sources Of INFOBASE Program Data

The following NAVAIR maintenance manuals are incorporated into the InfoBase information system:

Manual Number	Manual Title
NAVAIR 01-1A-1	Aircraft Structural Repair Manual
NAVAIR 01-1A-12	Fabrication, Maintenance and Repair of Transparent Plastics Manual for Aircraft Applications
NAVAIR 01-1A-16	Non-Destructive Inspection Methods Manual
NAVAIR 01-1A-17	Aviation Hydraulics Manual
NAVAIR 01-1A-20	Aviation Hose & Tube Manual
NAVAIR 01-1A-21	General Composite Repair Manual
NAVAIR 01-1A-34	Aeronautical Equipment Welding Manual
NAVAIR 01-1A-35	Aircraft Fuel Cells & Fuel Tanks Maintenance Instructions Manual
NAVAIR 01-1A-39	Naval Aircraft Battle Damage Repair Manual
NAVAIR 01-1A-75	Airborne Weapons & Associated Equipment, Consumable Material Applications & Hazardous Material Authorized Use List
NAVAIR 01-1A-503	Maintenance of Aeronautical Antifriction Bearings
NAVAIR 01-1A-507	General Use of Cements, Sealants & Coatings Manual
NAVAIR 01-1A-509	Aircraft Weapons Systems Cleaning & Corrosion Control Manual
NAVAIR 04-10-1	Aircraft Wheels Maintenance Manual
NAVAIR 04-10-506	Aircraft Tires & Tubes Manual
NAVAIR16-1-540	Avionics Cleaning & Corrosion Prevention/Control Manual
NAVAIR17-1-125	Support Equipment Cleaning, Preservation, & Corrosion Control Manual



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