

**NAVSEA S6480-A4-CAT-010**

---

**0910-LP-101-6896**

**U.S. NAVY SURFACE SHIP  
(NON-SUBMARINE)**

**AUTHORIZED CHEMICAL CLEANING  
PRODUCTS AND DISPENSING SYSTEMS  
CATALOG**



DISTRIBUTION STATEMENT A: APPROVED FOR PUBLIC RELEASE; DISTRIBUTION IS UNLIMITED.

DESTRUCTION NOTICE: DESTROY BY ANY METHOD THAT WILL PREVENT DISCLOSURE OF CONTENTS OR RECONSTRUCTION OF THIS DOCUMENT.

PUBLISHED BY DIRECTION OF COMMANDER, NAVAL SEA SYSTEMS COMMAND

---

**05 AUGUST 2003**

**LIST OF EFFECTIVE PAGES**

**Dates of Original and Change Pages are:**

Original ..... 0.....5 August 2003

Insert latest changed pages; dispose of superseded pages.

NOTE: On a changed page, the portion of the text affected by the latest change is indicated by a vertical line on the outer margin of the page. Changes to illustrations are indicated by miniature pointing hands.

Total number of pages in this publication is 154 consisting of the following:

| Page No.                             | *Change No. | Page No.            | *Change No. |
|--------------------------------------|-------------|---------------------|-------------|
| Title and A                          | 0           |                     |             |
| Change Guide and Certification Sheet | 0           | CHAPTER 3           |             |
| Certification Sheet                  | 0           |                     |             |
| A&PR Page                            | 0           | Pages 50 through 67 | 0           |
| Change Record-1                      | 0           |                     |             |
| Change Record-2 blank                | 0           | SECTION 4           |             |
| Foreword-1                           | 0           |                     |             |
| Foreword-2 blank                     | 0           | Pages 68 through 74 | 0           |
| i and ii Table of Contents           | 0           |                     |             |
| iii List of Tables                   | 0           |                     |             |
| CHAPTER 1                            |             | INDEX               |             |
| Pages 1 through 5                    | 0           | Page 75 through 76  | 0           |
| CHAPTER 2                            |             |                     |             |
| Pages 6 through 49                   | 0           | TMDER Forms (3)     |             |

NOTE

If pages are marked with a change level but no change symbol, such pages contain original text placed on different pages, deleted material, and/or pages that have been added to the manual.

\*Zero in this column indicates an original page.

**NAVSEA TECHNICAL MANUAL  
CHANGE GUIDE**

**TM Change Number: NAVSEA Pub. No. S6480-A4-CAT-010**

**Change: 0; Original Issue**

**Title: U.S. NAVY SURFACE SHIP (NON-SUBMARINE) AUTHORIZED CHEMICAL CLEANING PRODUCTS  
AND DISPENSING SYSTEMS CATALOG**

**After the attached enclosures have been inserted, record this change on the Change Record sheet and insert this Change Guide immediately following the List of Effective Pages.**

**Remove the following pages and replace with new change pages attached. Dispose of superseded pages in accordance with applicable regulations.**

**Remove Pages**

**Not Applicable**

**Replace/Add Pages**

**Not Applicable; This is original issue**

# NAVSEA TECHNICAL MANUAL CERTIFICATION SHEET

Certification Applies to: Change 0; Original Issue

Applicable TMINs/Change No.: Pub. No. S6480-A4-CAT-010

Publication Date: 5 AUGUST 2003

Title: U.S. NAVY SURFACE SHIP (NON-SUBMARINE) AUTHORIZED CHEMICAL CLEANING PRODUCTS AND DISPENSING SYSTEMS CATALOG

TMCR: NDMS 980115-000

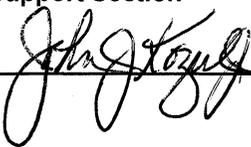
PURPOSE OF CHANGE: New Catalog.

Equipment Alteration Numbers Incorporated: N/A

TMDER/ACN Numbers Incorporated: N/A

## CERTIFICATION STATEMENT

This is to certify that responsible NAVSEA activities have reviewed the change for acquisition compliance, technical coverage, and printing quality. This form is for internal NAVSEA management use only, and does not imply contractual approval or acceptance of the technical manual by the Government, nor relieve the contractor of any responsibility for delivering the technical manual in accordance with the contract requirements.

| Authority           | Name   | Signature   | Organization          | Date    |
|---------------------|--|---|-----------------------|---------|
| Acquisition         | C. Socha<br>Solid & Hazardous Material<br>Engineering Branch<br>DSN 443- 7499 or Comm.<br>(215) 897-7499     |  | NSWCCD-SSES Code 635  | 7/31/03 |
| Technical           | M. Chapkovich<br>Shipboard Environmental<br>Protection Division<br>DSN 326 -1749 or Comm.<br>(202) 781- 1749 |  | NAVSEA 05M4           | 7/25/03 |
| Printing<br>Release | J. Kozul, PE<br>Head, TMMA & Feedback Support Section<br>DSN 443-1230 or Comm.<br>(215) 897-1230             |  | NSWCCD-SSES Code 9442 | 8/4/03  |

**CHANGE RECORD**

| Change No. | Date | Title and/or Brief Description | Signature of Validating Officer |
|------------|------|--------------------------------|---------------------------------|
|            |      |                                |                                 |

## FOREWORD

This catalog contains general guidance to the U.S. Navy Surface Fleet for cleaning products that are authorized by the Naval Sea Systems Command for use onboard U.S. Navy Surface Ships only. (Note: This catalog does not apply to U.S. Navy Submarines.) The catalog contains the following information: a list of authorized shipboard chemical cleaning products (concentrates and ready-to-use products) for general cleaning applications; precautions required for handling, stowage, and disposal of chemical cleaning products; containment requirements for chemical cleaning concentrates; and a list of authorized dispensing systems.

This publication consists of the following sections:

- Chapter 1:           General Information and Safety Precautions
- Chapter 2:           Authorized Cleaning Concentrates
- Chapter 3:           Authorized Dispensing Systems
- Chapter 4:           Authorized Ready-to-Use Cleaners
- Index

Ships, training activities, supply points, depots, Naval Shipyards, and Supervisors of Shipbuilding are requested to arrange for the maximum practical use and evaluation of NAVSEA technical manuals. All errors, omissions, discrepancies, and suggestions for improvement to NAVSEA technical manuals shall be reported to the Commander, NAVSURFWARCENDIV, 4363 Missile Way, Port Hueneme, CA 93043-4307 on NAVSEA/SPAWAR Technical Manual Deficiency/Evaluation Report (TMDER), NAVSEA Form 4160/1. To facilitate such reporting, copies of NAVSEA Form 4160/1 are included at the end of each bound part of each technical manual. All feedback comments shall be thoroughly investigated and originators will be advised of action resulting therefrom. Extra copies of NAVSEA Form 4160/1 may be requisitioned from DDSP Susquehanna PA, 05 E Street, Mechanicsburg, PA 17055-5003.

**TABLE OF CONTENTS**

| <b>Chapter</b> |  | <b>Page</b> |
|----------------|--|-------------|
| 1.0            | GENERAL INFORMATION AND SAFETY PRECAUTIONS.....                            | 1           |
| 1.1            | Introduction.....  | 1           |
| 1.2            | Background.....  | 1           |
| 1.3            | Safety Precautions.....  | 2           |
| 1.4            | Hazard Symbols.....  | 3           |
| 1.5            | Containment.....   | 4           |
| 1.6            | Dispensing System Enclosures.....  | 4           |
| 1.7            | Pricing Information.....   | 4           |
| 1.8            | Website Access.....  | 4           |
| 1.9            | Technical Purchase Descriptions.....                                       | 4           |
| 1.10           | Disposal.....  | 5           |
| 1.11           | Ordering Directives.....   | 5           |
| 1.12           | Changing Dispensing System to another Manufacturer’s System.....           | 5           |
| 2.0            | AUTHORIZED CHEMICAL CLEANING CONCENTRATES.....                             | 6           |
| 2.1            | Food Contact Surface Sanitizer Concentrates (No Cleaning Properties) ..... | 6           |
| 2.1.1          | Product Description.....   | 6           |
| 2.1.2          | Related Safety, Health, and Environmental Hazards.....                     | 6           |
| 2.2            | Food Contact Surface Sanitizer Concentrates with Cleaning Properties.....  | 9           |
| 2.2.1          | Product Description.....   | 9           |
| 2.2.2          | Related Safety, Health, and Environmental Hazards.....                     | 9           |
| 2.3            | Non-Food Contact Surface Disinfectant Cleaner Concentrates.....            | 12          |
| 2.3.1          | Product Description.....   | 12          |
| 2.3.2          | Related Safety, Health, and Environmental Hazards.....                     | 12          |
| 2.4            | General Purpose Heavy-Duty Cleaner Concentrates.....                       | 18          |
| 2.4.1          | Product Description.....   | 18          |
| 2.4.2          | Related Safety, Health, and Environmental Hazards.....                     | 18          |
| 2.5            | Heavy-Duty Cleaner Concentrates for Machinery and Bilges.....              | 31          |
| 2.5.1          | Product Description.....   | 31          |
| 2.5.2          | Related Safety, Health, and Environmental Hazards.....                     | 31          |
| 2.6            | Floor Finish Restorer Concentrates.....                                    | 35          |
| 2.6.1          | Product Description.....   | 35          |
| 2.6.2          | Related Safety, Health, and Environmental Hazards.....                     | 35          |
| 2.7            | Shipboard Floor Stripper Concentrates.....                                 | 42          |
| 2.7.1          | Product Description.....   | 42          |
| 2.7.2          | Related Safety, Health, and Environmental Hazards.....                     | 42          |
| 2.8            | Glass Cleaner Concentrates.....  | 46          |
| 2.8.1          | Product Description.....   | 46          |
| 2.8.2          | Related Safety, Health, and Environmental Hazards.....                     | 46          |

**TABLE OF CONTENTS (Continued)**

| <b>Chapter</b> |  | <b>Page</b> |
|----------------|--|-------------|
| 3.0            | AUTHORIZED DISPENSING SYSTEMS .....                              | 50          |
| 3.1            | General Requirements for Shipboard Dispensing Systems .....      | 50          |
| 3.2            | Installation Requirements for Shipboard Dispensing Systems ..... | 51          |
| 3.3            | Authorized Shipboard Dispensing Systems.....                     | 52          |
| 4.0            | AUTHORIZED READY TO USE CLEANING PRODUCTS.....                   | 68          |
| 4.1            | Product Description .....  | 68          |
| 4.2            | Application Method .....   | 68          |
| 4.3            | Related Safety, Health, and Environmental Hazards.....           | 68          |
| INDEX          | .....  | 74          |

**LIST OF TABLES**

| <b>Table</b>   | <b>Page</b> |
|--|-------------|
| Table 2-1 Authorized Food Contact Surface Sanitizer Concentrates (No Cleaning Properties)... | 8           |
| Table 2-2 Authorized Food Contact Surface Sanitizers with Cleaning Properties.....           | 11          |
| Table 2-3 Authorized Non-Food Contact Surface Disinfectant Cleaner Concentrates .....        | 14          |
| Table 2-4 General Purpose Heavy-Duty Cleaner Concentrates .....                              | 19          |
| Table 2-5 Authorized Heavy-Duty Cleaner Concentrates for Machinery and Bilges .....          | 33          |
| Table 2-6 MIL-D-16791 Authorized Vendors.....  | 34          |
| Table 2-7 Authorized Floor Finish Restorer Concentrates .....                                | 36          |
| Table 2-8 Authorized Shipboard Floor Stripper Concentrates .....                             | 43          |
| Table 2-9 Authorized Glass Cleaner Concentrates .....  | 48          |
| Table 3-1 Authorized Chemical Cleaning Dispensing Systems .....                              | 53          |
| Table 3-2 3M™ Twist ‘n Fill™ Model No. 1030BNP Dispensing System.....                        | 54          |
| Table 3-3 Allied Enterprises Leading Edge Mix Master Dispensing System .....                 | 55          |
| Table 3-4 Birsch Cleaning Products, Knight Proportioning Systems.....                        | 56          |
| Table 3-5 Ecolab Control Tower IV Dispensing System .....                                    | 57          |
| Table 3-6 Ecolab Oasis Ultra 1 Dispensing System .....                                       | 58          |
| Table 3-7 Ecolab Select Four Dispensing System.....  | 59          |
| Table 3-8 Johnson Wax Professional, J-Fill Dispensing System .....                           | 60          |
| Table 3-9 Magnolia Marketing Products, Knight KP1H Dispensing System .....                   | 61          |
| Table 3-10 MAK Products, DEMA Blend Dispensing Systems .....                                 | 62          |
| Table 3-11 Orison Marketing, LLC, DEMA Blend Dispensing Systems .....                        | 63          |
| Table 3-12 Orloff Corp/Computer Bath Products, KNIGHT KP1H Dispensing System .....           | 64          |
| Table 3-13 Quick ‘n Brite, Hydro AccuDose Proportioning Systems.....                         | 65          |
| Table 3-14 SOQ Environmental Multi-Blend Dispensing System.....                              | 66          |
| Table 3-15 State Industrial Products, Powerfill™ Dispensing Systems.....                     | 67          |
| Table 4-1 Authorized Ready-to-Use Cleaners.....  | 69          |
| Table 4-2 Authorized Ready-to-Use Glass Cleaners.....  | 73          |

## **1.0 GENERAL INFORMATION AND SAFETY PRECAUTIONS**

This chapter provides general information regarding the “U.S. Navy Surface Ship Authorized Chemical Cleaning Products and Dispensing Systems Catalog” and provides general safety precautions. This chapter includes a brief explanation of the methodology used to determine the acceptability of the cleaning products for shipboard use (authorization for use process). The safety precautions listed are general in nature and are intended to supplement specific manufacturers’ safety precautions, Material Safety Data Sheet (MSDS) recommendations, and product Warning Labels. MSDSs can be obtained from the Hazardous Material Information Resource System (HMIRS) website: <http://www.dlis.dla.mil.hmirs/>. Each product listed in this catalog has been evaluated to determine proper handling and storage precautions. Precautions are identified in this catalogue by the use of a hazard symbol, as explained in this chapter. There are also brief discussions regarding required containment and enclosures for cleaning product dispensing systems. In addition, this chapter includes general guidance for obtaining price information for the cleaning products and dispensing systems.

### **1.1 Introduction**

The intent of this catalog is to provide the following guidance to the Fleet:

- A list of cleaning concentrates and ready-to-use cleaning products authorized for use in general shipboard (surface ship only) applications. (These products were evaluated using information supplied by the manufacturers, based on environmental, health and safety (EHS) criteria. It was assumed that the information provided by the manufacturers was accurate and conformed to current market acceptability.)
- A list of authorized dispensing systems and associated products for each dispensing system
- Precautions required for handling, stowage, use, and disposal of chemical cleaning concentrates and diluted use concentrations.

### **1.2 Background**

In order to determine what chemical cleaning products and dispensers would be authorized for use onboard U.S. Navy surface ships, an evaluation was conducted to: a) determine what types of shipboard cleaning products and dispensers are needed by Navy surface ships, b) formulate environmental, health and safety requirements necessary to protect Ship’s Force, the ship systems and equipment, and the environment, c) identify candidate commercial cleaning products for consideration as possible authorized products, and d) evaluate the candidate cleaning products against the environmental,

safety and health requirements. This evaluation was conducted by the Naval Surface Warfare Center, Carderock Division, Philadelphia, PA under the direction of Naval Sea Systems Command, with Navy Environmental Health Center (NEHC) support.

The evaluation revealed that numerous military specifications and commercial item descriptions (CIDs) for cleaning products had been previously canceled. As a result, it was deemed necessary to create Technical Purchase Descriptions (TPDs) for nine different categories of cleaners and one TPD for dispensing systems. The TPDs are needed to ensure environmental, health and safety requirements are considered by manufacturers of products for each cleaning category. TPD requirements include materials/composition, listings of prohibited material/chemicals, relative toxicity, aquatic toxicity, biodegradability, pH, regulatory requirements and cleaning or removal efficiency. The cleaning categories covered by the new TPDs are as follows:

- Food Contact Sanitizer Concentrates
- Food Contact Sanitizer/Cleaner Concentrates
- Non-Food Contact Disinfectant/Cleaner Concentrates
- General Purpose Heavy-Duty Cleaner Concentrates
- Heavy-Duty Cleaner Concentrate for Machinery and Bilge Cleaners
- Floor Finish Restorer Concentrates
- Floor Stripper Concentrates
- Glass Cleaners (Concentrates and Ready-to-Use)
- Ready-to-Use General Purpose Cleaners
- Chemical Cleaning Dispensing Systems

Manufacturers were solicited to obtain product information for cleaning products and dispensers. Information received from manufacturers included Material Safety Data Sheets, Product Data Sheets, supporting documentation related to biodegradability and aquatic toxicity requirements, cleaning test results, and product brochures and literature. The manufacturers' product information was evaluated against the requirements of the appropriate TPD. The evaluation was based on the understanding that the information provided by the manufacturers was accurate and conformed to current market acceptability per TPD requirements. The products and dispensing systems that complied with the requirements of the TPDs were then authorized for surface ship use and are included in this catalog.

### **1.3 Safety Precautions**

The review and evaluation of numerous cleaning concentrates revealed that most concentrates were found to have the following intrinsic characteristics:

- Concentrates, in general, were found to have a high pH and to be highly corrosive in nature;

- Concentrates, in general, contain one or more components that were toxic or harmful to the aquatic environment;
- Concentrates, in general, were found have less hazardous properties to the environment and the user when diluted in accordance with the manufacturers' recommended dilution-ratio; and
- Some glass cleaner concentrates were found to require special shipboard stowage due to combustion properties (low flash point, i.e., <140° F)

**CAUTION**

**It is recommended that all cleaning concentrates be disposed of as Used/Excess Hazardous Materials and handled by Ship's Force using chemical workers goggles (also a full-length face shield if splashing could be a problem) and rubber gloves. Consult the product MSDS for specific guidance.**

#### 1.4 Hazard Symbols

Each product listed in this catalog was evaluated to determine appropriate shipboard storage and disposal requirements. These requirements are identified by the use of hazard symbols. The hazard symbols will be indicated in the "Precautions" column (if applicable) of the cleaning product information in the following chapters. Requirements for storage and/or disposal corresponding to each hazard symbol are provided in the list below.

| Hazard             | Hazard Symbol | Storage and/or Disposal Required (*) |
|--------------------|---------------|--------------------------------------|
| Acidic             | "A"           | Special stowage required.            |
| Aquatic Toxicity   | "AT"          | Special disposal required.           |
| Corrosive          | "C"           | Special stowage required.            |
| Flammable          | "F"           | Special storage required.            |
| Hazardous Material | "HM"          | Special disposal required            |

(\*) Shipboard stowage and disposal of products associated with the above hazard designation shall be performed in accordance with the policy and guidance provided in

OPNAVINST 5090.1B (Appendix L) and OPNAVINST 5100.19 series. Additional management guidance is provided in NSTM 593 “Pollution Control.”

## **1.5 Containment**

Installation of containment provisions under/around dispensing systems is required to prevent concentrate spillage/leakage on deck surfaces. GSA Advantage provides “spill containment” equipment on their website: [www.gsaadvantage.gov/](http://www.gsaadvantage.gov/). All containment equipment shall be obtained and installed upon installation of dispensing systems, prior to underway or deployment periods. Detailed spill control guidelines for cleaning products and concentrates are provided in the Hazardous Materials (HM) User’s Guide (HMUG), OPNAV P-145-110-03.

## **1.6 Dispensing System Enclosures**

In order to prevent pilferage of concentrates or tampering of the dispensing systems dilution settings, all dispensing systems shall have a lock and key or similar tamper-resistant mechanism. If the dispensing system is not originally designed with this feature, a dispensing system enclosure is required

## **1.7 Pricing Information**

Pricing information for cleaning products and dispensing systems is not provided in this catalog. For most cleaning compounds, current pricing information is available on the GSA Advantage website: [www.gsaadvantage.gov/](http://www.gsaadvantage.gov/). If this website access is unavailable, manufacturers’ customer service numbers are provided in this catalog and should be used accordingly.

## **1.8 Website Access**

An online version of this catalog is available on the GSA Advantage Website: [www.gsaadvantage.gov/](http://www.gsaadvantage.gov/) under Authorized Shipboard Cleaning Products and Dispensers. It is also available on the Navy Shipboard Environmental Information Clearinghouse (Navy SEIC) website: <http://navyseic.dt.navy.mil>.

## **1.9 Technical Purchase Descriptions**

Technical Purchase Descriptions or reference copies of the TPDs listed in this catalog may be obtained from Naval Surface Warfare Center, Carderock Division, Philadelphia

Naval Business Center, Building 1000, Code 635, 5001 S. Broad Street, Philadelphia, Pennsylvania, 19112-5083, attention Ms. Socha, or Ms. Phillips (e-mail address - sochacm@nswccd.navy.mil or [phillipsse@nswccd.navy.mil](mailto:phillipsse@nswccd.navy.mil)). These TPDs may also be accessed on the Navy Shipboard Environmental Information Clearinghouse (NAVY SEIC) website: <http://navyseic.dt.navy.mil>.

### **1.10 Disposal**

Shipboard handling, stowage, and disposal of cleaning products shall be performed as described by the applicable hazard symbol and in accordance with the policy and guidance provided in OPNAVINST 5090.1B (Appendix L) and OPNAVINST 5100.19 series. Additional management guidance is provided in Navy Standard Technical Manual (NSTM) 593 “Pollution Control” and also in the Hazardous Materials User’s Guide (HMUG), OPNAV P-145-110-03.

### **1.11 Ordering Directives**

In accordance with Chief of Naval Operations (CNO N4) policy, as referenced in Naval message 131755Z JAN 03, all Navy ships and shore installations are required to fully implement the Consolidated Hazardous Material Reutilization and Inventory Management Program (CHRIMP). In support of CHRIMP, ordering excessive quantities of cleaning concentrates for a specific application is strongly discouraged. Excessive quantities of concentrates will impact the following areas:

- Increase in HAZMAT disposal costs (Unused concentrates are required to be disposed of as HAZMAT),
- Decrease in shipboard stowage areas available for vital equipment/material from an already limited supply

### **1.12 Changing from one Dispensing System to another Manufacturer’s Dispensing System**

If Ship’s Force is anticipating a change from one dispensing system to another system, they are requested to deplete the existing stock of concentrate prior to the changeover to the “new” product. This will allow maximum utilization of available cleaning products. In addition, depleting the existing stock will minimize the disposal of any unused cleaning products during the dispensing system changeover.

## **2.0 AUTHORIZED CHEMICAL CLEANING CONCENTRATES**

The evaluation of submitted cleaning products and dispensing systems against the TPD requirements resulted in the authorization of the chemical cleaning concentrates listed in this chapter for use on U.S. Navy surface ships. The chemical cleaning applications discussed in this chapter is as follows:

- Food Contact Surface Sanitizer Concentrates (No Cleaning Properties)
- Food Contact Surface Sanitizer Concentrates with Cleaning Properties
- Non-Food Contact Surface Disinfectant Cleaner Concentrates
- General Purpose Heavy-Duty Cleaner Concentrates
- Machinery and Bilge Cleaners
- Floor Finish Restorer Concentrates
- Floor Stripper Concentrates
- Glass Cleaner Concentrates

### **2.1 Food Contact Surface Sanitizer Concentrates (No Cleaning Properties)**

Products determined to comply with this product description and authorized for use on Navy surface ships are included in Table 2-1.

#### **2.1.1 Product Description.**

The cleaning products listed in this section are categorized as non-rinsing liquid or powder sanitizer concentrates only, containing quaternary ammonium compounds as the active ingredient. These sanitizing products have no cleaning properties. These sanitizers, when diluted in accordance with manufacturer's instructions, have been determined to effectively disinfect all **food contact surface types** and will kill 99.99 % of staph (Staphylococcus aureus), E-coli (Escherichia coli) and Salmonella.

#### **2.1.2 Related Safety, Health, and Environmental Hazards**

Due to the highly alkaline (caustic) nature and sanitizing properties of all sanitizer cleaners, the following precautions are required when handling sanitizer concentrates:

- Ensure that general ventilation is in operation in the vicinity where cleaning compounds are being used.
- Avoid skin or eye contact with sanitizer concentrates. If contact is made, flush affected area with water. Wear chemical workers goggles and rubber gloves

when handling these concentrates. Consult the product MSDS for specific guidance.

- Avoid breathing mists, vapors, or dusts from these sanitizers. Keep containers closed when not in use. Prolonged and repeated exposure to sanitizer mists and vapors can irritate the nose, throat, or lungs.
- Use sanitizers only as prescribed on the container label. Ensure that the concentrate is diluted in accordance with the manufacturer's directions.
- DO NOT re-use empty sanitizer concentrate containers for any purpose other than to hold used or excess sanitizer. Manual pump spray bottles containing diluted product may be re-used after thorough rinsing with water.
- **All sanitizer concentrates shall be disposed of as Used/Excess Hazardous Materials (HM).** This disposal requirement does not pertain to unused or used solutions diluted in accordance with manufacturer's directions.
- If used in a dispensing system, the sanitizer concentrate shall only be used with the manufacturer-authorized dispenser. **The concentrate may not be used with another manufacturer's dispensing system.**
- If used in a dispensing system having a concentrate reservoir, a portable, temporary containment shall be installed under the reservoir to prevent accidental spills from leaking on surrounding decks.
- All sanitizers shall be used in a single dispensing system whereby only one product is dispensed to avoid cross contamination. Sanitizers **shall not be used in multi-product** dispensing systems.
- All empty plastic containers shall be carried to the solid waste room for disposal in the plastic waste processor (PWP) in accordance with Navy Ship Technical Manual (NSTM) 593, Pollution Control.

**Table 2-1**

**Authorized Food Contact Surface Sanitizer Concentrates (No Cleaning Properties)**

| <b>Company / Phone / Internet Address</b>  | <b>Product Name</b> | <b>Manufacturer Part Number</b> | <b>NSN</b>       | <b>Unit of Issue</b> | <b>Warnings</b> | <b>Dispensing System</b>           |
|--|---------------------|---------------------------------|------------------|----------------------|-----------------|------------------------------------|
| <b>3M™ Commercial Care Division</b><br>Customer Assistance:<br>1 (800) 3M-HELPS<br>Web Site:<br><a href="http://www.3M.com/commcare">www.3M.com/commcare</a> | 3M™ Sanitizer       | 70-0708-4016-3                  | 7930-01-412-1036 | 6 - 2 L BT/case      | HM              | 3M™ Twist ‘n Fill™                 |
| <b>Ecolab Institutional Division</b><br>Customer Assistance:<br>1 (800) 35-CLEAN<br>Web Site:<br><a href="http://www.ecolab.com">www.ecolab.com</a>          | Oasis 144           | 14191                           | 7930-01-379-5182 | 2.5 GL               | HM              | Oasis Ultra 1 Control Tower IV     |
| <b>Susquehanna Association for the Blind</b><br>Customer Assistance:<br>1 (717) 291-5951<br>Web Site:<br><a href="http://www.sabvi.com">www.sabvi.com</a>    | Sanitizer Quat 10   | 7930-0200-141                   | 6840-01-505-8147 | 12 -16 oz BT/case    | HM              | Trigger spray bottle, bucket, etc. |
|  | Sanitizer Quat 10   | 7930-0200-142                   | 6840-01-505-8149 | 12- 32 oz BT/case    | HM              | Trigger spray bottle, bucket, etc. |
|  | Sanitizer Quat 10   | 7930-0200-143                   | 6840-01-505-8151 | 4 -1 GL/case         | HM              | Trigger spray bottle, bucket, etc. |
|  | Sanitizer Quat 10   | 7930-0200-144                   | 6840-01-505-8153 | 5 GL                 | HM              | Trigger spray bottle, bucket, etc. |
|  | Sanitizer Quat 10   | 7930-0200-145                   | 6840-01-505-8139 | 55 GL drum           | HM              | Trigger spray bottle, bucket, etc. |

## 2.2 Food Contact Surface Sanitizer Concentrates with Cleaning Properties

Products determined to comply with this product description and authorized for use on Navy surface ships are included in Table 2-2.

### 2.2.1 Product Description

The cleaning products listed in this section are categorized as non-rinsing liquid sanitizer-cleaner concentrates containing quaternary ammonium compounds as the active ingredient. These sanitizer/cleaners, when diluted in accordance with manufacturer's instructions, have been determined to effectively disinfect and clean all **food contact surface types** and will kill 99.99 % of Staph (Staphylococcus aureus), E-coli (Escherichia coli) and Salmonella.

### 2.2.2 Related Safety, Health, and Environmental Hazards

Due to the highly alkaline (caustic) nature and sanitizing properties of all disinfectant cleaners, the following precautions are required when handling sanitizer cleaner concentrates:

- Ensure that general ventilation is in operation in the vicinity where cleaning compounds are being used.
- Avoid skin or eye contact with sanitizer cleaner concentrates. If contact is made, flush affected area with water. Wear chemical worker goggles and rubber gloves when handling these concentrates. Consult the product MSDS for specific guidance.
- Avoid breathing vapors or dusts from these sanitizers. Keep containers closed when not in use. Prolonged and repeated exposure to sanitizer vapors can irritate the nose, throat, or lungs.
- Use sanitizers only as prescribed on the container label. Ensure that the concentrate is diluted in accordance with the manufacturer's directions.
- DO NOT re-use empty sanitizer containers for any purpose other than to hold used or excess sanitizer. Manual pump spray bottles containing diluted product may be re-used after thorough rinsing with water.
- **All sanitizer cleaner concentrates shall be disposed of as Used/Excess HM.** This disposal requirement does not pertain to unused or used solutions diluted in accordance with manufacturer's directions.

- If used in a dispensing system, the sanitizer concentrate shall only be used with the manufacturer-authorized dispenser. **The concentrate may not be used with another manufacturer's dispensing system.**
- If used in a dispensing system having a concentrate reservoir, a portable, temporary containment shall be installed under the reservoir to prevent accidental spills from leaking on surrounding decks.
- All sanitizers shall be used in a single dispensing system whereby only one product is dispensed to avoid cross contamination. Sanitizers **shall not be used in multi-product** dispensing systems.
- All empty plastic containers shall be carried to the solid waste room for disposal in the plastic waste processor (PWP) in accordance with Navy Ship Technical Manual (NSTM) 593, Pollution Control.

**Table 2-2**

**Authorized Food Contact Surface Sanitizers with Cleaning Properties**

| <b>Company / Phone / Internet Address</b>  | <b>Product Name</b> | <b>Manufacturer Part Number</b> | <b>NSN</b>       | <b>Unit of Issue</b> | <b>Precautions</b> | <b>Dispensing System</b>           |
|--|---------------------|---------------------------------|------------------|----------------------|--------------------|------------------------------------|
| <b>Birsch</b><br>Customer Assistance:<br>1 (888) 622-0356<br>Web Site:<br><a href="http://www.supplythenavy.com">www.supplythenavy.com</a><br><a href="http://www.Birsch.com">www.Birsch.com</a> | Sanitizer 512       | 1713103                         | 6840-01-506-3518 | 1 GL                 | HM                 | Knight – single unit               |
|  | Sanitizer 512       | 17131034                        | 6840-01-506-6429 | 4 - 1 GL/case        | HM                 | Knight – single unit               |
|  | Sanitizer 512       | 1713107                         | 6840-01-506-6431 | 5 GL pail*           | HM                 | Trigger spray bottle, bucket, etc. |
|  | Sanitizer 512       | 1713105                         | 6840-01-506-6434 | 15 GL keg*           | HM                 | Trigger spray bottle, bucket, etc. |
|  | Sanitizer 512       | 1713101                         | 6840-01-506-6436 | 55 GL drum*          | HM                 | Trigger spray bottle, bucket, etc. |
| *Check with manufacturer for dispensing system options   |                     |                                 |                  |                      |                    |                                    |
| <b>State Industrial Products</b><br>Customer Assistance:<br>1 (866) 573-4468<br>Web Site:<br><a href="http://www.stateindustrial.com">www.stateindustrial.com</a>                                | Formula 362         | 17174                           | 6840-01-505-8061 | 4 - 1 GL/case        | C, HM              | Trigger spray bottle, bucket, etc. |
|  | Formula 362         | 106090                          | 6840-01-506-1035 | 4 – 3 L/case         | C, HM              | “One Solution” Powerfill           |

## 2.3 Non-Food Contact Surface Disinfectant Cleaner Concentrates

Products determined to comply with this product description and authorized for use on Navy surface ships are included in Table 2-3.

### 2.3.1 Product Description

The cleaning concentrates listed in this section are categorized as non-abrasive disinfectant cleaner concentrates containing quaternary ammonium compounds as the active ingredient. These cleaners are authorized to clean porcelain fixtures such as **urinals, water closets, and sinks** in ship washrooms, showers, and heads. They may also be used to clean the **decks** in these spaces. These disinfectant cleaners when diluted in accordance with the manufacturers' instructions will effectively kill the following bacteria and fungus: Staphylococcus aureus, Salmonella choleraesuis, Pseudomonas aeruginosa, and Trichophyton mentagrophytes (athlete's foot)

### 2.3.2 Related Safety, Health, and Environmental Hazards

Due to the highly alkaline (caustic) nature and bactericide/fungicide properties of all disinfectant cleaners, the following precautions should be taken when handling disinfectant cleaner concentrates:

- Ensure that general ventilation is in operation in the vicinity where cleaning compounds are being used.
- Avoid skin or eye contact with disinfectant cleaner concentrates. If contact is made, flush affected area with water. Wear chemical worker goggles and rubber gloves when handling these concentrates. Consult the product MSDS for specific guidance.
- Avoid breathing mists and vapors from disinfectant cleaner concentrates. Keep containers closed when not in use.
- Use disinfectant cleaner concentrates only as prescribed on the container label. Ensure the concentrate is diluted in accordance with manufacturers' directions.
- DO NOT re-use empty cleaner concentrate containers for any purpose other than to hold used or excess detergent. Manual pump spray bottles containing diluted product may be re-used after thorough rinsing with water.
- **All disinfectant cleaner concentrates shall be disposed of as Used/Excess HM.** This disposal requirement does not pertain to unused or used solutions diluted in accordance with manufacturer's directions.

- If used in a dispensing system, the disinfectant cleaner concentrate shall only be used with the manufacturer-authorized dispenser. **The concentrate may not be used with another manufacturer's dispensing system.**
- If used in a dispensing system having a concentrate reservoir, a portable, temporary containment shall be installed under reservoir to prevent accidental spills from leaking on surrounding decks.
- All disinfectant cleaner concentrates shall be used in a single dispensing system whereby only one product is dispensed to avoid cross contamination. Disinfectant cleaner concentrates **shall not be used in multi-product** dispensing systems.
- All empty plastic containers shall be carried to the solid waste room for disposal in the plastic waste processor (PWP) in accordance with Navy Ship Technical Manual (NSTM) 593, Pollution Control.

**Table 2-3**

**Authorized Non-Food Contact Surface Disinfectant Cleaner Concentrates**

| <b>Company / Phone / Internet Address</b>  | <b>Product Name</b>                       | <b>Manufacturer Part Number</b> | <b>NSN</b>       | <b>Unit of Issue</b> | <b>Precautions</b> | <b>Dispensing System</b>           |
|--|---|---------------------------------|------------------|----------------------|--------------------|------------------------------------|
| <b>3M™ Commercial Care Division</b><br>Customer Assistance:<br>1 (800) 3M-HELPS<br>Web Site:<br><a href="http://www.3M.com/commcare">www.3M.com/commcare</a> | 3M™ Quat Disinfectant Cleaner 5L          | 70-0708-3993-4                  | 7930-01-381-5981 | 6 - 2 L BT/case      | F, HM              | 3M™ Twist ‘n Fill™                 |
|  | 3M™ Quat Disinfectant Cleaner 5H          | 70-0708-3994-2                  | 7930-01-381-5803 | 6 - 2 L BT/case      | F, HM              | 3M™ Twist ‘n Fill™                 |
|  | 3M™ Neutral Quat Disinfectant Cleaner 23H | 70-0708-4022-1                  | 6840-01-506-3721 | 6 - 2 L BT/case      | HM                 | 3M™ Twist ‘n Fill™                 |
|  | 3M™ Neutral Quat Disinfectant Cleaner 23L | 70-0710-0729-1                  | 6840-01-506-3718 | 6 - 2 L BT/case      | HM                 | 3M™ Twist ‘n Fill™                 |
| <b>Allied Enterprises</b><br>Customer Assistance:<br>1 (800) 943-5400<br>Web Site:<br><a href="http://www.shopallied.com">www.shopallied.com</a>             | Leading Edge Neutral Disinfectant         | 9P-0998                         | 6840-01-506-3000 | 4 – 1/2 GL/ case     | HM                 | Leading Edge Mix Master            |
|  | Leading Edge Neutral Disinfectant         | 9509H-1357-4                    | 6840-01-506-3181 | 4 - 1 GL/case        | HM                 | Trigger spray bottle, bucket, etc. |
|  | Leading Edge Neutral Disinfectant         | 9509G-1357                      | 6840-01-506-3183 | 5 GL                 | HM                 | Trigger spray bottle, bucket, etc. |

**Table 2-3**  
**Authorized Non-Food Contact Disinfectant Cleaner Concentrates**

| <b>Company / Phone / Internet Address</b>  | <b>Product Name</b> | <b>Manufacturer Part Number</b> | <b>NSN</b>       | <b>Unit of Issue</b> | <b>Precautions</b> | <b>Dispensing System</b>           |
|--|---------------------|---------------------------------|------------------|----------------------|--------------------|------------------------------------|
| <b>Birsch</b><br>Customer Assistance:<br>1 (888) 622-0356<br>Web Site:<br><a href="http://www.supplythenavy.com">www.supplythenavy.com</a><br><a href="http://www.Birsch.com">www.Birsch.com</a> | LOD Neutral 32      | 1454993                         | 6840-01-506-3527 | 1 GL                 | HM                 | Knight – single unit               |
|  | LOD Neutral 32      | 14549934                        | 6840-01-506-3537 | 4 - 1 GL/case        | HM                 | Knight – single unit               |
|  | LOD Neutral 32      | 1454997                         | 6840-01-506-3532 | 5 GL pail *          | HM                 | Trigger spray bottle, bucket, etc. |
|  | LOD Neutral 32      | 1454995                         | 6840-01-506-3522 | 15 GL keg*           | HM                 | Trigger spray bottle, bucket, etc. |
|  | LOD Neutral 128     | 1445053                         | 6840-01-506-3513 | 1 GL                 | HM                 | Knight – single unit               |
|  | LOD Neutral 128     | 14450534                        | 6840-01-506-6329 | 4 - 1 GL/case        | HM                 | Knight – single unit               |
|  | LOD Neutral 128     | 1445057                         | 6840-01-506-6347 | 5 GL pail *          | HM                 | Trigger spray bottle, bucket, etc. |
|  | LOD Neutral 128     | 1445055                         | 6840-01-506-6361 | 15 GL keg *          | HM                 | Trigger spray bottle, bucket, etc. |
|  | LOD Neutral 256     | 1455093                         | 6840-01-506-3508 | 1 GL                 | HM                 | Knight – single unit               |
|  | LOD Neutral 256     | 14550934                        | 6840-01-506-6412 | 4 - 1 GL/case        | HM                 | Knight – single unit               |
|  | LOD Neutral 256     | 1455097                         | 6840-01-506-6387 | 5 GL pail*           | HM                 | Trigger spray bottle, bucket, etc. |
|  | LOD Neutral 256     | 1455095                         | 6840-01-506-6382 | 15 GL keg*           | HM                 | Trigger spray bottle, bucket, etc. |

\*Check with manufacturer for dispensing system options

**Table 2-3**

**Authorized Non-Food Contact Disinfectant Cleaner Concentrates**

| <b>Company / Phone / Internet Address</b>  | <b>Product Name</b>                           | <b>Manufacturer Part Number</b> | <b>NSN</b>       | <b>Unit of Issue</b> | <b>Precautions</b> | <b>Dispensing System</b>                 |
|--|---|---------------------------------|------------------|----------------------|--------------------|--|
| <b>Ecolab Institutional Division</b><br>Customer Assistance:<br>1 (800) 35-CLEAN<br>Web Site:<br><a href="http://www.ecolab.com">www.ecolab.com</a>              | Mikro-Quat                                    | 13227                           | 6840-00-201-2505 | 4 -1<br>GL/case      | C, HM              | Oasis Ultra 1<br>Control Tower<br>IV     |
|  | Quik Fill A-33                                | 62380195                        | 6840-01-398-0974 | 2.5 GL               | HM                 | Oasis Ultra 1<br>Control Tower<br>IV     |
| <b>Johnson Wax Professional</b><br>Customer Assistance:<br>1 (800) 558-2332<br>Web Site:<br><a href="http://www.johnsondiversey.com">www.johnsondiversey.com</a> | Crew Restroom<br>Floor and<br>Surface Cleaner | 4731                            | 7930-01-508-3240 | 4 - 1<br>GL/case     | HM                 | Trigger spray<br>bottle, bucket,<br>etc. |
|  | Crew Restroom<br>Floor and<br>Surface Cleaner | 4735                            | 7930-01-508-3235 | 5 GL                 | HM                 | Trigger spray<br>bottle, bucket,<br>etc. |
|  | Crew Restroom<br>Floor and<br>Surface Cleaner | 4739                            | 7930-01-508-3236 | 2 - 2.5<br>L/case    | HM                 | J-Fill                                   |
| <b>Maintex</b><br>Customer Assistance:<br>1 (800) 261-4456<br>Web Site:<br><a href="http://www.maintex.com">www.maintex.com</a>                                  | Citra Cide                                    | 145401                          | 7930-01-508-3710 | 1 GL                 | HM                 | Trigger spray<br>bottle, bucket,<br>etc. |
|  | Citra Cide                                    | 145404                          | 7930-01-412-1015 | 4 - 1<br>GL/box      | HM                 | Trigger spray<br>bottle, bucket,<br>etc. |
|  | Citra Cide                                    | 145405                          | 7930-01-412-1016 | 5 GL<br>pail         | HM                 | Trigger spray<br>bottle, bucket,<br>etc. |

**Table 2-3**

**Authorized Non-Food Contact Disinfectant Cleaner Concentrates**

| <b>Company / Phone / Internet Address</b>  | <b>Product Name</b>          | <b>Manufacturer Part Number</b> | <b>NSN</b>       | <b>Unit of Issue</b> | <b>Precautions</b> | <b>Dispensing System</b> |
|--|------------------------------|---------------------------------|------------------|----------------------|--------------------|--------------------------|
| <b>Orison Marketing, L.L.C.</b><br>Customer Assistance:<br>1 (800) 460-2403<br>Web Site:<br><a href="http://www.orisonllc.com">www.orisonllc.com</a> | Expel Detergent Disinfectant | ED-32                           | 7930-01-508-2115 | 6 QT/case            | C, HM              | Manual Spray Bottle      |
|  | Expel Detergent Disinfectant | ED-4                            | 7930-01-508-2739 | 4 – 1 GL/case        | C, HM              | DEMA Blend               |
|  | Expel Detergent Disinfectant | ED-5                            | 7930-01-508-2737 | 5 GL carboy          | C, HM              | DEMA Blend               |
|  | Expel Detergent Disinfectant | ED-55                           | 7930-01-508-2734 | 55 GL drum           | C, HM              | Manual Spray Bottle      |

## 2.4 General Purpose Heavy-Duty Cleaner Concentrates

Products determined to comply with this product description and authorized for use on Navy surface ships are included in Table 2-4.

### 2.4.1 Product Description

The cleaning concentrates listed in this section are categorized as general purpose, heavy-duty liquid concentrated cleaners suitable for removing heavy soils from hard surfaces, walls, painted surfaces, linoleum, asphalt, rubber, vinyl tile flooring, and other washable surfaces. These cleaners are suitable for manual cleaning or for use in automatic scrubbing machines.

### 2.4.2 Related Safety, Health, and Environmental Hazards

- Ensure that general ventilation is in operation in the vicinity where cleaning compounds are being used.
- Avoid skin or eye contact with detergent concentrate. If contact is made, flush affected area with water. Wear chemical worker goggles and rubber gloves when handling these concentrates. Consult the product MSDS for specific guidance.
- Avoid breathing mists and vapors from these concentrates.
- Use concentrated detergents only as prescribed on the container label. Ensure that the concentrate is diluted in accordance with the manufacturer's directions.
- **All general purpose heavy duty concentrates shall be disposed of as Used/Excess HM.** This disposal requirement does not pertain to unused or used solutions diluted in accordance with manufacturer's directions.
- If used in a dispensing system, the concentrate shall only be used with the manufacturer-authorized dispenser. **The concentrate may not be used with another manufacturer's dispensing system.**
- If used in a dispensing system having a concentrate reservoir, a portable, temporary containment shall be installed under the reservoir to prevent accidental spills from leaking on surrounding decks.
- All empty plastic containers shall be carried to the solid waste room for disposal in the plastic waste processor (PWP) in accordance with Navy Ship Technical Manual (NSTM) 593, Pollution Control.

**Table 2-4**

**General Purpose Heavy-Duty Cleaner Concentrates**

| <b>Company / Phone / Internet Address</b>  | <b>Product Name</b>   | <b>Manufacturer Part Number</b> | <b>NSN</b>       | <b>Unit of Issue</b> | <b>Precautions</b> | <b>Dispensing System</b>                     |
|--|---|---------------------------------|------------------|----------------------|--------------------|--|
| <b>1<sup>st</sup> EnviroSafety, Inc.</b><br>Customer Assistance:<br>1-888-578-9600<br>Web Site:<br><a href="http://www.1stenvirosafety.com">www.1stenvirosafety.com</a>  | Organic Cleaner / Degreaser                                   | 67128                           | 6850-01-505-7711 | 4 -1 GL/case         | HM                 | Mop and Bucket                               |
|  | Organic Cleaner / Degreaser                                   | 67640                           | 6850-01-507-7912 | 5 GL CN              | HM                 | Mop and Bucket                               |
|  | Organic Cleaner / Degreaser                                   | 67030                           | 6850-01-505-7706 | 1-30 GL Drum         | HM                 | Mop and Bucket                               |
|  | Organic Cleaner / Degreaser                                   | 67055                           | 6850-01-505-7710 | 55 GL Drum           | HM                 | Mop and Bucket                               |
| <b>3M<sup>TM</sup> Commercial Care Division</b><br>Customer Assistance:<br>1 (800) 3M-HELPS<br>Web Site:<br><a href="http://www.3M.com/commcare">www.3M.com/commcare</a> | 3M <sup>TM</sup> General Purpose Cleaner Concentrate 8L       | 70-0708-3998-3                  | 7930-01-381-6001 | 6 - 2 L BT/case      | F, HM              | 3M <sup>TM</sup> Twist ‘n Fill <sup>TM</sup> |
|  | 3M <sup>TM</sup> General Purpose Cleaner Concentrate 8H       | 70-0708-4008-0                  | 7930-01-381-5834 | 6 - 2 L BT/case      | F, HM              | 3M <sup>TM</sup> Twist ‘n Fill <sup>TM</sup> |
|  | 3M <sup>TM</sup> Food Service Degreaser 7L                    | 70-0708-3996-7                  | 7930-01-381-5871 | 6 - 2 L BT/case      | C, AT, HM          | 3M <sup>TM</sup> Twist ‘n Fill <sup>TM</sup> |
|  | 3M <sup>TM</sup> Food Service Degreaser 7H                    | 70-0708-3997-5                  | 7930-01-381-5936 | 6 - 2 L BT/case      | C, AT, HM          | 3M <sup>TM</sup> Twist ‘n Fill <sup>TM</sup> |
|  | 3M <sup>TM</sup> Heavy-duty Multi-surface Cleaner Concentrate | 70-0708-3990-0                  | 7930-01-381-5997 | 6 - 2 L BT/case      | C, AT, HM          | 3M <sup>TM</sup> Twist ‘n Fill <sup>TM</sup> |

**Table 2-4**

**General Purpose Heavy-Duty Cleaner Concentrates**

| <b>Company / Phone / Internet Address</b>  | <b>Product Name</b>                             | <b>Manufacturer Part Number</b> | <b>NSN</b>       | <b>Unit of Issue</b> | <b>Precautions</b> | <b>Dispensing System</b>                   |
|--|---|---------------------------------|------------------|----------------------|--------------------|--|
| <b>Allied Enterprises</b><br>Customer Assistance:<br>1 (800) 943-5400<br>Web Site:<br><a href="http://www.shopallied.com">www.shopallied.com</a> | Leading Edge Degreaser and Hard Surface Cleaner | 9P-1003                         | 6840-01-506-3002 | 4 -1/2 GL/case       | C, AT, HM          | Leading Edge Mix Master                    |
|  | Leading Edge Degreaser and Hard Surface Cleaner | 9109H-1359-4                    | 6850-01-506-3178 | 4 -1 GL/case         | C, AT, HM          | Trigger spray bottle, mop and bucket, etc. |
|  | Leading Edge Degreaser and Hard Surface Cleaner | 9109G-1359                      | 6850-01-506-3185 | 5 GL                 | C, AT, HM          | Trigger spray bottle, mop and bucket, etc. |
|  | Leading Edge HD Emulsifying Detergent           | 9109P-1001                      | 7930-01-508-2125 | 4 -1/2 GL/case       | C, AT, HM          | Leading Edge Mix Master                    |
|  | Leading Edge HD Emulsifying Detergent           | 9109H-1360-4                    | 7930-01-508-2123 | 4 -1 GL/case         | C, AT, HM          | Trigger spray bottle, mop and bucket, etc  |
|  | Leading Edge HD Emulsifying Detergent           | 9109G-1360                      | 7930-01-508-2120 | 5 GL                 | C, AT, HM          | Trigger spray bottle, mop and bucket, etc. |

Table 2-4

General Purpose Heavy-Duty Cleaner Concentrates

| Company / Phone / Internet Address   | Product Name    | Manufacturer Part Number | NSN              | Unit of Issue  | Precautions | Dispensing System                          |
|--|-----------------|--------------------------|------------------|----------------|-------------|--|
| <b>American Cleaning Solutions</b><br>Customer Assistance:<br>1 (866) 883-3562<br>Web Site:<br><a href="http://www.americancleaning.com">www.americancleaning.com</a>                            | TUFF JOB        | TJ-00501                 | 7930-01-336-7197 | 6 - 1 GL/case  | C, HM       | Trigger spray bottle, mop and bucket, etc. |
|  | TUFF JOB        | TJ-00505                 | 7930-01-336-7198 | 5 GL pail      | C, HM       | Trigger spray bottle, mop and bucket, etc. |
|  | TUFF JOB        | TJ-00555                 | 7930-01-319-5373 | 55 GL drum     | C, HM       | Trigger spray bottle, mop and bucket, etc. |
| <b>Birsch</b><br>Customer Assistance:<br>1 (888) 622-0356<br>Web Site:<br><a href="http://www.supplythenavy.com">www.supplythenavy.com</a><br><a href="http://www.Birsch.com">www.Birsch.com</a> | Blaze Off       | 60605083                 | 6850-01-506-5087 | 1 GL           | C, HM       | Knight Dispenser                           |
|  | Blaze Off       | 606050834                | 6840-01-506-3505 | 4 -1 GL/case   | C, HM       | Knight Mixing station                      |
|  | Blaze Off       | 60605087                 | 6850-01-506-6326 | 5 GL pail*     | C, HM       | Trigger spray bottle, mop and bucket, etc. |
|  | Blaze Off       | 60605085                 | 6850-01-506-6323 | 15 GL keg*     | C, HM       | Trigger spray bottle, mop and bucket, etc. |
|  | H2Orange It All | 1276554                  | 7930-01-508-2135 | 1 QT           | HM          | Trigger spray bottle, mop and bucket, etc  |
|  | H2Orange It All | 127655                   | 7930-01-508-2129 | 12 - 1 QT/case | HM          | Trigger spray bottle, mop and bucket, etc  |

Table 2-4

General Purpose Heavy-Duty Cleaner Concentrates

| Company / Phone / Internet Address   | Product Name              | Manufacturer Part Number | NSN              | Unit of Issue | Precautions | Dispensing System                          |
|--|---------------------------|--------------------------|------------------|---------------|-------------|--|
| <b>Birsch</b><br>Customer Assistance:<br>1 (888) 622-0356<br>Web Site:<br><a href="http://www.supplythenavy.com">www.supplythenavy.com</a><br><a href="http://www.Birsch.com">www.Birsch.com</a> | H2Orange It All           | 1276553                  | 7930-01-508-2132 | 1 GL          | HM          | Knight Mixing station                      |
|  | H2Orange It All           | 12765534                 | 7930-01-508-3238 | 4 - 1 GL/case | HM          | Knight Mixing station                      |
|  | H2Orange It All           | 1276557                  | 7930-01-508-2134 | 5 GL pail*    | HM          | Trigger spray bottle, mop and bucket, etc. |
|  | H2Orange It All           | 1276555                  | 7930-01-508-2127 | 15 GL keg*    | HM          | Trigger spray bottle, mop and bucket, etc. |
|  | MPC Multi-purpose Cleaner | 1517513                  | 7930-01-508-2131 | 1 GL          | AT, HM      | Knight Mixing station                      |
|  | MPC Multi-purpose Cleaner | 15175134                 | 7930-01-508-3126 | 4 - 1 GL/case | AT, HM      | Knight Mixing station                      |
|  | MPC Multi-purpose Cleaner | 1517517                  | 7930-01-508-2136 | 5 GL pail*    | AT, HM      | Trigger spray bottle, mop and bucket, etc. |
|  | MPC Multi-purpose Cleaner | 1517515                  | 7930-01-508-2133 | 15 GL keg*    | AT, HM      | Trigger spray bottle, mop and bucket, etc. |
|  | Unmistakable Green        | 1770503                  | 7930-01-508-2747 | 1 GL          | AT, HM      | Knight Mixing station                      |
|  | Unmistakable Green        | 17705034                 | 7930-01-508-3226 | 4 - 1 GL/case | AT, HM      | Knight Mixing station                      |

Table 2-4

General Purpose Heavy-Duty Cleaner Concentrates

| Company / Phone / Internet Address   | Product Name       | Manufacturer Part Number | NSN              | Unit of Issue   | Precautions  | Dispensing System                             |
|--|--------------------|--------------------------|------------------|-----------------|--------------|---|
| <b>Birsch</b><br>Customer Assistance:<br>1 (888) 622-0356<br>Web Site:<br><a href="http://www.supplythenavy.com">www.supplythenavy.com</a><br><a href="http://www.Birsch.com">www.Birsch.com</a> | Unmistakable Green | 1770507                  | 7930-01-508-3233 | 5 GL pail*      | AT, HM       | Trigger spray bottle, mop and bucket, etc.    |
|  | Unmistakable Green | 1770505                  | 7930-01-508-3222 | 15 GL keg*      | AT, HM       | Trigger spray bottle, mop and bucket, etc.    |
| <b>Ecolab Institutional Division</b><br>Customer Assistance:<br>1 (800) 35-CLEAN<br>Web Site: <a href="http://www.ecolab.com">www.ecolab.com</a>   | Oasis 136          | 10707                    | 7930-01-398-0955 | 2.5 GL          | C, F, AT, HM | Select Four Control Tower IV<br>Oasis Ultra 1 |
|  | Oasis 136          | 10732                    | 7930-01-436-7943 | 15 GL           | C, F, AT, HM | Trigger spray bottle, mop and bucket, etc.    |
|  | Quik Fill 560      | 62380278                 | 7930-01-418-1448 | 2.5 GL          | HM           | Select Four Control Tower IV<br>Oasis Ultra 1 |
| <b>ELSCO International</b><br>Customer Assistance:<br>1 (888) 84-ELSCO<br>Web Site:<br><a href="http://www.elscointl.com">www.elscointl.com</a>  | Super Blast Off    | SB-3                     | 7930-01-363-2818 | 6 - 1 GL/case   | HM           | Trigger spray bottle, mop and bucket, etc.    |
|  | Super Blast Off    | B-2                      | 7930-01-364-7376 | 5 GL pail       | HM           | Trigger spray bottle, mop and bucket, etc.    |
|  | Super Blast Off    | B-32                     | 7930-01-381-3398 | 12 – 32 OZ/case | HM           | Trigger spray bottle, mop and bucket, etc.    |

Table 2-4

General Purpose Heavy-Duty Cleaner Concentrates

| Company / Phone / Internet Address   | Product Name                  | Manufacturer Part Number | NSN              | Unit of Issue    | Precautions | Dispensing System                          |
|--|-------------------------------|--------------------------|------------------|------------------|-------------|--|
| <b>ELSCO International</b><br>Customer Assistance:<br>1 (888) 84-ELSCO<br>Web Site:<br><a href="http://www.elscointl.com">www.elscointl.com</a>                  | Super Blast Off               | B-22                     | 7930-01-363-2819 | 12 - 22 OZ/case  | HM          | Trigger spray bottle, mop and bucket, etc. |
| <b>Fine Organics Corp.</b><br>Customer Assistance:<br>1 (800) 528-7480<br>Web Site:<br><a href="http://www.fineorganicscorp.com">www.fineorganicscorp.com</a>    | Envirosolv 650M®              | Envirosolv 650M® 31750C  | 6850-01-506-2515 | 4 - 1 GL/case    | AT, HM      | Trigger spray bottle, mop and bucket, etc. |
|  | Envirosolv 650M®              | Envirosolv 650M® 31707P  | 6850-01-506-2511 | 5 GL             | AT, HM      | Trigger spray bottle, mop and bucket, etc. |
|  | Envirosolv 650M®              | Envirosolv 650M® 31719D  | 7930-01-508-3234 | 55 GL drum       | AT, HM      | Trigger spray bottle, mop and bucket, etc. |
| <b>Johnson Wax Professional</b><br>Customer Assistance:<br>1 (800) 558-2332<br>Web Site:<br><a href="http://www.johnsondiversey.com">www.johnsondiversey.com</a> | Stride Citrus Neutral Cleaner | 4716                     | 7930-01-508-3232 | 2 - 2.5 L/case   | HM          | J-Fill                                     |
|  | Stride Citrus Neutral Cleaner | 3909                     | 7930-01-397-2710 | 6 – 32oz BT/case | HM          | Trigger spray bottle, mop and bucket, etc. |
|  | Stride Citrus Neutral Cleaner | 3904                     | 7930-01-508-3223 | 4 – 1 GL/case    | HM          | Trigger spray bottle, mop and bucket, etc. |

**Table 2-4**

**General Purpose Heavy-Duty Cleaner Concentrates**

| <b>Company / Phone / Internet Address</b>  | <b>Product Name</b>                           | <b>Manufacturer Part Number</b> | <b>NSN</b>       | <b>Unit of Issue</b> | <b>Precautions</b> | <b>Dispensing System</b>                   |
|--|---|---------------------------------|------------------|----------------------|--------------------|--|
| <b>Johnson Wax Professional</b><br>Customer Assistance:<br>1 (800) 558-2332<br>Web Site:<br><a href="http://www.johnsondiversey.com">www.johnsondiversey.com</a>         | Stride Citrus Neutral Cleaner                 | 3906                            | 7930-01-508-3225 | 5 GL                 | HM                 | Trigger spray bottle, mop and bucket, etc. |
| <b>Magnolia Marketing</b><br>Customer Assistance:<br>1 (610) 436-6054<br>Web Site:<br><a href="http://www.magnoliamarketinggroup.com">www.magnoliamarketinggroup.com</a> | SS-2000 Industrial Strength Cleaner/Degreaser | 7841                            | 7930-01-508-3228 | 4 - 1 GL/case        | C, AT, HM          | KP1H Mixing Center                         |
|  | SS-2000 Industrial Strength Cleaner/Degreaser | 7815                            | 7930-01-508-3221 | 5 GL pail            | C, AT, HM          | KP1H Mixing Center                         |
|  | SS-2000 Industrial Strength Cleaner/Degreaser | 7855                            | 7930-01-508-3224 | 55 GL drum           | C, AT, HM          | Trigger spray bottle, mop and bucket, etc. |
|  | Enviro-Kleen                                  | 2541                            | 7930-01-508-3239 | 4 - 1 GL/case        | C, AT, HM          | KP1H Mixing Center                         |
|  | Enviro-Kleen                                  | 2515                            | 7930-01-508-3237 | 5 GL pail            | C, AT, HM          | KP1H Mixing Center                         |
|  | Enviro Kleen                                  | 2555                            | 7930-01-508-3242 | 55 GL drum           | C, AT, HM          | Trigger spray bottle, mop and bucket, etc. |

**Table 2-4**

**General Purpose Heavy-Duty Cleaner Concentrates**

| <b>Company / Phone / Internet Address</b>   | <b>Product Name</b> | <b>Manufacturer Part Number</b> | <b>NSN</b>       | <b>Unit of Issue</b> | <b>Precautions</b> | <b>Dispensing System</b>                   |
|---|---------------------|---------------------------------|------------------|----------------------|--------------------|--|
| <b>Maintex</b><br>Customer Assistance:<br>1 (800) 261-4456<br>Web Site:<br><a href="http://www.maintex.com">www.maintex.com</a> | Safe Blue           | 114301                          | 6850-01-505-6655 | 1 GL                 | C, AT, HM          | Trigger spray bottle, mop and bucket, etc. |
|   | Safe Blue           | 114304                          | 7930-01-412-1018 | 4 - 1 GL/case        | C, AT, HM          | Trigger spray bottle, mop and bucket, etc. |
|   | Safe Blue           | 1143051                         | 6850-01-505-7970 | 5 GL pail            | C, AT, HM          | Trigger spray bottle, mop and bucket, etc. |
|   | Safe D'Orange       | 162632                          | 6850-01-505-7960 | 12 - 1 QT/case       | AT, HM             | Trigger spray bottle, mop and bucket, etc. |
|   | Safe D'Orange       | 162601                          | 6850-01-505-6657 | 1 GL                 | AT, HM             | Trigger spray bottle, mop and bucket, etc. |
|   | Safe D'Orange       | 162604                          | 7930-01-398-0882 | 4 - 1 GL/case        | AT, HM             | Trigger spray bottle, mop and bucket, etc. |
|   | Safe D'Orange       | 162605                          | 6850-LL-H59-3384 | 5 GL pail            | AT, HM             | Trigger spray bottle, mop and bucket, etc. |
|   | Safe D'Orange       | 1626055                         | 7930-01-398-0885 | 55 GL drum           | AT, HM             | Trigger spray bottle, mop and bucket, etc. |

Table 2-4

General Purpose Heavy-Duty Cleaner Concentrates

| Company / Phone / Internet Address  | Product Name  | Manufacturer Part Number | NSN              | Unit of Issue  | Precautions | Dispensing System                          |
|---|---|--------------------------|------------------|----------------|-------------|--|
| <b>Maintex</b><br>Customer Assistance:<br>1 (800) 261-4456<br>Web Site:<br><a href="http://www.maintex.com">www.maintex.com</a>                       | Shower, Tub & Tile  | 115732                   | 7930-01-398-0854 | 12 - 1 QT/case | A, HM       | Trigger spray bottle, mop and bucket, etc. |
|   | Shower, Tub & Tile  | 115701                   | 7930-01-508-2109 | 1 GL           | A, HM       | Trigger spray bottle, mop and bucket, etc. |
|   | Shower, Tub & Tile  | 115704                   | 7930-01-398-0855 | 4 - 1 GL/case  | A, HM       | Trigger spray bottle, mop and bucket, etc. |
|   | Shower, Tub & Tile  | 115705                   | 7930-01-398-0856 | 5 GL pail      | A, HM       | Trigger spray bottle, mop and bucket, etc. |
| <b>MAK Products</b><br>Customer Assistance<br>1 (800) 625-6869<br>Web Site:<br><a href="http://www.makenvironmental.com">www.makenvironmental.com</a> | ECO-MARINE Heavy Equipment and Machine Cleaner/ Degreaser | ECOMAR GL                | 7930-01-508-2110 | 1 GL           | HM          | DEMA Blend Safe                            |
|   | ECO-MARINE Heavy Equipment and Machine Cleaner/ Degreaser | ECOMAR PL                | 7930-01-508-2121 | 5 GL           | HM          | DEMA Blend Safe                            |

Table 2-4

General Purpose Heavy-Duty Cleaner Concentrates

| Company / Phone / Internet Address   | Product Name                                | Manufacturer Part Number | NSN              | Unit of Issue | Precautions | Dispensing System                          |
|--|---|--------------------------|------------------|---------------|-------------|--|
| <b>MAK Products</b><br>Customer Assistance<br>1 (800) 625-6869<br>Web Site:<br><a href="http://www.makenvironmental.com">www.makenvironmental.com</a>        | ECO-100 General Purpose Cleaner Concentrate | ECO100GL                 | 7930-01-508-2112 | 1 GL          | HM          | DEMA Blend Safe                            |
|  | ECO-100 General Purpose Cleaner Concentrate | ECO100PL                 | 7930-01-508-2108 | 5 GL          | HM          | DEMA Blend Safe                            |
| <b>Orison Marketing, L.L.C.</b><br>Customer Assistance:<br>1 (800) 460-2403<br>Web Site:<br><a href="http://www.orisonllc.com">www.orisonllc.com</a>         | VPW SC-1000                                 | VPW SC-1000-1            | 6850-01-505-7202 | 4 - 1 GL/case | HM          | DEMA Blend                                 |
|  | VPW SC-1000                                 | VPW SC-1000-5s           | 6850-01-474-1273 | 5 GL carboy   | HM          | DEMA Blend                                 |
|  | VPW SC-1000                                 | VPW SC-1000-55           | 6850-01-474-1311 | 55 GL drum    | HM          | Trigger spray bottle, mop and bucket, etc. |
| <b>Orloff Corp./Computer Bath</b><br>Customer Assistance:<br>1 (714) 754-6461<br>Web Site:<br><a href="http://www.computerbath.com">www.computerbath.com</a> | Absolutely Clean                            | ABCC-200                 | 6850-01-505-7166 | 1 GL          | HM          | KP1H Mixing Center                         |
|  | Absolutely Clean                            | ABCC-205                 | 6850-01-505-7693 | 5 GL          | HM          | KP1H Mixing Center                         |
|  | Absolutely Clean                            | ABCC-255                 | 6850-01-505-7692 | 55 GL drum    | HM          | Trigger spray bottle, mop and bucket, etc. |

Table 2-4

General Purpose Heavy-Duty Cleaner Concentrates

| Company / Phone / Internet Address  | Product Name   | Manufacturer Part Number | NSN              | Unit of Issue | Precautions | Dispensing System                          |
|---|----------------|--------------------------|------------------|---------------|-------------|--|
| <b>Quick ‘n Brite</b><br>Customer Assistance:<br>1 (425) 778-8285<br>Web Site:<br><a href="http://www.quicknbrite.com">www.quicknbrite.com</a>                    | Quick ‘n Brite | QB-165-001-A             | 7930-01-442-5900 | 55 GL drum    | HM          | Accudose                                   |
|   | Quick ‘n Brite | QB-255-001-A             | 7930-01-442-5898 | 6 - 1 GL/case | HM          | Accudose                                   |
|   | Quick ‘n Brite | QB-160-001-A             | 7930-01-442-5899 | 5 GL          | HM          | Accudose                                   |
| <b>SOQ Environmental</b><br>Customer Assistance:<br>1 (480) 966-2892<br>Web Site:<br><a href="http://www.soqenvironmental.com">www.soqenvironmental.com</a>       | Ecomate MPC    | MPC-4                    | 7930-01-398-0934 | 4 – 1 GL/case | C, HM       | Trigger spray bottle, mop and bucket, etc. |
|   | Ecomate MPC    | MPC-5                    | 7930-01-398-0935 | 5 GL          | C, HM       | SOQ Multiblend                             |
|   | Ecomate MPC    | MPC-15                   | 7930-01-468-4419 | 15 GL         | C, HM       | SOQ Multiblend                             |
| <b>State Industrial Products</b><br>Customer Assistance:<br>1 (866) 573-4468<br>Web Site:<br><a href="http://www.stateindustrial.com">www.stateindustrial.com</a> | No Issue       | 20825                    | 7930-01-508-2738 | 6 - 1 GL/case | C, HM       | Trigger spray bottle, mop and bucket, etc. |
|   | No Issue       | 106088                   | 7930-01-508-6091 | 4 -3 L/case   | C, HM       | “One Solution” Powerfill                   |
|   | No Issue       | 20823                    | 7930-01-508-2733 | 20 GL drum    | C, HM       | Trigger spray bottle, mop and bucket, etc. |
|   | No Issue       | 20821                    | 7930-01-508-3712 | 55 GL drum    | C, HM       | Trigger spray bottle, mop and bucket, etc. |

**Table 2-4**

**General Purpose Heavy-Duty Cleaner Concentrates**

| <b>Company / Phone / Internet Address</b>   | <b>Product Name</b> | <b>Manufacturer Part Number</b> | <b>NSN</b>       | <b>Unit of Issue</b> | <b>Precautions</b> | <b>Dispensing System</b>                   |
|---|---------------------|---------------------------------|------------------|----------------------|--------------------|--|
| <b>Sun Brite Corporation</b><br>Customer Assistance:<br>1 (800) 458-5636<br>Web Site:<br><a href="http://www.sunbrite.biz/online/default.htm">www.sunbrite.biz/online/default.htm</a> | Sun Brite Cleaner   | SB-1PT                          | 7930-01-508-2736 | 1 PT                 | HM                 | Trigger spray bottle, mop and bucket, etc. |
|   | Sun Brite Cleaner   | SB - CASE                       | 7930-01-508-2743 | 24 - 1 PT/case       | HM                 | Trigger spray bottle, mop and bucket, etc. |
|   | Sun Brite Cleaner   | SB – 1GAL                       | 7930-01-508-3701 | 1 GL                 | HM                 | Trigger spray bottle, mop and bucket, etc. |
|   | Sun Brite Cleaner   | SB – 4.25gal                    | 7930-01-508-3707 | 4.25 GL bucket       | HM                 | Trigger spray bottle, mop and bucket, etc. |

## 2.5 Heavy-Duty Cleaner Concentrates for Machinery and Bilges

Products determined to comply with this product description and authorized for use on Navy surface ships are included in the following Tables 2-5 and 2-6.

### 2.5.1 Product Description

The cleaning concentrates listed in this section are categorized as Heavy-Duty Cleaner Concentrates intended for use on machinery and in bilge areas. All expended cleaning compound solutions used for this application are processed for overboard discharge through the shipboard oil/water separators. Some cleaning agents produce stable emulsions that prevent the proper operation of the oil/water separators and are therefore prohibited in this application . Only two cleaning compounds for machinery and bilge areas tested to date have proven to be compatible with the oil/water separators (these products are provided in Table 2-5). For future authorization of “proposed” cleaning concentrates for this application, test and evaluation studies shall be required to determine compatibility Navy oil/water separators. Authorized cleaners are water-based, non-toxic, biodegradable, and alkaline. These cleaners remove grease, oil, dirt, and wax from machinery and bilge areas. The cleaners are intended for use on most metal surfaces (including aluminum, brass, cadmium, copper, steel, magnesium, and stainless steel). Additionally, these cleaners can be used on painted and other finishes, glass, upholstery, plastic, and tires.

### 2.5.2 Related Safety, Health, and Environmental Hazards

- Ensure that general ventilation is in operation in the vicinity where cleaning compounds are being used.
- Avoid skin or eye contact with detergent concentrate. If contact is made, flush affected area with water. Wear chemical worker goggles and rubber gloves when handling these concentrates. Consult the product MSDS for specific guidance.
- Avoid breathing mists and vapors from these concentrates.
- Use concentrated detergents only as prescribed on the container label. Ensure that the concentrate is diluted in accordance with the manufacturer’s directions.
- **All machinery and bilge cleaning concentrates shall be disposed of as Used/Excess HM.** This disposal requirement does not pertain to unused or used solutions diluted in accordance with manufacturer’s directions.

- If used in a dispensing system, the concentrate shall only be used with the manufacturer-authorized dispenser. **The concentrate may not be used with another manufacturer's dispensing system.**
- If used in a dispensing system having a concentrate reservoir, a portable, temporary containment shall be installed under the reservoir to prevent accidental pills from leaking on surrounding decks.
- All empty plastic containers shall be carried to the solid waste room for disposal in the plastic waste processor (PWP) in accordance with Navy Ship Technical Manual (NSTM) 593, Pollution Control.

**Table 2-5**

**Authorized Heavy-Duty Cleaner Concentrates for Machinery and Bilges**

| <b>Company / Phone / Internet Address</b>  | <b>Product Name</b> | <b>Manufacturer Part Number</b> | <b>NSN</b>       | <b>Unit of Issue</b> | <b>Precautions</b> | <b>Dispensing System</b>           |
|--|---------------------|---------------------------------|------------------|----------------------|--------------------|------------------------------------|
| <b>Allied Enterprises</b><br>Customer Assistance:<br>(800) 943-5400<br>Web Site:<br><a href="http://www.shopallied.com">www.shopallied.com</a> | Formula P-98        | 9I154                           | 6850-01-278-3859 | 10 packets/box       | HM                 | Trigger spray bottle, bucket, etc. |
|  | Formula P-98        | 9G154                           | 6850-01-278-4421 | 5 GL                 | HM                 | Trigger spray bottle, bucket, etc. |
|  | Formula P-98        | 9A154                           | 6850-01-278-4420 | 55 GL drum           | HM                 | Trigger spray bottle, bucket, etc. |
| <b>Manufacturers of MIL-D-16791 are listed in the Table 2-6.</b>   | MIL-D-16791         | MIL-D-16791                     | 7930-00-282-9699 | 1 GL                 | HM                 | Trigger spray bottle, bucket, etc. |
|  | MIL-D-16791         | MIL-D-16791                     | 7930-00-985-6911 | 5 GL                 | HM                 | Trigger spray bottle, bucket, etc. |
|  | MIL-D-16791         | MIL-D-16791                     | 7930-00-282-9700 | 55 GL drum           | HM                 | Trigger spray bottle, bucket, etc. |

**Table 2-6**

**MIL-D-16791 Authorized Vendors**

| <b>Company Name</b>                       | <b>Customer Assistance</b> | <b>Web Site</b>  |
|---|----------------------------|--|
| Chemical Specialties and Development Inc. | 1 (936) 756-1065           | <a href="http://www.startexchemical.com">www.startexchemical.com</a>         |
| Lighthouse for the Blind                  | 1 (877) 438-5963           | <a href="http://www.lhbindustries.co">www.lhbindustries.co</a>               |
| Michel and Pelton Co.                     | Not Listed                 | Not listed   |
| Octagon Process Inc.                      | 1 (800) 423-3375           | No website   |
| Danbury Union Carbide (Dow)               | 1 (800) 447-4369           | <a href="http://www.dow.com">www.dow.com</a>                                 |
| Ashland Chemical Co.                      | 1 (888) 274-2436           | <a href="http://www.ashland.com">www.ashland.com</a>                         |
| National Diagnostics, Inc.                | 1 (800) 526-3967           | <a href="http://www.nationaldiagnostics.com">www.nationaldiagnostics.com</a> |
| Chemscope Corp.                           | Not Listed                 | Not listed   |
| Continental Chemical Corp.                | Not Listed                 | Not listed   |
| CC Distributing Inc.                      | 1 (801) 621-7918           | <a href="mailto:ccd@stormbowling.com">ccd@stormbowling.com</a>               |
| Mallinckrodt Baker, Inc.                  | 1 (800) 582-2537           | <a href="http://www.mallbaker.com">www.mallbaker.com</a>                     |

## 2.6 Floor Finish Restorer Concentrates

Products determined to comply with this product description and authorized for use on Navy surface ships are included in Table 2-7.

### 2.6.1 Product Description

The cleaning concentrates listed in this section are categorized as Floor Finish Restorer Concentrates suitable for removing heavy soils from walls, painted surfaces, linoleum, asphalt, rubber, vinyl tile flooring, epoxy colorflake decking, terrazzo decking, and other washable surfaces. These cleaners comply with shipboard requirements for a stable, homogenous, non-abrasive, concentrated, liquid, heavy-duty cleaner. These cleaners are not intended for use on non-skid or “stratica” tile decking systems unless otherwise specified herein.

### 2.6.2 Related Safety, Health, and Environmental Hazards

- Ensure that general ventilation is in operation in the vicinity where cleaning compounds are being used.
- Avoid skin or eye contact with detergent concentrate. If contact is made, flush affected area with water. Wear chemical worker goggles and rubber gloves when handling these concentrates. Consult the product MSDS for specific guidance.
- Avoid breathing mists and vapors from these concentrates.
- Use concentrated detergents only as prescribed on the container label. Ensure that the concentrate is diluted in accordance with the manufacturer’s directions.
- **All floor finish restorer concentrates shall be disposed of as Used/Excess HM.** This disposal requirement does not pertain to unused or used solutions diluted in accordance with manufacturer’s directions.
- If used in a dispensing system, the concentrate shall only be used with the manufacturer-authorized dispenser. **The concentrate may not be used with another manufacturer’s dispensing system.**
- If used in a dispensing system having a concentrate reservoir, a portable, temporary containment shall be installed under the reservoir to prevent accidental spills from leaking on surrounding decks.
- All empty plastic containers shall be carried to the solid waste room for disposal in the plastic waste processor (PWP) in accordance with Navy Ship Technical Manual (NSTM) 593, Pollution Control.

**Table 2-7**

**Authorized Floor Finish Restorer Concentrates**

| <b>Company / Phone / Internet Address</b>  | <b>Product Name</b>  | <b>Manufacturer Part Number</b> | <b>NSN</b>       | <b>Unit of Issue</b> | <b>Precautions</b> | <b>Dispensing System</b>                     |
|--|--|---------------------------------|------------------|----------------------|--------------------|--|
| <b>1<sup>st</sup> EnviroSafety, Inc.</b><br>Customer Assistance:<br>1-888-578-9600<br>Web Site:<br><a href="http://www.1stenvirosafety.com">www.1stenvirosafety.com</a>  | Organic Cleaner / Degreaser  | 67128                           | 6850-01-505-7711 | 4 -1 GL/case         | HM                 | Mop and Bucket                               |
|  | Organic Cleaner / Degreaser  | 67640                           | 6850-01-507-7912 | 5 GL CN              | HM                 | Mop and Bucket                               |
|  | Organic Cleaner / Degreaser  | 67030                           | 6850-01-505-7706 | 1-30 GL drum         | HM                 | Mop and Bucket                               |
|  | Organic Cleaner / Degreaser  | 67055                           | 6850-01-505-7710 | 55 GL drum           | HM                 | Mop and Bucket                               |
| <b>3M<sup>TM</sup> Commercial Care Division</b><br>Customer Assistance:<br>1 (800) 3M-HELPS<br>Web Site:<br><a href="http://www.3M.com/commcare">www.3M.com/commcare</a> | 3M <sup>TM</sup> General Purpose Cleaner Concentrate 8L (dispenses 1 GL/min) | 70-0708-3998-3                  | 7930-01-381-6001 | 6 - 2L BT/case       | F, HM              | 3M <sup>TM</sup> Twist ‘n Fill <sup>TM</sup> |
|  | 3M <sup>TM</sup> General Purpose Cleaner Concentrate 8H (dispenses 3 GL/min) | 70-0708-4008-0                  | 7930-01-381-5834 | 6 - 2L BT/case       | F, HM              | 3M <sup>TM</sup> Twist ‘n Fill <sup>TM</sup> |
|  | 3M <sup>TM</sup> Heavy-duty Multi-surface Cleaner Concentrate                | 70-0708-3990-0                  | 7930-01-381-5997 | 6 - 2L BT/case       | C, AT, HM          | 3M <sup>TM</sup> Twist ‘n Fill <sup>TM</sup> |

**Table 2-7**

**Authorized Floor Finish Restorer Concentrates**

| <b>Company / Phone / Internet Address</b>   | <b>Product Name</b>                             | <b>Manufacturer Part Number</b> | <b>NSN</b>       | <b>Unit of Issue</b> | <b>Precautions</b> | <b>Dispensing System</b>                   |
|---|---|---------------------------------|------------------|----------------------|--------------------|--|
| <b>Allied Enterprises</b><br>Customer Assistance:<br>1 (800) 943-5400<br>Web Site:<br><a href="http://www.shopallied.com">www.shopallied.com</a>                      | Leading Edge Degreaser and Hard Surface Cleaner | 9P-1003                         | 6850-01-506-3002 | 4 -1/2 GL/case       | C, AT, HM          | Leading Edge Mix Master                    |
|   | Leading Edge Degreaser and Hard Surface Cleaner | 9109H-1359-4                    | 6850-01-506-3178 | 4 -1 GL/case         | C, AT, HM          | Trigger spray bottle, mop and bucket, etc. |
|   | Leading Edge Degreaser and Hard Surface Cleaner | 9109G-1359                      | 6850-01-506-3185 | 5 GL                 | C, AT, HM          | Trigger spray bottle, mop and bucket, etc. |
|   | Leading Edge Spray and Wipe Cleaner             | 9409P-0999                      | 7930-01-508-2111 | 4 - 1/2 GL/case      | HM                 | Leading Edge Mix Master                    |
| <b>American Cleaning Solutions</b><br>Customer Assistance:<br>1 (866) 883-3562<br>Web Site:<br><a href="http://www.americancleaning.com">www.americancleaning.com</a> | TUFF JOB  | TJ-00501                        | 7930-01-336-7197 | 6 – 1 GL/case        | C, HM              | Trigger spray bottle, mop and bucket, etc. |
|   | TUFF JOB  | TJ-00505                        | 7930-01-336-7198 | 5 GL pail            | C, HM              | Trigger spray bottle, mop and bucket, etc. |
|   | TUFF JOB  | TJ-00555                        | 7930-01-319-5373 | 55 GL drum           | C, HM              | Trigger spray bottle, mop and bucket, etc. |

Table 2-7

Authorized Floor Finish Restorer Concentrates

| Company / Phone / Internet Address   | Product Name              | Manufacturer Part Number | NSN              | Unit of Issue | Precautions | Dispensing System |
|--|---------------------------|--------------------------|------------------|---------------|-------------|-------------------|
| <b>Birsch</b><br>Customer Assistance:<br>1 (888) 622-0356<br>Web Site:<br><a href="http://www.supplythenavy.com">www.supplythenavy.com</a><br><a href="http://www.Birsch.com">www.Birsch.com</a><br><br>*Check with manufacturer for dispensing system options | Blaze Off                 | 60605083                 | 6850-01-506-5087 | 1 GL          | C, HM       | Knight Dispenser  |
|  | Blaze Off                 | 606050834                | 6840-01-506-3505 | 4 - 1 GL/case | C, HM       | Knight Dispenser  |
|  | Blaze Off                 | 60605087                 | 6850-01-506-6326 | 5 GL pail*    | C, HM       | Mop and Bucket    |
|  | Blaze Off                 | 60605085                 | 6850-01-506-6323 | 15 GL keg*    | C, HM       | Mop and Bucket    |
|  | Golden Gusto Cleaner      | 1277453                  | 7930-01-370-9512 | 4 - 1 GL/case | AT, HM      | Knight Dispenser  |
|  | Golden Gusto Cleaner      | 1277457                  | 7930-01-508-2118 | 5 GL pail*    | AT, HM      | Mop and Bucket    |
|  | Golden Gusto Cleaner      | 1277455                  | 7930-01-508-2114 | 15 GL keg*    | AT, HM      | Mop and Bucket    |
|  | MPC Multi-purpose Cleaner | 1517513                  | 7930-01-508-2131 | 1 GL          | AT, HM      | Knight Dispenser  |
|  | MPC Multi-purpose Cleaner | 15175134                 | 7930-01-508-3216 | 4 - 1 GL/case | AT, HM      | Knight Dispenser  |
|  | MPC Multi-purpose Cleaner | 1517517                  | 7930-01-508-2136 | 5 GL pail*    | AT, HM      | Mop and Bucket    |
|  | MPC Multi-purpose Cleaner | 1517515                  | 7930-01-508-2133 | 15 GL keg     | AT, HM      | Mop and Bucket    |

**Table 2-7**

**Authorized Floor Finish Restorer Concentrates**

| <b>Company / Phone / Internet Address</b>   | <b>Product Name</b> | <b>Manufacturer Part Number</b> | <b>NSN</b>       | <b>Unit of Issue</b> | <b>Precautions</b> | <b>Dispensing System</b>                         |
|---|---------------------|---------------------------------|------------------|----------------------|--------------------|--|
| <b>Ecolab Institutional Division</b><br>Customer Assistance:<br>1 (800) 35-CLEAN<br>Web Site:<br><a href="http://www.ecolab.com">www.ecolab.com</a> | Flash Back          | 61221180                        | 7930-01-418-1226 | 2.5 GL               | HM                 | Control Tower IV<br>Select Four<br>Oasis Ultra 1 |
|   | Oasis 136           | 10707                           | 7930-01-398-0955 | 2.5 GL               | C, F, AT, HM       | Control Tower IV<br>Select Four<br>Oasis Ultra 1 |
|   | Oasis 136           | 10732                           | 7930-01-436-7943 | 15 GL                | C, F, AT, HM       | Mop and Bucket                                   |
|   | Quik Fill 330       | 62380053                        | 7930-01-379-5357 | 2.5 GL               | AT, HM             | Control Tower IV<br>Select Four<br>Oasis Ultra 1 |
| <b>ELSCO International</b><br>Customer Assistance:<br>1 (888) 84 ELSCO<br>Web Site:<br><a href="http://www.elscointl.com">www.elscointl.com</a>     | Super Blast Off     | SB-3                            | 7930-01-363-2818 | 6 - 1 GL/case        | HM                 | Mop & bucket                                     |
|   | Super Blast Off     | SB-2                            | 7930-01-364-7376 | 5 GL pail            | HM                 | Mop & bucket                                     |
|   | Super Blast Off     | B-32                            | 7930-01-381-3398 | 12 -32 oz BT/case    | HM                 | Mop & bucket                                     |
|   | Super Blast Off     | B-22                            | 7930-01-363-2819 | 12-22 oz BT/case     | HM                 | Mop & bucket                                     |

Table 2-7

Authorized Floor Finish Restorer Concentrates

| Company / Phone / Internet Address   | Product Name                   | Manufacturer Part Number | NSN              | Unit of Issue     | Precautions | Dispensing System |
|--|--------------------------------|--------------------------|------------------|-------------------|-------------|-------------------|
| <b>Johnson Wax Professional</b><br>Customer Assistance:<br>1 (800) 558-2332<br>Web Site:<br><a href="http://www.johnsondiversey.com">www.johnsondiversey.com</a> | *Stride Citrus Neutral Cleaner | 4716                     | 7930-01-508-3232 | 2 - 2.5 L/case    | HM          | J-Fill            |
|  | *Stride Citrus Neutral Cleaner | 3909                     | 7930-01-397-2710 | 6 - 32 oz BT/case | HM          | Mop & bucket      |
|  | *Stride Citrus Neutral Cleaner | 3904                     | 7930-01-508-3223 | 4 - 1 GL/case     | HM          | Mop & bucket      |
|  | *Stride Citrus Neutral Cleaner | 3906                     | 7930-01-508-3225 | 5 GL              | HM          | Mop & bucket      |
| <b>Maintex</b><br>Customer Assistance:<br>1 (800) 261-4456<br>Web Site:<br><a href="http://www.maintex.com">www.maintex.com</a>                                  | Double Duty                    | 114732                   | 7930-01-508-4760 | 12-1 QT BT/case   | AT, HM      | Mop & bucket      |
|  | Double Duty                    | 114701                   | 7930-01-508-4764 | 1 GL              | AT, HM      | Mop & bucket      |
|  | Double Duty                    | 114704                   | 7930-01-412-1019 | 4 - 1 GL/case     | AT, HM      | Mop & bucket      |
|  | Double Duty                    | 114705                   | 7930-01-412-1020 | 5 GL pail         | AT, HM      | Mop & bucket      |
| <b>Orison Marketing, L.L.C.</b><br>Customer Assistance:<br>1 (800) 460-2403<br>Web Site:<br><a href="http://www.orisonllc.com">www.orisonllc.com</a>             | VPW SC-1000                    | VPW SC-1000-1            | 6850-01-505-7202 | 4 - 1 GL/case     | HM          | Mop & bucket      |
|  | VPW SC-1000                    | VPW SC-1000-5s           | 6850-01-474-1273 | 5 GL carboy       | HM          | Mop & bucket      |
|  | VPW SC-1000                    | VPW SC-1000-55           | 6850-01-474-1311 | 55 GL drum        | HM          | Mop & bucket      |

\* Stride Citrus Neutral Cleaners are approved by NAVSEA for use on “Stratica” floor tiles.

**Table 2-7**

**Authorized Floor Finish Restorer Concentrates**

| <b>Company / Phone / Internet Address</b>  | <b>Product Name</b> | <b>Manufacturer Part Number</b> | <b>NSN</b>       | <b>Unit of Issue</b> | <b>Precautions</b> | <b>Dispensing System</b>                   |
|--|---------------------|---------------------------------|------------------|----------------------|--------------------|--|
| <b>Orloff Corp./Computer Bath</b><br>Customer Assistance:<br>1 (714) 754-6461<br>Web Site:<br><a href="http://www.computerbath.com">www.computerbath.com</a> | Absolutely Clean    | ABCC-200                        | 6850-01-505-7166 | 1 GL                 | HM                 | KP1H Mixing Center                         |
|  | Absolutely Clean    | ABCC-205                        | 6850-01-505-7693 | 5 GL                 | HM                 | KP1H Mixing Center                         |
|  | Absolutely Clean    | ABCC-255                        | 6850-01-505-7692 | 55 GL drum           | HM                 | KP1H Mixing Center                         |
| <b>Quick 'n Brite</b><br>Customer assistance:<br>1 (425) 778-8285<br>Web Site:<br><a href="http://www.quicknbrite.com">www.quicknbrite.com</a>               | Quick 'n Brite      | QB-255-011-A                    | 7930-01-442-5898 | 6 - 1 GL/case        | HM                 | Accudose                                   |
|  | Quick 'n Brite      | QB-160-001-A                    | 7930-01-442-5899 | 5 GL                 | HM                 | Accudose                                   |
|  | Quick 'n Brite      | QB-165-001-A                    | 7930-01-442-5900 | 55 GL drum           | HM                 | Accudose                                   |
| <b>SOQ Environmental</b><br>Customer Assistance:<br>1 (480) 966-2892<br>Web Site:<br><a href="http://www.soqenvironmental.com">www.soqenvironmental.com</a>  | Ecomate MPC         | MPC-4                           | 7930-01-398-0934 | 4 - 1 GL/box         | C, HM              | Trigger spray bottle, mop and bucket, etc. |
|  | Ecomate MPC         | MPC-15                          | 7930-01-468-4419 | 15 GL                | C, HM              | SOQ Multiblend Dispenser                   |
|  | Ecomate MPC         | MPC-5                           | 7930-01-398-0935 | 5 GL                 | C, HM              | SOQ Multiblend Dispenser                   |

## 2.7 Shipboard Floor Stripper Concentrates

Products determined to comply with this product description and authorized for use on Navy surface ships are included in Table 2-8.

### 2.7.1 Product Description

The cleaning products listed in this section are categorized as Shipboard Floor Stripper Concentrates. These cleaners will remove water emulsion floor finish and floor wax from impermeable floor surfaces.

### 2.7.2 Related Safety, Health, and Environmental Hazards

- Ensure that general ventilation is in operation in the vicinity where cleaning compounds are being used.
- Avoid skin or eye contact with detergent concentrate. If contact is made, flush affected area with water. Wear chemical worker goggles and rubber gloves when handling these concentrates. Consult the product MSDS for specific guidance.
- Avoid breathing mists and vapors from these concentrates.
- Use concentrated detergents only as prescribed on the container label. Ensure that the concentrate is diluted in accordance with the manufacturer's directions.
- **All floor finish restorer concentrates shall be disposed of as Used/Excess HM.** This disposal requirement does not pertain to unused or used solutions diluted in accordance with manufacturer's directions.
- If used in a dispensing system, the concentrate shall only be used with the manufacturer-authorized dispenser. **The concentrate may not be used with another manufacturer's dispensing system.**
- If used in a dispensing system having a concentrate reservoir, a portable, temporary containment be installed under the reservoir to prevent accidental spills and leakage on surrounding decks.
- All empty plastic containers shall be carried to the solid waste room for disposal in the plastic waste processor (PWP) in accordance with Navy Ship Technical Manual (NSTM) 593, Pollution Control.

**Table 2-8**

**Authorized Shipboard Floor Stripper Concentrates**

| <b>Company / Phone / Internet Address</b>  | <b>Product Name</b>   | <b>Manufacturer Part Number</b> | <b>NSN</b>       | <b>Unit of Issue</b> | <b>Precautions</b> | <b>Dispensing System</b>                   |
|--|-----------------------|---------------------------------|------------------|----------------------|--------------------|--|
| <b>3M™ Commercial Care Division</b><br>Customer Assistance:<br>1 (800) 3M-HELPS<br>Web Site:<br><a href="http://www.3M.com/commcare">www.3M.com/commcare</a>                                     | 3M™ Finish Remover 21 | 70-0710-0957-8                  | 7930-01-508-2233 | 6 - 2 L BT/case      | C, AT, HM          | 3M™ Twist ‘n Fill™                         |
|  | 3M™ Floor Stripper LO | 70-0708-4021-3                  | 7930-01-508-2231 | 6 - 2 L BT/case      | C, AT, HM          | 3M™ Twist ‘n Fill™                         |
|  | 3M™ Speed Stripper    | 70-0710-6561-2                  | 7930-01-381-5982 | 6 - 2 L BT/case      | C, AT, HM          | 3M™ Twist ‘n Fill™                         |
| <b>Allied Enterprises</b><br>Customer Assistance:<br>1 (800) 943-5400<br>Web Site:<br><a href="http://www.shopallied.com">www.shopallied.com</a>   | Power Strip           | 9409H-0948                      | 7930-01-508-2239 | 4-1 GL/case          | C, AT, HM          | Mop & bucket only                          |
|  | Power Strip           | 9409G-0948                      | 7930-01-508-2237 | 5 GL                 | C, AT, HM          | Mop & bucket only                          |
| <b>Birsch</b><br>Customer Assistance:<br>1 (888) 622-0356<br>Web Site:<br><a href="http://www.supplythenavy.com">www.supplythenavy.com</a><br><a href="http://www.Birsch.com">www.Birsch.com</a> | New Kemtronics        | 1528803                         | 7930-01-508-2748 | 4 – 1 GL/case        | AT, HM             | Knight Mixing Station                      |
|  | New Kemtronics        | 1528807                         | 7930-01-508-3219 | 5 GL pail            | AT, HM             | Trigger spray bottle, mop and bucket, etc. |
|  | New Kemtronics        | 1528805                         | 7930-01-508-4216 | 15 GL keg            | AT, HM             | Trigger spray bottle, mop and bucket, etc. |
|  | New Kemtronics        | 1528801                         | 7930-01-508-2241 | 55 GL drum           | AT, HM             | Trigger spray bottle, mop and bucket, etc. |
|  | No Scrub Stripper     | 1550003                         | 7930-01-508-3214 | 1 GL                 | C, HM              | Mop & bucket only                          |

**Table 2-8**

**Authorized Shipboard Floor Stripper Concentrates**

| <b>Company / Phone / Internet Address</b>  | <b>Product Name</b> | <b>Manufacturer Part Number</b> | <b>NSN</b>       | <b>Unit of Issue</b> | <b>Precautions</b> | <b>Dispensing System</b>                      |
|--|---------------------|---------------------------------|------------------|----------------------|--------------------|---|
| <b>Birsch</b><br>Customer Assistance:<br>1 (888) 622-0356<br>Web Site:<br><a href="http://www.supplythenavy.com">www.supplythenavy.com</a><br><a href="http://www.Birsch.com">www.Birsch.com</a> | No Scrub Stripper   | 15500034                        | 7930-01-508-3218 | 4 - 1 GL/case        | C, HM              | Mop & bucket only                             |
|  | No Scrub Stripper   | 1550007                         | 7930-01-508-2746 | 5 GL pail            | C, HM              | Mop & bucket only                             |
|  | No Scrub Stripper   | 1550005                         | 7930-01-508-2744 | 15 GL keg            | C, HM              | Mop & bucket only                             |
|  | Vac-Up Stripper     | 1795453                         | 7930-01-363-1630 | 4 - 1 GL/case        | C, HM              | Mop & bucket only                             |
|  | Vac-Up Stripper     | 1795457                         | 7930-01-370-7513 | 5 GL pail            | C, HM              | Mop & bucket only                             |
|  | Vac-Up Stripper     | 1795455                         | 7930-01-508-3713 | 15 GL keg            | C, HM              | Mop & bucket only                             |
| <b>Ecolab Institutional Division</b><br>Customer Assistance:<br>1 (800) 35-CLEAN<br>Web Site:<br><a href="http://www.ecolab.com">www.ecolab.com</a>  | CareStrip LO        | 61183458                        | 7930-01-473-1230 | 2.5 GL               | C, AT, HM          | Select Four Control Tower IV<br>Oasis Ultra 1 |
|  | Quik Fill 320       | 62380041                        | 7930-01-379-5353 | 2.5 GL               | C, AT, HM          | Select Four Control Tower IV<br>Oasis Ultra 1 |

**Table 2-8**

**Authorized Shipboard Floor Stripper Concentrates**

| <b>Company / Phone /<br/>Internet Address</b>   | <b>Product Name</b>                             | <b>Manufacturer<br/>Part Number</b> | <b>NSN</b>       | <b>Unit of<br/>Issue</b> | <b>Precautions</b> | <b>Dispensing<br/>System</b> |
|---|---|-------------------------------------|------------------|--------------------------|--------------------|------------------------------|
| <b>State Industrial Products</b><br>Customer Assistance:<br>1 (866) 573-4468<br>Web Site:<br><a href="http://www.stateindustrial.com">www.stateindustrial.com</a> | Floor Wizard<br>High<br>Performance<br>Stripper | 103163                              | 7930-01-508-2740 | 4 -1<br>GL/case          | C, HM              | Mop & bucket<br>only         |
|   | Floor Wizard<br>High<br>Performance<br>Stripper | 108189                              | 7930-01-508-6105 | 4 – 3<br>L/case          | C, HM              | “One Solution”<br>Powerfill  |
|   | Floor Wizard<br>High<br>Performance<br>Stripper | 101202                              | 7930-01-508-4390 | 55 GL<br>drum            | C, HM              | Mop & bucket<br>only         |
|   | Floor Wizard<br>High<br>Performance<br>Stripper | 101180                              | 7930-01-508-3711 | 20 GL<br>drum            | C, HM              | Mop & Bucket<br>only         |
|   | Floor Wizard<br>High<br>Performance<br>Stripper | 101204                              | 7930-01-508-6123 | 2 - 2.5<br>GL/case       | C, HM              | Mop & bucket<br>only         |

## 2.8 Glass Cleaner Concentrates

Products determined to comply with this product description and authorized for use on Navy surface ships are included in Table 2-9.

### 2.8.1 Product Description

The cleaning concentrates listed in this section are categorized as glass cleaner liquid concentrates with and without antifogging properties. These glass cleaners are used to polish glass surfaces, plastics, ceramics, chrome, painted surfaces, and stainless steel. The glass cleaner concentrates, when diluted in accordance with the manufacturers instructions, are applied using manually pumped plastic or glass bottles and corresponding refills (not aerosol-packaged, ready-to-use cleaners).

#### NOTE

**Aerosol-packaged ready-to-use cleaners are not included under this description. In order to minimize the use of propellants and the accumulation of empty aerosol cans, manually hand pumped product spray dispensers are recommended and considered a more viable and environmentally-friendly option.**

### 2.8.2 Related Safety, Health, and Environmental Hazards

- Many glass cleaning concentrates have a flash point less than 140° F and are considered **“flammable materials.”** Glass cleaning concentrates should be stored in accordance with current directives for **“flammable liquids”** as stated in OPNAVINST 5110.19. **DO NOT use or store glass cleaning concentrates near or on hot surfaces or sources of ignition, sparks, or an open flame and oxidizers such as calcium hypochlorite, sodium nitrate, and hydrogen peroxide.** Diluted glass cleaning solutions are not classified as “flammable materials.” No special handling or storage considerations are required for these in-use glass cleaners.
- Ensure that general ventilation is in operation in the vicinity where cleaning compounds are being used.
- Avoid skin or eye contact with glass cleaner concentrate. If contact is made, flush affected area with water. Wear chemical worker goggles and rubber gloves when handling these concentrates. Consult the product MSDS for specific guidance.
- Avoid breathing mists and vapors from these concentrates.

- Use concentrated detergents only as prescribed on the container label. Ensure that the concentrate is diluted in accordance with the manufacturer's directions.
- **All glass cleaner concentrates shall be disposed of as Used/Excess HM.** This disposal requirement does not pertain to unused or expended solutions diluted in accordance with manufacturer's directions.
- If used in a dispensing system, the concentrate shall be only used with the manufacturer-authorized dispenser. **The concentrate may not be used with another manufacturer's dispensing system.**
- If used in a dispensing system having a concentrate reservoir, a portable, temporary containment be installed under the reservoir to prevent accidental spills and leakage on surrounding decks.
- All empty plastic containers shall be carried to the solid waste room for disposal in the plastic waste processor (PWP) in accordance with Navy Ship Technical Manual (NSTM) 593, Pollution Control.

**Table 2-9**

**Authorized Glass Cleaner Concentrates**

| <b>Company / Phone / Internet Address</b>  | <b>Product Name</b>                          | <b>Manufacturer Part Number</b> | <b>NSN</b>       | <b>Unit of Issue</b> | <b>Precautions</b> | <b>Dispensing System</b>                   |
|--|--|---------------------------------|------------------|----------------------|--------------------|--|
| <b>3M™ Commercial Care Division</b><br>Customer Assistance:<br>1 (800) 3M-HELPS<br>Web Site:<br><a href="http://www.3M.com/commcare">www.3M.com/commcare</a> | 3M™ Heavy-duty Glass Cleaner Concentrate     | 70-0708-4020-5                  | 7930-01-508-2244 | 6 - 2 L BT/case      | F, HM              | 3M™ Twist ‘n Fill™                         |
|  | 3M™ Twist ‘n Fill™ Glass Cleaner Concentrate | 70-0708-4007-2                  | 7930-01-381-5826 | 6 - 2 L BT/case      | F, AT, HM          | 3M™ Twist ‘n Fill™                         |
| <b>Allied Enterprises</b><br>Customer Assistance:<br>1 (800) 943-5400<br>Web Site:<br><a href="http://www.shopallied.com">www.shopallied.com</a>             | Leading Edge Mix Master No.1 Glass Cleaner   | 9409P-1000                      | 7930-01-508-2119 | 4 -1/2 GL/case       | F, AT, HM          | Leading Edge Mix Master                    |
| <b>Ecolab Institutional Division</b><br>Customer Assistance:<br>1 (800) 35-CLEAN<br>Web Site:<br><a href="http://www.ecolab.com">www.ecolab.com</a>          | Oasis 255                                    | 11227                           | 7930-01-379-5378 | 2.5 GL               | C, HM              | Select Four Control Tower IV Oasis Ultra 1 |
|  | Oasis 255                                    | 11197                           | 7930-01-379-5174 | 5 GL                 | C, HM              | Trigger spray bottle, etc.                 |
|  | Oasis 256                                    | 18515                           | 7930-01-379-5330 | 2.5 GL               | C, F, HM           | Select Four Control Tower IV Oasis Ultra 1 |
|  | Oasis 256                                    | 18531                           | 7930-01-379-5178 | 5 GL                 | C, F, HM           | Trigger spray bottle, etc.                 |

**Table 2-9**

**Authorized Glass Cleaner Concentrates**

| <b>Company / Phone / Internet Address</b>   | <b>Product Name</b>              | <b>Manufacturer Part Number</b> | <b>NSN</b>       | <b>Unit of Issue</b> | <b>Precautions</b> | <b>Dispensing System</b>                      |
|---|----------------------------------|---------------------------------|------------------|----------------------|--------------------|---|
| <b>Ecolab Institutional Division</b><br>Customer Assistance:<br>1 (800) 35-CLEAN<br>Web Site:<br><a href="http://www.ecolab.com">www.ecolab.com</a>                                   | Oasis 256                        | 13086                           | 7930-01-436-8007 | 15 GL                | C, F, HM           | Trigger spray bottle, etc.                    |
|   | Oasis 257                        | 16891                           | 7930-01-508-4218 | 2.5 GL               | C, HW              | Select Four Control Tower IV<br>Oasis Ultra 1 |
|   | Oasis 257                        | 11224                           | 7930-01-508-3212 | 15 GL                | C, HW              | Trigger spray bottle, etc.                    |
| <b>Johnson Wax Professional</b><br>Customer Assistance:<br>1 (800) 558-2332<br>Web Site:<br><a href="http://www.johnsondiversey.com">www.johnsondiversey.com</a>                      | Glance Glass and Surface Cleaner | 5779                            | 7930-01-508-3241 | 2 - 2.5 L/case       | C, HM              | J-Fill  |
| <b>Sun Brite Corporation</b><br>Customer Assistance:<br>1 (800) 458-5636<br>Web Site:<br><a href="http://www.sunbrite.biz/online/default/htm">www.sunbrite.biz/online/default/htm</a> | Sun Brite Cleaner                | SB – 1PT                        | 7930-01-508-2736 | 1 PT                 | HM                 | Trigger spray bottles, etc.                   |
|   | Sun Brite Cleaner                | SB – CASE                       | 7930-01-508-2743 | 24 - 1 PT BT/case    | HM                 | Trigger spray bottles, etc.                   |
|   | Sun Brite Cleaner                | SB – 1GAL                       | 7930-01-508-3701 | 1 GL                 | HM                 | Trigger spray bottles, etc.                   |
|   | Sun Brite Cleaner                | SB – 4.25 gal                   | 7930-01-508-3707 | 4.25 GL bucket       | HM                 | Trigger spray bottles, etc.                   |

### 3.0 AUTHORIZED DISPENSING SYSTEMS

This chapter covers general-purpose chemical cleaning dispensing systems (CCDSs) for Naval surface ships general-purpose use. The dispensers are used to mix and dispense cleaning compound concentrates. The cleaning compounds must be procured separately. This chapter will summarize the requirements for approved dispensing systems, as documented in the Technical Purchase Description (TPD) for dispensing systems.

#### NOTE

**Prior to ordering dispensing systems, contact the manufacturer's Customer Service Department to verify the following information:**

- **Dispenser model features, flow options, supporting hardware, dilution ratios for specific concentrates, backflow options, installation options, etc.**
- **Dispenser model numbers and product names are current and not changed or discontinued.**

### 3.1 General Requirements for Shipboard Dispensing Systems

The following general requirements are necessary for authorized surface ships CCDSs:

- The installation and maintenance of the CCDS shall be conducted by the manufacturer or Ship's Force in accordance with manufacturers' instructions and requirements contained herein.
- Only manufacturer-authorized products shall be used with a specific manufacturer's dispensing system.
- The CCDS shall have a lock and key mechanism or tamper-resistant feature built into the system. If the dispensing system is not designed with this feature, a dispensing system enclosure is required.
- The CCDS have a backflow prevention feature to prevent cross-contamination of the potable water system.
- The CCDS may be a gravity feed, pneumatic, or electronically-monitored (or similar) dispensing system.

- The CCDS automatically dilutes the concentrated cleaner to the prescribed-manufacturer's dilution ratio to provide a ready-to-use cleaner. This dilution ratio shall be adjustable to suit a variety of cleaning compounds' dilutions as specified by the manufacturer. Information related to the dilution ratios for specific applications is provided in the manufacturers CCDS and concentrate technical data to ensure proper dilution ratios are dispensed.
- The dispensing system shall either pass or be disassembled so that it can pass through a shipboard access (26 X 66 inches) with 8-inch radius corners.
- A portable, temporary containment shall be installed under the concentrate reservoir to prevent accidental spills and leakage on surrounding decks.

### **3.2 Installation Requirements for Shipboard Dispensing Systems**

The following installation requirements are necessary for authorized surface ship CCDSs:

- The CCDSs shall be physically and visually accessible from the front for operation and for normal maintenance with tools, test equipment, and replacement parts.
- The CCDS shall be installed in a work area, shop or work center that has adequate ventilation and potable water source connections available. Adequate stowage facilities for the cleaner concentrates should also be available.
- Electronic CCDSs shall meet requirements of UL 62 "Flexible Control Equipment" and UL 508 "Industrial Control Equipment." The CCDS unit shall operate on 115 VAC, 60 Hz, single-phase power, as defined in MIL-STD-1399, Section 300 "Interface Standard for Shipboard Systems Section 300A Electric Power, Alternating" and shall have provisions for making direct (hardwired) connections for electric power (2 conductors) and for equipment grounding (1 conductor). All outer metallic surfaces shall be grounded via the equipment grounding connection. The grounding resistance between any exposed metallic surfaces and the common ground point shall be not greater than 0.1 ohm. Electrical components shall be provided in accordance with NEMA Type 13 or equivalent enclosure protection. Metal parts of electrical components and enclosures shall be inherently corrosion resistant or shall be treated and processed for corrosion resistance in accordance with IEEE Standard 45 "IEEE Recommended Practice for Electric Installation of Shipboard." A motor, if present, shall be hermetically sealed.

- A data nameplate or decal shall be installed to provide the manufacturer's name, model, serial number, and any other information needed to uniquely identify the unit.
- An instruction plate shall be installed to provide instructions for start-up, operation, and shut-down.

### **3.3 Authorized Shipboard Dispensing Systems**

This section presents general purpose chemical cleaning dispensing systems (CCDSs) that are authorized for Naval shipboard general purpose use. The dispensers are used to mix and dispense cleaning compound concentrates. The cleaning compounds must be procured separately. Dispenser feature highlights were obtained from manufacturer product information. For more detailed product descriptions, contact the manufacturers. Tables 3-2 through 3-14 show the approved CCDSs and some of their associated characteristics.

**Table 3-1**

**Authorized Chemical Cleaning Dispensing Systems**

| <b>Manufacturer</b>           | <b>Dispensing System</b>        | <b>Table</b> |
|-------------------------------|---------------------------------|--------------|
| 3M™ Commercial Care Division  | Twist ‘n Fill Model No. 1030BNP | 3-2          |
| Allied Enterprises            | Leading Edge Mix Master         | 3-3          |
| Birsch Cleaning Products      | Knight Proportioner Systems     | 3-4          |
| Ecolab Institutional Division | Control Tower IV                | 3-5          |
| Ecolab Institutional Division | Oasis Ultra 1                   | 3-6          |
| Ecolab Institutional Division | Select 4                        | 3-7          |
| Johnson Wax Professional      | J-Fill                          | 3-8          |
| Magnolia Marketing            | Knight KP1H                     | 3-9          |
| MAK Products                  | DEMA Blend                      | 3-10         |
| Orison Marketing              | DEMA Blend                      | 3-11         |
| Orloff Corp./Computer Bath    | Knight KP1H                     | 3-12         |
| Quick ‘n Brite                | Accudose                        | 3-13         |
| SOQ Environmental             | Ecomate Multi Blend             | 3-14         |
| State Industrial Products     | Powerfill™                      | 3-15         |

Table 3-2

**3M™ Twist ‘n Fill™ Model No. 1030BNP Dispensing System**

| Dispenser  | Dispenser Features   |
|--|--|
|  | <ul style="list-style-type: none"> <li>• Wall-mounted, single compact dispenser - can be grouped together</li> <li>• 2-liter unit of issue required for dispensing system</li> <li>• Integral air gap prevents chemical backflow to potable water source</li> <li>• Dual flow rates:             <ul style="list-style-type: none"> <li>- 3-gallon per min dispense rate for bucket application</li> <li>- 1-gallon per min for trigger spray bottle application</li> </ul> </li> <li>• Gravity-fed</li> <li>• Visual out-of-chemical indicator</li> <li>• Manual rinse water valve</li> <li>• Meets ASSE Standard #1055</li> <li>• Automatic shut-off option available</li> <li>• Can be installed and maintained by manufacturer</li> <li>• Concentrates shall be removed from the CCDS when not in use to avoid dripping on surrounding area (The requirement for a locking device feature is waived since concentrate is not stored in the dispensing system)</li> </ul> <p>Model No: 1030BNP<br/>Customer Service: 1 (800) 3M-HELPS</p> |

**Table 3-3**

**Allied Enterprises Leading Edge Mix Master Dispensing System**

| Dispenser   | Dispenser Features  |
|---|---|
|  | <ul style="list-style-type: none"> <li>• One dispensing system can dispense 6 products – 4 low flow rates, 2 high flow rates</li> <li>• Controlled by dial selection</li> <li>• Lock and key mechanism to prevent tampering</li> <li>• Meets vibration and motion requirements as defined in MIL-STD-167/1</li> <li>• Can be installed and maintained by manufacturer</li> <li>• E-gap eductors provide protection against backfill</li> <li>• Standard ½ gallon locking enclosures</li> </ul> <p>Stock No: 410-4J-06845<br/>Customer Service: 1 (800) 943-5400</p> |

**Table 3-4**

**Birsch Cleaning Products: Knight Proportioning Systems**

| Dispenser  | Dispenser Features   |
|--|--|
| <div data-bbox="359 456 903 987" data-label="Image"> </div> <p data-bbox="331 1101 932 1133">Knight MXC-404 Four Product Mixing Center</p> | <ul data-bbox="1108 430 1871 1182" style="list-style-type: none"> <li>• Modular components or dial 4 dispenser or 1 to 5 customized mixing stations</li> <li>• Stainless steel or plastic case</li> <li>• 1 gallon unit of issue used in dispenser</li> <li>• Optional “Aire-Gap” or “Flex-Gap” for backflow prevention</li> <li>• Dispenses 4 products (Dial-a-Mix) and a choice of 1, 3, or 4 gpm flow rate</li> <li>• Modular configuration allows individual stations to be connected</li> <li>• The “Mixing Center” provides a locking cabinet that prevents pilferage or tampering with chemical mix ratios</li> <li>• “No-drip” fill spouts deliver product straight into bottle</li> <li>• Color-coded metering tips</li> <li>• All dispensers use water suction to extract concentrate from container</li> <li>• Due to numerous specific features/options and various configurations of mixing stations, consult with company prior to ordering</li> </ul> <p data-bbox="1108 1219 1837 1289">Models: Dial-A-Mix Proportioning Systems (4 types)<br/>Knight Mixing Stations (1 to 5 units)</p> <p data-bbox="1115 1328 1587 1359">Customer Service: 1 (757) 622-0355</p> |

**Table 3-5**

**Ecolab Control Tower IV Dispensing System**

**(same unit as Oasis Tower)**

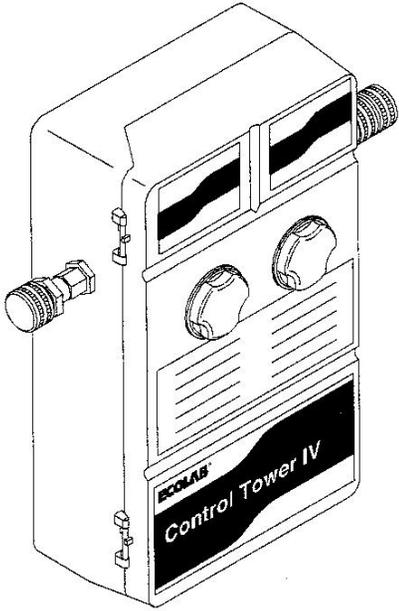
| Dispenser   | Dispenser Features  |
|---|---|
|  <p data-bbox="443 1182 814 1214">ECOLAB Control Tower IV</p> | <ul style="list-style-type: none"> <li>• Single or multi unit available</li> <li>• Requires minimum of 20 psi water pressure, maximum 85 psi water pressure to operate</li> <li>• Water temperature can be no greater than 160° F for bucket dispensing, 110° F for spray bottle</li> <li>• Water inlet is located on right side of machine</li> <li>• Pneumatic system, button activated</li> <li>• Air gap to prevent backfill</li> <li>• Can be connected to faucet</li> <li>• Metering tips to control dilution concentrations</li> <li>• Tamper-resistant feature</li> <li>• Installed and maintained by manufacturer</li> <li>• Recommended for dispensing quaternary ammonium cleaners</li> </ul> <p data-bbox="1108 1166 1606 1235">Model No: Control Tower IV<br/>Customer Service: 1 (800) 25-CLEAN</p> |

Table 3-6

Ecolab Oasis Ultra 1 Dispensing System

| Dispenser  | Dispenser Features   |
|--|--|
|  | <ul style="list-style-type: none"><li>• Requires minimum of 20 psi water pressure, maximum 85 psi water pressure to operate</li><li>• Water temperature can be no greater than 140° F for bucket dispensing, 110° F for spray bottle</li><li>• Water inlet is located on right side of machine</li><li>• Button or bottle activated</li><li>• “Flex-Gap” prevents potable water contamination (air gap to prevent backfill is available as an alternate to “Flex-Gap” if desired)</li><li>• Can be connected to faucet</li><li>• Metering valves to control concentrations</li><li>• Single or multi-units available</li><li>• Recommended for dispensing quaternary ammonium cleaners</li><li>• Dispensers for sanitary products may be supplied with a capillary kit to control final diluted concentration</li><li>• Installed and maintained by manufacturer</li></ul> <p>Model No: Oasis Ultra 1<br/>Customer Service: 1 (800) 25-CLEAN</p> |

Table 3-7

Ecolab Select Four Dispensing System

| Dispenser   | Dispenser Features   |
|---|--|
|  | <ul style="list-style-type: none"> <li>• Dispenses up to 4 products from one dispensing system</li> <li>• Selector valve to choose product</li> <li>• Requires minimum of 20 psi water pressure, maximum 85 psi water pressure to operate</li> <li>• Water temperature can be no greater than 140° F for bucket dispensing, 110° F for spray bottle</li> <li>• Water inlet is located on right side of machine</li> <li>• Button or bottle activated</li> <li>• Can be connected to faucet</li> <li>• Metering valves to control concentrations</li> <li>• “Flex-Gap” prevents potable water contamination (air gap to prevent backfill is available as an alternate to “Flex-Gap” if desired)</li> <li>• NOT FOR USE WITH QUATERNARY AMMONIUM PRODUCTS</li> <li>• Installed and maintained by manufacturer</li> </ul> <p>Model No: Select Four<br/>Customer Service: 1 (800) 25-CLEAN</p> |

**Table 3-8**  
**Johnson Wax Professional**  
**J-Fill Dispensing System**

| Dispenser  | Dispenser Features   |
|--|--|
| <div data-bbox="428 631 825 1130" data-label="Image"> </div> <p data-bbox="470 1170 798 1203">J-Fill Dispensing System</p> | <ul style="list-style-type: none"> <li>▪ 2.5 liter “spil-tite” cartridges- 4 products/dispenser</li> <li>▪ Air gap meeting ANSI Standard 112.1.2 for water backflow prevention</li> <li>▪ Spray loaded drip tray with latch. Up for bucket filling, down for filling spray bottles</li> <li>▪ Windows for product identification and usage levels</li> <li>▪ Stainless steel cabinet – lockable to prevent pilferage</li> <li>▪ Selector switch and button activated</li> </ul> <p data-bbox="1108 1187 1581 1252">Model: J-Fill<br/> Customer Service: 1 (800) 558-2332</p> |

Table 3-9

Magnolia Marketing Products  
 Knight KP1H Dispensing System

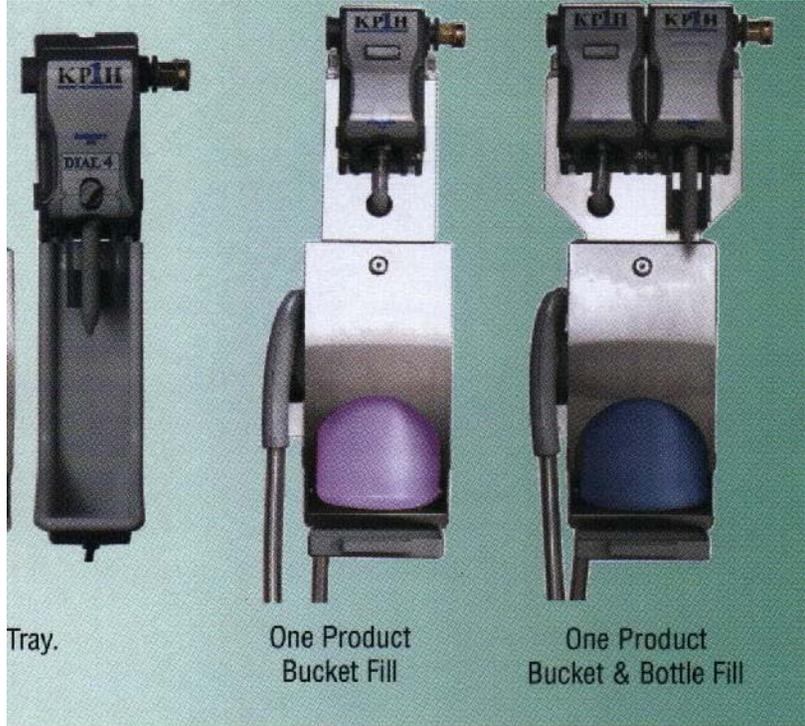
| Dispenser   | Dispenser Features  |
|---|---|
|  <p>Tray.</p> <p>One Product Bucket Fill</p> <p>One Product Bucket &amp; Bottle Fill</p> | <ul style="list-style-type: none"> <li>• Modular components</li> <li>• May be built as a single product bottle or bucket fill dispenser or multiple product Dial 4 dispenser</li> <li>• Units can be linked</li> <li>• Button and bottle activated</li> <li>• Dial-a-mix system allows from 1 to 4 cleaning concentrates to be dispensed, each with its own dilution rate</li> <li>• 2 different backflow devices – “Flex-Gap” or “Aire-Gap” option</li> <li>• 2 types of dispenser activation – “Easy Lock” button to fill buckets or bottles and “One-Hand” filling of spray bottles</li> <li>• Specific features and number of stations <b>should be verified and confirmed</b> with company prior to placing Order</li> <li>• Locking front cover provides secure storage for cleaning and prevents product pilferage.</li> </ul> <p>Models: KP1H-1 One product at one dilution<br/>                     KP1H-4 Four products at one dilution</p> <p>Customer Service: 1 (610) 436-6054</p> |

Table 3-10

MAK Products

DEMA Blend Dispensing Systems

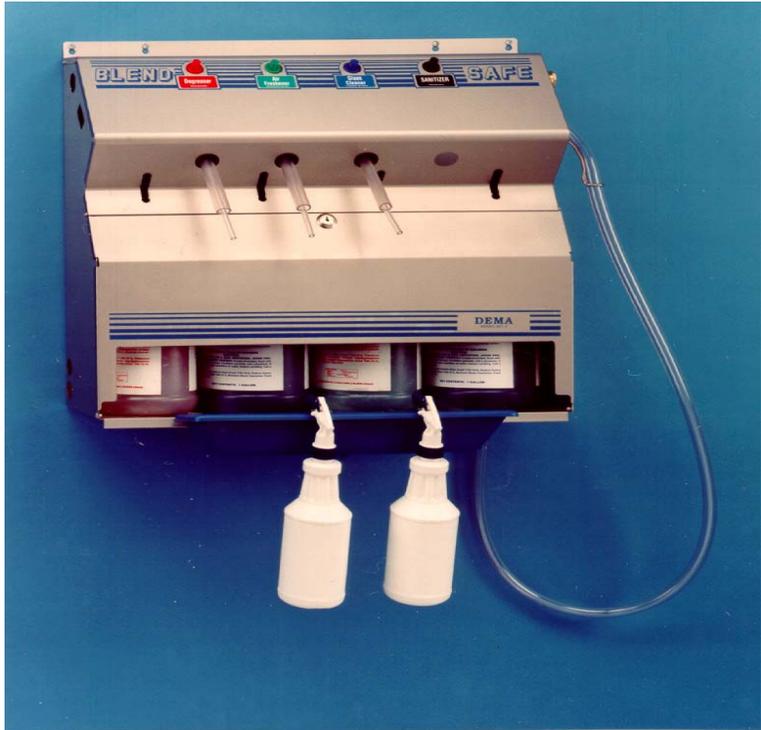
| Dispenser   | Dispenser Features   |
|---|--|
|  <p data-bbox="323 1279 936 1318"><b>DEMA 661AG-4 Blend Safe Dispenser</b></p> | <ul style="list-style-type: none"> <li>• Exterior corrosion-resistant, stainless steel, single or multi-units available</li> <li>• Vertical or horizontal plane mounted storage compartment</li> <li>• Window level indicator</li> <li>• Unit accommodates various bottle sizes up to 5 liters</li> <li>• Built-in backfill preventer</li> <li>• MSDS compartment</li> <li>• Durable ABS plastic components</li> <li>• Modular locking dispensing system</li> <li>• Removable drip tray</li> <li>• Tamper-resistant feature</li> <li>• Color-coded metering tips</li> <li>• Installation and maintenance is available</li> <li>• Built-in locking actuator button</li> <li>• Due to numerous specific features/options and various configurations of mixing stations, <b>consult with company prior to ordering</b></li> </ul> <p data-bbox="1108 1198 1688 1338">                     Model Nos: DEMA 661 AG-4 Blend Safe<br/>                     DEMA 662-AG-1, DEMA AG-4<br/>                     DEMA 661GAPDB<br/>                     Customer Service: 1 (800) 625-6869                 </p> |

Table 3-11

Orison Marketing, LLC  
**DEMA Blend Dispensing Systems**

| Dispenser  | Dispenser Features  |
|--|---|
|  <p><b>DEMA 661AG-4 Blend Safe Dispenser</b></p> | <ul style="list-style-type: none"> <li>• Metering tips, selector valves</li> <li>• Plastic or stainless steel outer casing</li> <li>• Optional <b>DEMA Safe</b> lockable compartment to prevent tampering</li> <li>• 4 station configuration</li> <li>• Unit accommodates various bottle sizes up to 5 liters</li> <li>• Product level viewing window</li> <li>• All AG models have AirGap proportioner to prevent backfill</li> <li>• May be installed by ship's force or by contractor under separate maintenance contract</li> <li>• Specific features and number of stations <b>should be verified and confirmed</b> with company prior to placing order</li> </ul> <p>Models: DEMA 661 AGS, DEMA 662-AG,<br/>                     DEMA Dial-A-Blend Models 635AG, 637AG,<br/>                     639AG-4-1<br/>                     DEMA Multi-Blend 681 AG-2P, 681 AG-3P</p> <p>Customer Service: 1 (800) 460-2403</p> |

Table 3-12

**Orloff Corp/Computer Bath Products  
KNIGHT KP1H Dispensing System**

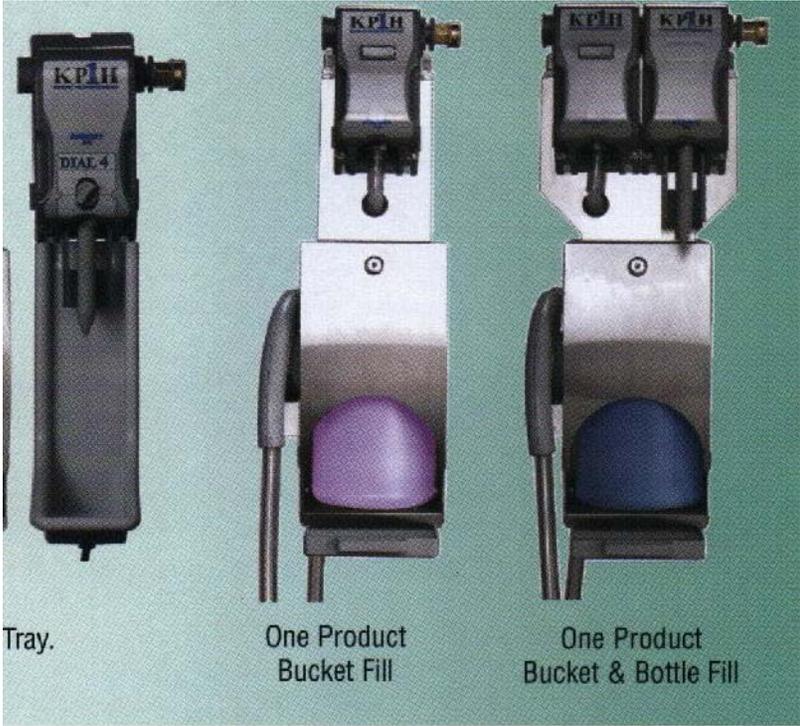
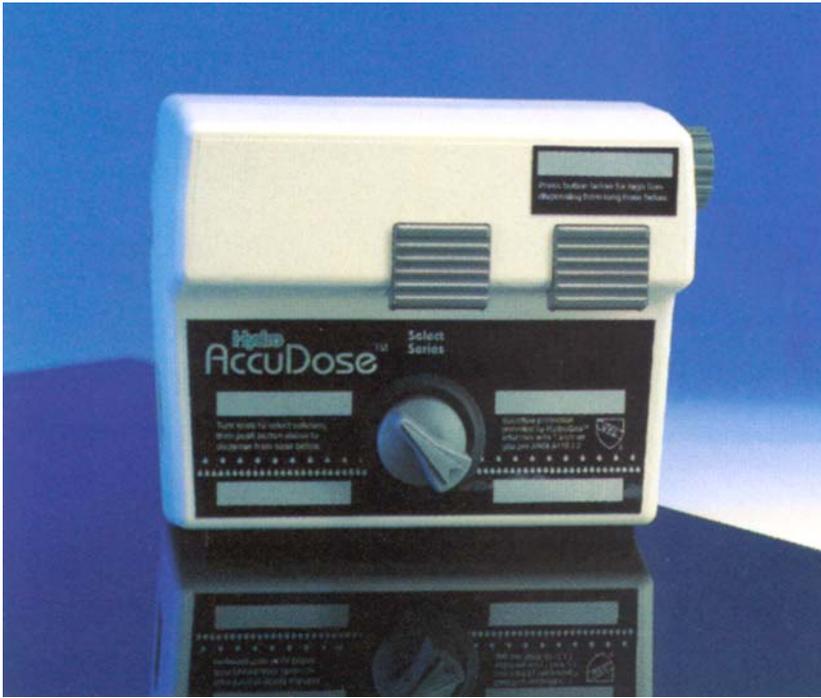
|   | <b>Dispenser Features</b>   |
|---|---|
|  <p>Tray.</p> <p>One Product<br/>Bucket Fill</p> <p>One Product<br/>Bucket &amp; Bottle Fill</p> | <ul style="list-style-type: none"> <li>• Modular components</li> <li>• May be built as a single product bottle or bucket fill dispenser or multiple product Dial 4 dispenser</li> <li>• Units can be linked</li> <li>• Button and bottle activated</li> <li>• Dial-a-mix system allows from 1 to 4 cleaning concentrates to be dispensed, each with its own dilution rate</li> <li>• 2 different backflow devices – “Flex-Gap” or “Aire-Gap” option</li> <li>• 2 types of dispenser activation – “Easy Lock” button to fill buckets or bottles and “One-Hand” filling of spray bottles</li> <li>• Installation and maintenance of dispensing system available by Computer/Bath</li> <li>• Locking front cover provides secure storage for cleaning and prevents product pilferage.</li> </ul> <p>Model No: KP1H-1 One product at 1 dilution<br/>                     KP1H-4 Four products at 1 dilution<br/>                     Customer Service: 1 (714) 754-6461</p> |

Table 3-13

Quick 'n Brite

Hydro AccuDose Proportioning Systems

| Dispenser  | Dispenser Features  |
|--|---|
|  <p data-bbox="449 1252 814 1287"><b>AccuDose Select Series</b></p> | <ul data-bbox="1108 540 1866 1016" style="list-style-type: none"> <li>• Standard Accudose units are equipped with HydroGap Air gap eductors to prevent backflow (ASSE 1055B Approved.)</li> <li>• Metering dispensing tips</li> <li>• Locking option for chemical management rack</li> <li>• Available in three formats             <ul data-bbox="1157 764 1812 906" style="list-style-type: none"> <li>- four dilutions of a single product</li> <li>- dispenses four separate products</li> <li>- four products at a low flow rate and one product at a high flow</li> </ul> </li> <li>• Specific features and number of stations <b>should be verified and confirmed</b> with company prior to placing order</li> </ul> <p data-bbox="1100 1206 1824 1273">Models: 3871AG-2, 3872AG-2, 3874AG-2, 3875AG-2, 3876AG-2</p> <p data-bbox="1100 1279 1776 1312">Customer Service: 1 (513) 271-8800 Hydro Systems</p> |

**Table 3-14**

**SOQ Environmental Multi-Blend Dispensing System**

| Dispenser  | Dispenser Features  |
|--|---|
|  | <ul style="list-style-type: none"> <li>• Not tamper resistant – caging device for the dispenser is available</li> <li>• Dispenses one product at four different dilution ratios</li> <li>• Wall-mounted</li> <li>• Air Gap or Action Gap prevents backflow into the potable water system</li> <li>• Internal parts are formed plastic, except for pipe to garden hose adapter, which is made out of brass</li> <li>• Pumping mechanism – suction/aspirator via water flow</li> <li>• Can be installed by SOQ or customer. If installed by customer, discount is offered</li> </ul> <p>Model: Ecomate Multi-Blend<br/>                     NSN: 7930-01-468-4834<br/>                     Customer Service: 1 (480) 966-2892</p> |

Table 3-15

State Industrial Products

Powerfill™ Dispensing Systems

| Dispenser   | Dispenser Features  |
|---|---|
|  | <ul style="list-style-type: none"> <li>• Pneumatic system</li> <li>• 3-liter bottles used in dispensing unit</li> <li>• “e-gap” eductor to prevent backflow</li> <li>• Customized metering tips (factory installed)</li> <li>• Plastic unit with some metal components</li> <li>• ¾-inch fitting for hose or potable water connection</li> <li>• Choice of different configurations             <ul style="list-style-type: none"> <li>- one to four button configurations</li> <li>- one to six product dispensers</li> <li>- spray bottle and/or bucket valve configuration</li> </ul> </li> <li>• Specific features and number of stations <b>should be verified and confirmed</b> with company prior to placing order</li> <li>• System is customized by manufacturer for product, dilution, and applications for the user. Locking feature option should be requested when ordering.</li> <li>• Various Model Part Numbers: 108265 through 108287</li> </ul> <p>Model 108287 Illustrated: Powerfill Select 4 + 2</p> <p>Customer Service: 1 (866) 573-4468</p> |

## **4.0 AUTHORIZED READY TO USE CLEANING PRODUCTS**

Products determined to comply with this product description and authorized for use on Navy surface ships are included in Tables 4-1 and 4-2.

### **4.1 Product Description**

The cleaners represented in this category are pre-packaged solutions that do not require any dilution on the part of the end user. The Ready-to-Use category consists of two types of cleaners:

Type 1 - A spray-on, wipe-off, general hard surface cleaner

Type 2 - A spray-on, wipe-off glass cleaner

### **4.2 Application Method**

These cleaners are usually packaged or applied using manually pumped bottles (plastic or glass) and may be fill/refilled manually from a larger container of the same ready-to-use product.

#### **NOTE**

**Aerosol-packaged ready-to-use cleaners are not included under this description. In order to minimize the use of propellants and the accumulation of empty aerosol cans, manually hand pumped product spray dispensers are recommended and considered a more viable and environmentally-friendly option.**

### **4.3 Related Safety, Health, and Environmental Hazards**

- Ensure that general ventilation is in operation in the vicinity where cleaning compounds are being used.
- Avoid skin or eye contact with detergent. If contact is made, flush affected area liberally with water. Consult the MSDS for specific guidance.
- Avoid breathing mists and vapors from the products.
- Ensure the cleaner is used in accordance with the manufacturer's directions.

**Table 4-1**  
**Authorized Ready-to-Use Cleaners**

| <b>Company / Phone / Internet Address</b>   | <b>Product Name</b>                 | <b>Manufacturer Part Number</b> | <b>NSN</b>       | <b>Unit of Issue</b> | <b>Precautions</b> | <b>Dispensing System</b>   |
|---|-------------------------------------|---------------------------------|------------------|----------------------|--------------------|----------------------------|
| <b>1<sup>st</sup> EnviroSafety, Inc.</b><br>Customer Assistance:<br>1-888-578-9600<br>Web Site:<br><a href="http://www.1stenvirosafety.com">www.1stenvirosafety.com</a> | Organic Cleaner / Degreaser         | 60032                           | 6850-01-505-7703 | 12 QT/case           | None               | Trigger spray bottles, etc |
|   | Organic Cleaner / Degreaser         | 60128                           | 6850-01-505-7705 | 4 -1 GL/case         | None               | Mop and Bucket             |
|   | Organic Cleaner / Degreaser         | 60640                           | 6850-01-507-7910 | 5 GL CN              | None               | Mop and Bucket             |
|   | Organic Cleaner / Degreaser         | 60030                           | 6850-01-505-7702 | 1-30 GL Drum         | None               | Mop and Bucket             |
|   | Organic Cleaner / Degreaser         | 60055                           | 6850-01-505-7704 | 55 GL Drum           | None               | Mop and Bucket             |
| <b>Allied Enterprises</b><br>Customer Assistance:<br>1 (800) 943-5400<br>Web Site:<br><a href="http://www.shopallied.com">www.shopallied.com</a>                        | Leading Edge Spray and Wipe Cleaner | 9409I-1358                      | 7930-01-508-2126 | 12 QT/case           | None               | Spray Bottle               |
|   | Leading Edge Spray and Wipe Cleaner | 9409H-1358-4                    | 7930-01-508-2117 | 4 - 1 GL/case        | None               | Manual, mop & bucket       |
|   | Leading Edge Spray and Wipe Cleaner | 9409G-1358                      | 7930-01-508-2113 | 5 GL                 | None               | Manual, mop & bucket       |
| <b>American Cleaning Solutions</b><br>Customer Assistance:<br>1 (866) 883-3562<br>Web Site:<br><a href="http://www.americancleaning.com">www.americancleaning.com</a>   | TUFF JOB                            | TJ-00401                        | 7930-01-331-1507 | 12-32oz BT/case      | None               | Spray bottle               |

**Table 4-1**

**Authorized Ready-to-Use Cleaners**

| <b>Company / Phone / Internet Address</b>  | <b>Product Name</b>              | <b>Manufacturer Part Number</b> | <b>NSN</b>       | <b>Unit of Issue</b> | <b>Precautions</b> | <b>Dispensing System</b>                   |
|--|----------------------------------|---------------------------------|------------------|----------------------|--------------------|--|
| <b>Birsch</b><br>Customer Assistance:<br>1 (888) 622-0356<br>Web Site:<br><a href="http://www.supplythenavy.com">www.supplythenavy.com</a><br><a href="http://www.birsch.com">www.birsch.com</a> | Spray & Wipe                     | 1745603                         | 7930-01-508-2745 | 1 GL                 | None               | Spray Bottle                               |
|  | Spray & Wipe                     | 1745608                         | 7930-01-508-3231 | 4 - 1 GL/case        | None               | Manual, mop & bucket                       |
|  | Spray & Wipe                     | 1745604B                        | 7930-01-508-3215 | 12 QT/case           | None               | Manual, mop & bucket                       |
| <b>Johnson Wax Professional</b><br>Customer Assistance:<br>1 (800) 558-2332<br>Web Site:<br><a href="http://www.johnsondiverse.com">www.johnsondiverse.com</a>                                   | Glance Glass and Surface Cleaner | 4789                            | 7930-01-508-3243 | 4 - 1 GL/case        | None               | Trigger spray bottle, mop and bucket, etc  |
|  | Glance Glass and Surface Cleaner | 4705                            | 7930-01-381-5921 | 12-32oz BT/case      | None               | Spray bottles                              |
|  | Stride Citrus Neutral Cleaner    | 4185                            | 7930-01-508-3213 | 12 - 32 oz/case      | None               | Trigger spray bottle, mop and bucket, etc. |
| <b>Magnolia Marketing Group</b><br>Customer Assistance:<br>1 (610) 436-6054<br>Web Site:<br><a href="http://www.magnoliamarketinggroup.com">www.magnoliamarketinggroup.com</a>                   | Citra Kleen                      | 7341                            | 7930-01-508-3227 | 4 - 1 GL/case        | None               | Trigger spray bottle, mop and bucket, etc. |
|  | Citra-Kleen                      | 7315                            | 7930-01-508-3217 | 5 GL pail            | None               | Trigger spray bottle, mop and bucket, etc. |
|  | Citra-Kleen                      | 7355                            | 7930-01-508-3220 | 55 GL drum           | None               | Trigger spray bottle, mop and bucket, etc. |

**Table 4-1**

**Authorized Ready-to-Use Cleaners**

| <b>Company / Phone / Internet Address</b>   | <b>Product Name</b>                                      | <b>Manufacturer Part Number</b> | <b>NSN</b>       | <b>Unit of Issue</b> | <b>Precautions</b> | <b>Dispensing System</b> |
|---|--|---------------------------------|------------------|----------------------|--------------------|--------------------------|
| <b>MAK Products</b><br>Customer Assistance<br>1 (800) 625-6869<br>Web Site:<br><a href="http://www.makenvironmental.com">www.makenvironmental.com</a> | ECO-MARINE Heavy Equipment and Machine Cleaner/Degreaser | ECOMAR RTU32                    | 7930-01-508-2116 | 1 QT                 | None               | Refillable spray bottle  |
|   | ECO-100 General Purpose Cleaner Concentrate              | ECO100RTU32                     | 7930-01-508-3709 | 1 QT                 | None               | Refillable spray bottle  |
| <b>Orison Marketing, L.L.C.</b><br>Customer Assistance:<br>1 (800) 460-2403<br>Web Site:<br><a href="http://www.orisonllc.com">www.orisonllc.com</a>  | VPW SC-1000 Ready-To-Use (4:1)                           | VPW-SC-RTU-Q                    | 6850-01-505-7175 | 6 - 32 oz BT/case    | None               | Spray Bottle             |
|   | VPW SC-1000 Ready-To-Use (4:1)                           | VPW-SC-RTU-4                    | 6850-01-505-7206 | 4 - 1 GL/case        | None               | Manual, mop & bucket     |
|   | VPW SC-1000 Ready-To-Use (4:1)                           | VPW-SC-RTU-5                    | 7930-01-508-2735 | 5 GL                 | None               | Manual, mop & bucket     |
|   | VPW SC-1000 Ready-To-Use (4:1)                           | VPW-SC-RTU-55                   | 7930-01-508-2741 | 55 GL                | None               | Manual, mop & bucket     |
|   | VPW SC-1000 Ready-To-Use (4:1)                           | VPW-SC-RTU-275                  | 6850-01-505-7204 | 275 GL               | None               | Manual, mop & bucket     |

**Table 4-1**  
**Authorized Ready-to-Use Cleaners**

| <b>Company / Phone / Internet Address</b>  | <b>Product Name</b>                 | <b>Manufacturer Part Number</b> | <b>NSN</b>       | <b>Unit of Issue</b> | <b>Precautions</b> | <b>Dispensing System</b> |
|--|-------------------------------------|---------------------------------|------------------|----------------------|--------------------|--------------------------|
| <b>Orison Marketing, L.L.C.</b><br>Customer Assistance:<br>1 (800) 460-2403<br>Web Site:<br><a href="http://www.orisonllc.com">www.orisonllc.com</a>         | EZ Safe Solutions Cleaner RTU (7:1) | VPW-SC-2000-Q                   | 6850-01-505-7198 | 6 - 32 oz BT/case    | None               | Spray Bottle             |
|  | EZ Safe Solutions Cleaner RTU (7:1) | VPW-SC-2000-1s                  | 6850-01-505-7207 | 4 - 1 GL/case        | None               | Manual, mop & bucket     |
|  | EZ Safe Solutions Cleaner RTU (7:1) | VPW-SC-2000-5s                  | 6850-01-505-7193 | 5 GL                 | None               | Manual, mop & bucket     |
|  | EZ Safe Solutions Cleaner RTU (7:1) | VPW-SC-275                      | 6850-01-505-7185 | 275 GL               | None               | Manual, mop & bucket     |
|  | EZ Safe Solutions Cleaner RTU (7:1) | VPW-SC-2000-55s                 | 6850-01-505-7187 | 55 GL                | None               | Manual, mop & bucket     |
| <b>Orloff Corp./Computer Bath</b><br>Customer Assistance:<br>1 (714) 754-6461<br>Web Site:<br><a href="http://www.computerbath.com">www.computerbath.com</a> | Absolutely Clean                    | ABC-100                         | 6850-01-505-7165 | 1 GL                 | None               | Manual, mop & bucket     |
|  | Absolutely Clean                    | ABC-105                         | 6850-01-505-7695 | 5 GL                 | None               | Manual, mop & bucket     |
|  | Absolutely Clean                    | ABC-155                         | 6850-01-505-7691 | 55 GL drum           | None               | Manual, mop & bucket     |

**Table 4-2**

**Authorized Ready-to-Use Glass Cleaners**

| <b>Company / Phone / Internet Address</b>   | <b>Product Name</b>              | <b>Manufacturer Part Number</b> | <b>NSN</b>       | <b>Unit of Issue</b> | <b>Precautions</b> | <b>Dispensing System</b>                   |
|---|----------------------------------|---------------------------------|------------------|----------------------|--------------------|--|
| <b>Allied Enterprises</b><br>Customer Assistance:<br>1 (800) 943-5400<br>Web Site:<br><a href="http://www.shopallied.com">www.shopallied.com</a>                      | Leading Edge RTU Glass Cleaner   | 9409I-1361                      | 7930-01-508-2128 | 12 QT/case           | None               | Spray Bottles                              |
|   | Leading Edge RTU Glass Cleaner   | 9409H-1361-4                    | 7930-01-508-2124 | 4 - 1 GL/case        | None               | Spray Bottles                              |
|   | Leading Edge RTU Glass Cleaner   | 9409G-1361                      | 7930-01-508-2122 | 5 GL                 | None               | Spray Bottles                              |
|   | Kleer Vue Glass Cleaner          | 9409I-0982                      | 7930-01-508-2130 | 12- 1 QT/case        | None               | Spray Bottles                              |
| <b>Johnson Wax Professional</b><br>Customer Assistance:<br>1 (800) 558-2332<br><b>Web Site:</b><br><a href="http://www.johnsondiverse.com">www.johnsondiverse.com</a> | Glance Glass and Surface Cleaner | 4789                            | 7930-01-508-3243 | 4 - 1 GL/case        | None               | Trigger spray bottle, mop and bucket, etc. |
|   | Glance Glass and Surface Cleaner | 4705                            | 7930-01-381-5921 | 12-32 oz BT/case     | None               | Spray bottles                              |

## INDEX

|  |            |
|--|------------|
| 3M™ Finish Remover 21 .....  | 43         |
| 3M™ Floor Stripper LO.....   | 43         |
| 3M™ General Purpose Cleaner Concentrate 8H .....                   | 19, 36     |
| 3M™ General Purpose Cleaner Concentrate 8L.....                    | 19, 36     |
| 3M™ Heavy-duty Glass Cleaner Concentrate .....                     | 48         |
| 3M™ Heavy-duty Multi-surface Cleaner Concentrate .....             | 19, 36     |
| 3M™ Neutral Quat Disinfectant Cleaner 23H .....                    | 14         |
| 3M™ Neutral Quat Disinfectant Cleaner 23L.....                     | 14         |
| 3M™ Quat Disinfectant Cleaner 5H.....                              | 14         |
| 3M™ Quat Disinfectant Cleaner 5L .....                             | 14         |
| 3M™ Sanitizer .....  | 8          |
| 3M™ Speed Stripper.....  | 43         |
| 3M™ Twist ‘n Fill™ Glass Cleaner Concentrate .....                 | 48         |
| 3M™ Twist ‘n Fill™ Model No. 1030BNP Dispensing System.....        | 54         |
| 3M™ Food Service Degreaser 7H .....                                | 19         |
| 3M™ Food Service Degreaser 7L.....                                 | 19         |
| Absolutely Clean .....   | 28, 41, 72 |
| Allied Enterprises Leading Edge Mix Master Dispensing System ..... | 55         |
| Blaze Off .....  | 21, 38     |
| CareStrip LO .....   | 44         |
| Citra Kleen .....  | 70         |
| Citra-cide.....  | 16         |
| Citra-Kleen.....   | 70         |
| Crew Restroom Floor and Surface Cleaner.....                       | 16         |
| DEMA Blend Dispensing Systems .....                                | 62, 63     |
| Double Duty .....  | 40         |
| ECO-100 General Purpose Cleaner Concentrate.....                   | 28, 71     |
| Ecolab Control Tower IV Dispensing System .....                    | 57         |
| Ecolab Oasis Ultra 1 Dispensing System.....                        | 58         |
| Ecolab Select Four Dispensing System.....                          | 59         |
| ECO-MARINE Heavy Equipment and Machine Cleaner/ Degreaser.....     | 27, 71     |
| Ecomate MPC.....   | 29, 41     |
| Enviro-Kleen .....   | 25         |
| Envirosolv 650M®.....  | 24         |
| Expel Detergent Disinfectant .....                                 | 17         |
| EZ Safe Solutions Cleaner RTU.....                                 | 72         |
| Flash Back .....   | 39         |
| Floor Wizard High Performance Stripper .....                       | 45         |
| Formula 362 .....  | 11         |
| Glance Glass and Surface Cleaner .....                             | 49, 70, 73 |
| Golden Gusto Cleaner .....   | 38         |
| H2Orange It All.....   | 21, 22     |
| Hydro AccuDose Proportioning Systems.....                          | 65         |
| J-Fill Dispensing System.....                                      | 60         |
| Kleer Vue Glass Cleaner .....                                      | 73         |
| Kleer Vue RTU Glass Cleaner .....                                  | 48         |
| Knight KP1H Dispensing System .....                                | 61         |

|  |                |
|--|----------------|
| KNIGHT KP1H Dispensing System .....                          | 64             |
| Knight Proportioning Systems .....                           | 56             |
| Leading Edge Degreaser and Hard Surface Cleaner .....        | 20, 37         |
| Leading Edge HD Emulsifying Detergent .....                  | 20             |
| Leading Edge Neutral Disinfectant .....                      | 14             |
| Leading Edge Spray and Wipe Cleaner.....                     | 37, 69, 73     |
| LOD Neutral 128.....   | 15             |
| LOD Neutral 256.....   | 15             |
| LOD Neutral 32.....  | 15             |
| Mikro-Quat.....  | 16             |
| MIL-D-16791 .....  | 33             |
| MPC Multi-purpose Cleaner .....                              | 22, 38         |
| New Kemtronics.....  | 43             |
| No Issue.....  | 29             |
| No Scrub Stripper.....                                       | 43, 44         |
| Oasis 136 .....  | 23, 39         |
| Oasis 144 .....  | 8              |
| Oasis 255 .....  | 48             |
| Oasis 256 .....  | 48, 49         |
| Oasis 257 .....  | 49             |
| Organic Cleaner / Degreaser .....                            | 19, 36, 69     |
| P-98 .....   | 33             |
| Power Strip.....   | 43             |
| Powerfill™ Dispensing Systems.....                           | 67             |
| Quick ‘n Brite.....  | 29, 41, 53, 65 |
| Quik Fill 320 .....  | 44             |
| Quik Fill 330 .....  | 39             |
| Quik Fill 560 .....  | 23             |
| Quik Fill A-33 .....   | 16             |
| Safe Blue .....  | 26             |
| Safe D’Orange.....   | 26             |
| Sanitizer 512.....   | 11             |
| Sanitizer Quat 10.....                                       | 8              |
| Shower Tub and Tile .....                                    | 27             |
| SOQ Environmental Multi-Blend Dispensing System.....         | 66             |
| Spray and Wipe .....   | 69, 70         |
| SS-2000 Industrial Strength Cleaner/ .....                   | 25             |
| Stride Citrus Neutral Cleaner .....                          | 24, 25, 40, 70 |
| Sun Brite Cleaner .....                                      | 30, 49         |
| Super Blast Off.....   | 23, 24, 39     |
| TUFF JOB Non-toxic Biodegradable Cleaner and Degreaser ..... | 21, 37, 69     |
| Unmistakable Green .....                                     | 22, 23         |
| Vac-Up Stripper .....  | 44             |
| VPW SC-1000.....   | 28, 40         |
| VPW SC-1000 Ready-To-Use .....                               | 71             |

(Insert Classification of Publication Here) CLASSIFICATION:

Ref: NAVSEAINST 4160.3A NAVSEA S0005AA-PRO-010/TMMP

**NAVSEA/SPAWAR TECHNICAL MANUAL DEFICIENCY/EVALUATION REPORT  
(TMDER)**

INSTRUCTION: Continue on 8 ½" x 11" paper if additional space is needed.

1. Use this report to indicate deficiencies, problems, and recommendations relating to a publication.
2. For CLASSIFIED TMDERs see OPNAVINST 5510H for mailing classified TMDERs.
3. Print clearly and carefully.
4. Submit TMDERs at web site <http://nsdsa.phdnswc.navy.mil> or mail to address on reverse.

|                    |             |                         |                        |
|--------------------|-------------|-------------------------|------------------------|
| 1. PUBLICATION NO. | 2. VOL/PART | 3. REV/DATE or CHG/DATE | 4. SYSTEM/EQUIPMENT ID |
|--------------------|-------------|-------------------------|------------------------|

|                         |   |
|-------------------------|---|
| 5. TITLE OF PUBLICATION | 6. REPORT CONTROL NUMBER<br>(6 digit UIC-YY-any four: xxxxxx-01-xxxx) |
|-------------------------|---|

**7. RECOMMENDED CHANGES TO PUBLICATION**

| 7a<br>Page # | 7b<br>Para # | 7c<br>RECOMMENDED CHANGES AND REASONS |
|--------------|--------------|---------------------------------------|
|--------------|--------------|---------------------------------------|

|  |  |  |
|--|--|--|
|  |  |  |
|--|--|--|

|                                      |         |   |   |
|--------------------------------------|---------|---|---|
| 8. ORIGINATOR'S NAME and WORK CENTER | 9. DATE | 10. PHONES Commercial/DSN/FAX<br>Include extentions | 11. TMMA of manual<br>(NSDSA will complete) |
|--------------------------------------|---------|---|---|

|   |                                 |
|---|---------------------------------|
| 12. Ship or Activity Name and Address (Include UIC/CAGE/HULL) | 13. ORIGINATOR'S E-MAIL ADDRESS |
|---|---------------------------------|

FOLD HERE AND TAPE SECURELY  
PLEASE DO NOT STAPLE

---

INCLUDE COMPLETE ADDRESS

USE  
PROPER  
POSTAGE

FOR OFFICIAL USE ONLY

**COMMANDER  
CODE 5E30DP BLDG 1388  
NAVSURFWARCENDIV NSDSA  
4363 MISSILE WAY  
PORT HUENEME CA 93043-4307**

---

FOLD HERE AND TAPE SECURELY  
PLEASE DO NOT STAPLE

(Insert Classification of Publication Here) CLASSIFICATION:

Ref: NAVSEAINST 4160.3A NAVSEA S0005AA-PRO-010/TMMP

**NAVSEA/SPAWAR TECHNICAL MANUAL DEFICIENCY/EVALUATION REPORT  
(TMDER)**

INSTRUCTION: Continue on 8 ½" x 11" paper if additional space is needed.

1. Use this report to indicate deficiencies, problems, and recommendations relating to a publication.
2. For CLASSIFIED TMDERs see OPNAVINST 5510H for mailing classified TMDERs.
3. Print clearly and carefully.
4. Submit TMDERs at web site <http://nsdsa.phdnswc.navy.mil> or mail to address on reverse.

|                    |             |                         |                        |
|--------------------|-------------|-------------------------|------------------------|
| 1. PUBLICATION NO. | 2. VOL/PART | 3. REV/DATE or CHG/DATE | 4. SYSTEM/EQUIPMENT ID |
|--------------------|-------------|-------------------------|------------------------|

|                         |   |
|-------------------------|---|
| 5. TITLE OF PUBLICATION | 6. REPORT CONTROL NUMBER<br>(6 digit UIC-YY-any four: xxxxxx-01-xxxx) |
|-------------------------|---|

**7. RECOMMENDED CHANGES TO PUBLICATION**

| 7a<br>Page # | 7b<br>Para # | 7c<br>RECOMMENDED CHANGES AND REASONS |
|--------------|--------------|---------------------------------------|
|--------------|--------------|---------------------------------------|

|  |  |  |
|--|--|--|
|  |  |  |
|--|--|--|

|                                      |         |   |   |
|--------------------------------------|---------|---|---|
| 8. ORIGINATOR'S NAME and WORK CENTER | 9. DATE | 10. PHONES Commercial/DSN/FAX<br>Include extentions | 11. TMMA of manual<br>(NSDSA will complete) |
|--------------------------------------|---------|---|---|

|   |                                 |
|---|---------------------------------|
| 12. Ship or Activity Name and Address (Include UIC/CAGE/HULL) | 13. ORIGINATOR'S E-MAIL ADDRESS |
|---|---------------------------------|

FOLD HERE AND TAPE SECURELY  
PLEASE DO NOT STAPLE

---

INCLUDE COMPLETE ADDRESS

USE  
PROPER  
POSTAGE

FOR OFFICIAL USE ONLY

**COMMANDER  
CODE 5E30DP BLDG 1388  
NAVSURFWARCENDIV NSDSA  
4363 MISSILE WAY  
PORT HUENEME CA 93043-4307**

---

FOLD HERE AND TAPE SECURELY  
PLEASE DO NOT STAPLE

(Insert Classification of Publication Here) CLASSIFICATION:

Ref: NAVSEAINST 4160.3A NAVSEA S0005AA-PRO-010/TMMP

**NAVSEA/SPAWAR TECHNICAL MANUAL DEFICIENCY/EVALUATION REPORT  
(TMDER)**

INSTRUCTION: Continue on 8 ½" x 11" paper if additional space is needed.

1. Use this report to indicate deficiencies, problems, and recommendations relating to a publication.
2. For CLASSIFIED TMDERs see OPNAVINST 5510H for mailing classified TMDERs.
3. Print clearly and carefully.
4. Submit TMDERs at web site <http://nsdsa.phdnswc.navy.mil> or mail to address on reverse.

|                    |             |                         |                        |
|--------------------|-------------|-------------------------|------------------------|
| 1. PUBLICATION NO. | 2. VOL/PART | 3. REV/DATE or CHG/DATE | 4. SYSTEM/EQUIPMENT ID |
|--------------------|-------------|-------------------------|------------------------|

|                         |   |
|-------------------------|---|
| 5. TITLE OF PUBLICATION | 6. REPORT CONTROL NUMBER<br>(6 digit UIC-YY-any four: xxxxxx-01-xxxx) |
|-------------------------|---|

**7. RECOMMENDED CHANGES TO PUBLICATION**

| 7a<br>Page # | 7b<br>Para # | 7c<br>RECOMMENDED CHANGES AND REASONS |
|--------------|--------------|---------------------------------------|
|--------------|--------------|---------------------------------------|

|  |  |  |
|--|--|--|
|  |  |  |
|--|--|--|

|                                      |         |   |   |
|--------------------------------------|---------|---|---|
| 8. ORIGINATOR'S NAME and WORK CENTER | 9. DATE | 10. PHONES Commercial/DSN/FAX<br>Include extentions | 11. TMMA of manual<br>(NSDSA will complete) |
|--------------------------------------|---------|---|---|

|   |                                 |
|---|---------------------------------|
| 12. Ship or Activity Name and Address (Include UIC/CAGE/HULL) | 13. ORIGINATOR'S E-MAIL ADDRESS |
|---|---------------------------------|

FOLD HERE AND TAPE SECURELY  
PLEASE DO NOT STAPLE

---

INCLUDE COMPLETE ADDRESS

USE  
PROPER  
POSTAGE

FOR OFFICIAL USE ONLY

**COMMANDER  
CODE 5E30DP BLDG 1388  
NAVSURFWARCENDIV NSDSA  
4363 MISSILE WAY  
PORT HUENEME CA 93043-4307**

---

FOLD HERE AND TAPE SECURELY  
PLEASE DO NOT STAPLE