Green Housekeeping Policy

September 25, 2008

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GREEN HOUSEKEEPING POLICY – Grand Valley State University

Intent:
To reduce exposure of building occupants and maintenance personnel to potentially hazardous chemical, biological and particulate contaminants, which adversely affect air quality, human health, building finishes, building systems and the environment.

Statement of Purpose:
- Prevent the introduction of contaminants into the environment by using appropriate materials.
- Prevent interior contamination by training the university's housekeeping staff in approved procedures and materials.
- Remove contaminants from the interior environment.

Requirements:
Grand Valley State University will maintain this green housekeeping policy for all buildings and for housekeeping staff addressing the following green housekeeping requirements:
- Purchase of cleaning, hard floor, and carpet care products meeting Green Seal Standards (See Appendix A) and Carpet and Rug Institute Standards.
- Purchase of hand towels and toilet tissue meeting EcoLogo^{M} Certification (See Appendix B)
- Development of requirements for staffing, and for training of maintenance personnel appropriate to the needs of each building. These requirements include the training of maintenance personnel in the disposal and recycling of cleaning chemicals, dispensing equipment and packaging. (See Appendix C).
- Development of guidelines addressing the safe handling and storage of cleaning chemicals used in the building. (See Appendix C)
- Establishment of standard operating procedures (SOPs) to protect vulnerable building occupants. (See Appendix C)
- Establish procedures for coordination with campus waste management and recycling procedures.
- Establish procedures for coordination with LEED Credit EQc5, Indoor Chemical and Pollutant Source Control. In all campus buildings, to the extent possible, GVSU Facilities Services Staff will implement its housekeeping operations in coordination with the LEED® Indoor Chemical and Pollutant Source Control credit requirements regarding chemical storage, mixing, and disposal. For LEED-Certified buildings which have earned or expect to earn the credit, staff will coordinate housekeeping operations to meet the letter and intent of the credit.

Standards:
All cleaning products and consumable products used must qualify under one or more of the following standards:

Green Seal^{TM} Standards GS-37
EcoLogo^{M} Program
a. CCD-086 Hand Towels
b. CCD-082 Toilet Tissue
EPA Environmentally Preferable Purchasing Program
Executive Order 13101
California Code of Regulations, Title 17 Section 94509
Carpet and Rug Institute "Green Label" Testing Program
EPA Comprehensive Procurement Guidelines

Unacceptable Products:
Any product classified as unacceptable must be approved by the Operations Supervisor, Facilities Services Department.
a. Petroleum-based solvents
b. Products containing ethylene diamine tetraacetic acid
c. Products containing nitrilotriacetic acid
d. Products containing glycol ethers
e. Products containing phenolic compounds and surfactants
f. Phenolic compounds and surfactants
g. Products containing butyl chemicals

Exception to Standards:
3M^{TM} Twist 'n' Fill^{TM} cleaner numbers four and fifteen. Both of these products are disinfectants used on an as-needed basis. Their volatile organic compound (VOC) percentages by weight range between one and five percent. The California Code of Regulation, Title 17 Section 94509 requires that such non-aerosol disinfectants must meet the VOC standard of one percent by weight as of December 31, 2008.

Staff may face non-routine housekeeping demands which require extraordinary effort or procedures such as for the removal of the evidence of lubricants, permanent marker, biological waste, and others.

Scope:
This policy directs the routine daily housekeeping activities for all buildings and associated grounds at Grand Valley State University.

Performance Metric:

a. GVSU's standard is that custodians will inspect their own work. They are University employees subject to regular performance reviews.
b. GVSU custodial supervisors do daily/weekly walks through buildings depending on usage and incidents of concern.
c. GVSU's Facilities Services customer service desk takes work orders from the customers for routine and special requests. These work orders include a follow-up component.
d. GVSU Facilities Services meets with its product vendors when new or revised products and procedures are introduced by the vendor. Any proposed changes will be assessed relative to the established GVSU standard.
e. As needed, GVSU Facilities Services staff will consult with vendor representative if materials and/or procedures are perceived to be ineffective or substandard.

Training:

Grand Valley State University will use the following training mechanisms

a. 3M Procedure Wizard
b. 3M Comprehensive training videos
    i. 3M Hard Floor Care
    ii. 3M Restrooms Care
    iii. 3M Twist 'n Fill Systems
c. 3M Computer-Based Training Program
    iv. OSHA Right-to-Know HazComm
    v. OSHA Right-to-Know Infectious Agents
d. Flipcharts, cart aids, and wall charts

Procedures and Strategy. Use the following:

a. 3M Green Seal Certified cleaning products.
b. 3M Twist 'n Fill Cleaning Chemical Management System.
c. Spartan Green Seal Certified cleaning and floor care products.
d. Paper towel and toilet tissue that contains 100% post consumer recycled content.
e. Pine oil or citrus-based solvents that do not contain petroleum distillates.
f. pH-neutral products.
g. Products that are packaged as concentrates and contained in recyclable containers.
h. Vendor performs routine maintenance on all powered equipment and maintains a log.
i. Trash can liners with post consumer recovered content of 10%

Responsible Parties:

a. Owner:
    a. Steve Leeser, Manager of Operations, GVSU.
    b. John Ruiter, Manager of Nighttime Operations.
    c. Gloria Myaard, Manager of Housing and Athletic Operations.
b. Product Vendor: Glen Huizenga, Nichols Paper and Supply.

Period of Operation:

a. Commencement. This policy is currently in effect.
b. Duration: This policy is continuous, with annual or semi-annual reviews by GVSU's Manager of Operations.

Coordination with United States Green Building Council LEED® Rating Systems

a. This policy is intended to meet requirements of LEED-NC version 2.2 for an Innovation and Design Credit.
b. This policy is intended to meet requirements of LEED-CI (version2.0) for Sustainable Sites Credit 1, Option L..
c. This policy is intended to meet requirements of LEED-EB O&M for Indoor Environmental Quality (EQ) Prerequisite 3, EQ Credit 3.1, EQ Credits 3.2-3.3, EQ Credits 3.4-3.6, and EQ Credit 3.7. Additional required documentation relative to the performance period will be submitted with each LEED-EB O&M submittal.

References:

a. Credit Interpretation Request; Ruling dated 4/8/2004. (See Appendix D)
b. Facilities Management Evaluation Report (sample). APPA.
c. Custodial Staffing Guidelines for Educational Facilities, APPA, second edition.
d. USGBC LEED Reference Guides for LEED-NC version 2.2, LEED-CI version 2.0, LEED-EB:O&M

Editorial assistance provided by Fishbeck, Thompson, Carr & Huber, Inc. (www.ftch.com)

APPENDIX A

MSD SHEETS

Glass Cleaner
Product No. 1

Technical Data

December 2005

Description:

3M™ Glass Cleaner is a concentrated product to be diluted and dispensed using the 3M™ Twist 'n Fill™ Cleaning Chemical Management System.

3M™ Glass Cleaner is a fast-drying, non-streaking glass cleaner formulated to effectively clean soil, water spots, oil, lipstick, and hairspray from non-porous surfaces.

This product meets Green Seal's GS-37 environmental standard for industrial and institutional cleaners based on its reduced human and aquatic toxicity and reduced smog production potential.

Special Features:

- Automatic dispensing eliminates measuring and mixing and ensures accurate dilutions
- Green Seal GS-37 Environmental Certification
- Pleasant fragrance
- Hard water tolerant
- Non-ammoniated formula
- Passes AMS 1550B cleaner tests for cleaning the interior of aircraft

Applications:

- Windows and mirrors
- Fixtures (stainless steel or chrome)
- Display cases (glass or plexiglas)
- Table tops
- Ceramic tile
- Marble

Packaging:

Concentrate:

2-liter bottle
6 bottles per case

Each 2-liter bottle yields 30 ready-to-use gallons

General Use Directions:

Refer to ready-to-use MSDS for personal protective equipment (PPE) recommendations.

Dispense Glass Cleaner with cold water using the 3M™ Twist 'n Fill™ Cleaning Chemical Dispenser into a properly labeled trigger-spray bottle.

1. Spray Glass Cleaner into a clean cloth or onto the surface.
2. Wipe the surface with a clean cloth or paper towel until clean and dry.
3. When using a squeegee, apply cleaner, scrub to loosen soil, then squeegee.

Product Specifications:

(Typical Values)

Concentrate:

1. pH: 9.5 – 10.5
2. Flash Point: 118°F
3. Solubility in Water: Complete
4. Specific Gravity: 0.9
5. Viscosity: < 50 cps
6. Appearance: Clear, dark blue liquid
7. Fragrance: Apple

Ready-to-Use:

1. pH: 10
2. Flash Point: N/A
3. Solubility in Water: Complete
4. Specific Gravity: 1.0
5. Viscosity: < 50 cps
6. Appearance: Clear, light aqua blue liquid
7. Fragrance: Apple

Precautionary Summary:

Concentrate:

Eye Contact: Moderate Eye Irritant

Suggested First Aid: Flush eyes with large amounts of water.

Skin Contact: Moderate Skin Irritant

Suggested First Aid: Remove contaminated clothing. Flush skin with large amounts of water.

Inhalation: May cause upper respiratory irritation.

Suggested First Aid: Remove person to fresh air.

Ready-to-Use:

Eye Contact: Mild Eye Irritant

Suggested First Aid: Flush eyes with large amounts of water.

Skin Contact: Mild Skin Irritant

Suggested First Aid**:** Wash affected area with soap and water.

Inhalation: May cause upper respiratory irritation

Suggested First Aid: Remove person to fresh air.

Note:
Refer to product Material Safety Data Sheet (MSDS: 18-5086-6, 08-2583-6) for specific health hazard, first aid and precautionary information

3M Branch Sales Offices

ANCHORAGE
11151 Calaska Circle
Anchorage, AK 99515
Telephone: 907/522-5200
Facsimile 907/522-1645

HONOLULU
4443 Malaai Street
Honolulu, HI 96818
Mail to: P.O. Box 30048
Honolulu, HI 96820
Telephone: 808/422-2721
Facsimile 808/422-9557

CONTINENTAL UNITED STATES
Customer Service Department
3M Center Building 223-5S-07
St. Paul, MN 55144-1000
Order Entry 1-800-852-9722
Facsimile 1-800-447-0408

CANADA
1840 Oxford Street East
London, Ontario, Canada
N5V 3G2
Mail to: P.O. Box 5757
London, Ontario, Canada
N6A 4T1
Telephone: 800/364-3577
Facsimile: 800/479-4453

Important:
The information provided in this report is believed to be reliable; however, due to the wide variety of intervening factors, 3M does not warrant that the results will necessarily be obtained. All details concerning product specifications and terms of sale are available from 3M.

3M Building and Commercial Services Division

St. Paul, MN 55144-1000
1-800-852-9722
www.3M.com/commcare

3M™ Glass Cleaner
(Product No. 1, Twist 'n Fill™ System)

SUMMARY OF EXPECTED ENVIRONMENTAL IMPACT

Note: This product does not have environmental data as formulated. The information on this document is a compilation of data for the individual components.

IMPACT OF PRODUCT USE

The use of this product is expected to have a low environmental risk. Most major components of this product should eventually degrade in the environment to naturally occurring materials including carbon dioxide, water, and inorganic salts. As such, components not totally degraded by wastewater treatment should eventually degrade in the environment. Components of this product are not expected to have a high potential to bioconcentrate. The ready-to-use product is not expected to exhibit adverse environmental effects on aquatic environments through intended use and proper disposal.

IMPACT OF ACCIDENTAL SPILLS:

Accidental discharge of five gallons (19 liters) or less of 3M™ Glass Cleaner (Ready-to-Use or Concentrate) into sewer systems is not expected to have significant adverse environmental impacts.

An accidental spill of 3M™ Glass Cleaner Concentrate directly into the environment is expected to have limited environmental impact because:

a. Packaging of the concentrate in sealed individual two-liter containers significantly reduces the likelihood of large-volume spills; and

b. Most components of this product are expected to degrade in natural aerobic environments and are not expected to bioaccumulate; however, direct water discharges of concentrate spills may be harmful to aquatic life.

IMPACT OF PACKAGING:

The packaging of this product is expected to have a low impact on the environment. Packaging complies with CONEG requirements.

The two-liter bottle is made of HDPE plastic and is recyclable where suitable facilities exist. The cap must be removed prior to recycling. Alternatively, the empty bottle and cap may be landfilled or incinerated.

The carton is made from cardboard having a minimum 45% post-consumer recycled content. The carton may be recycled where suitable facilities exist. Alternatively, the carton may be landfilled or incinerated.

Literature pertaining to this product, either as part of the packaging or distributed otherwise, has a recycled content as stated on the literature itself and may be recycled in accordance with local regulations.

FURTHER ENVIRONMENTAL INFORMATION

Technical documentation for the above summary is available on request. Call 1-800-626-8578 and ask to speak with the Commercial Care Division Regulatory Specialist.

Important: The information provided in this document is believed to be reliable; however, due to the wide variety of intervening factors, 3M does not warrant the accuracy of the conclusions provided in this document.

Neutral Cleaner
Product No. 3

"This product meets Green Seal's environmental standard for industrial and institutional cleaners based on its reduced human and aquatic toxicity and reduced smog production potential."

Technical Data

May 2007 Version 2

Description:

3M™ Neutral Cleaner is a concentrated product to be diluted and dispensed using the 3M™ Twist 'n Fill™ Cleaning Chemical Management System.

Ready-to-use Neutral Cleaner is designed to clean washable hard surfaces.

Special Features:

- Automatic dispensing eliminates measuring and mixing and ensures accurate dilutions
- Green Seal GS-37 Environmental Certification
- Will not dull or damage floor finishes
- Clean, fresh scent
- No rinsing is required, saving time and labor

Applications:

- Resilient floor surfaces including marble, ceramic, terrazzo, vinyl composition tiles and finished wood
- Use with a flat mop
- Use with mop and bucket
- Use with auto scrubber

Packaging:

2-liter bottle
6 bottles per case

Each 2-liter bottle yields 207 ready-to-use gallons.

General Use Directions:

Refer to ready-to-use MSDS for personal protective equipment (PPE) recommendations.

Dispense Neutral Cleaner with cold water using the 3M™ Twist 'n Fill™ Cleaning Chemical Dispenser into a buddy jug, Easy Scrub Express bottles, mop bucket or directly into an auto scrubber.

1. Sweep or dust mop floors.
2. Properly position caution signs for wet floor conditions.
3. Mop floor or scrub using an auto scrubber or floor machine with a 3M 5100 Red Buffer Pad.
4. Pick up soiled solution with a wet vacuum or tightly wrung mop.
5. No rinsing required.
6. Allow floor to dry. Note: Floors may be slippery when wet.
7. Burnish or spray-buff immediately after cleaning (optional).

Product Specifications:
(Typical Values)

Concentrate:

1. pH: 7-8
2. Flash Point: 200 °F
3. Solubility in water: Complete
4. Specific Gravity: 1.0
5. Viscosity: 100 cps
6. Boiling Point: 196 °F
7. Fragrance: Citrus
8. Appearance: Clear green-yellow liquid

Ready- to- Use:

1. pH: 6-8
2. Flash Point: Not Applicable
3. Solubility in water: Complete
4. Specific Gravity: 1.0
5. Viscosity: <100 cps
6. Boiling Point: 212 °F
7. Fragrance: Citrus
8. Appearance: Colorless to light green liquid

Precautionary Summary:

Concentrate:

Eye Contact: Severe Eye Irritant

Suggested First Aid: Immediately flush eyes with large amounts of water for at least 15 minutes. Get immediate medical attention.

Skin Contact: Moderate Skin Irritant
Suggested First Aid: Remove contaminated clothing and shoes. Immediately flush skin with large amounts of water. Get medical attention. Wash contaminated clothing and clean shoes before reuse.

Inhalation: May cause respiratory tract irritation.

Suggested First Aid: Remove person to fresh air. If signs/symptoms develop, get medical attention.

Waste Disposal Method: Incinerate in an industrial or commercial facility in the presence of a combustible material. As a disposal alternative, dispose of waste product in a facility permitted to accept chemical waste. Rinse empty container with water and recycle.

Ready-to-Use:

Eye Contact: Mild Eye Irritant

Suggested First Aid: Flush eyes with large amounts of water.

Skin Contact: No health effects are expected

Suggested First Aid: Wash affected area with soap and water.

Inhalation: May cause respiratory tract irritation

Suggested First Aid: Remove person to fresh air.

Note:
Refer to product Material Safety Data Sheet (MSDS: 22-5310-2, 22-9689-5) for specific health hazard, first aid and precautionary information

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Important:
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Building and Commercial Services Division
St. Paul, MN 55144-1000
1-800-852-9722
www.3M.com/commcare

3M™ Neutral Cleaner
(Product No. 3, Twist 'n Fill™ System)

SUMMARY OF EXPECTED ENVIRONMENTAL IMPACT

Note: This product does not have environmental data as formulated. The information on this document is a compilation of data for the individual components.

IMPACT OF PRODUCT USE

The use of this product is expected to have a low environmental risk. Most of the major components of this product are expected to be readily biodegradable. As such, components not totally degraded by wastewater treatment are likely to eventually degrade in the environment. Any toxicity effects are likely to be rapidly removed from aerobic environments that support biodegradation. Components of this product are not expected to have a high potential to bioconcentrate. The ready-to-use product is not expected to exhibit adverse environmental effects on aquatic environments through intended use and proper disposal.

IMPACT OF ACCIDENTAL SPILLS:

Accidental discharge of five gallons (19 liters) or less of 3M™ Neutral Cleaner (Ready-to-Use or Concentrate) into sewer systems is expected to have minimal environmental impact.

An accidental spill of 3M™ Neutral Cleaner (Concentrate) directly into the environment is expected to have limited environmental impact because:

a. Packaging of the concentrate in sealed individual two-liter containers significantly reduces the likelihood of large-volume spills; and

b. Most components of this product are expected to degrade in natural aerobic environments and are not expected to bioaccumulate; however, direct water discharges of concentrate spills may be harmful to aquatic life.

IMPACT OF PACKAGING:

The packaging of this product is expected to have a low impact on the environment. Packaging complies with CONEG requirements.

The two-liter bottle is made of HDPE plastic and is recyclable where suitable facilities exist. The cap must be removed prior to recycling. Alternatively, the empty bottle and cap may be landfilled or incinerated.

The carton is made from cardboard having a minimum 45% post-consumer recycled content. The carton may be recycled where suitable facilities exist. Alternatively, the carton may be landfilled or incinerated.

Literature pertaining to this product, either as part of the packaging or distributed otherwise, has a recycled content as stated on the literature itself and may be recycled in accordance with local regulations.

FURTHER ENVIRONMENTAL INFORMATION

Technical documentation for the above summary is available on request. Call 1-800-626-8578 and ask to speak with the Commercial Care Division Regulatory Specialist.

Bathroom Disinfectant Cleaner Concentrate 4

Technical Data

July 2007

Description:

3M™ Bathroom Disinfectant Cleaner is a concentrated product to be diluted and dispensed using the 3M™ Twist 'n Fill™ Cleaning Chemical Management System.

This product is a concentrated one-step disinfectant, cleaner, fungicide, mildewstat, virucide*, and deodorizer. This product is effective in 400 ppm hard water in the presence of 5% serum contamination.

Active Ingredients:

Octyl decyl dimethyl ammonium chloride	1.50%
Dioctyl dimethyl ammonium chloride	0.60%
Didecyl dimethyl ammonium chloride	0.90%
Alkyl (C_{14}, 50%, C_{12} 40%, C_{16}, 10%) dimethyl benzyl ammonium chloride	2.00%

EPA Registration:

EPA Reg. No. 6836-309-10350
EPA Est. No. 33915-MI-001

Applications:

- Cleaner
- Disinfectant
- Fungicide
- Virucide*
- Mold and Mildew Control

This product is for use on washable hard, nonporous surfaces such as; floors, walls, countertops, garbage cans, telephones, doorknobs, shower stalls, tubs and tiles, whirlpool bathtub surfaces, toilets, bathtubs, sinks, urinals, toilet bowls, toilet bowl surfaces, bathroom fixtures and other hard nonporous surfaces made of metal, glazed porcelain, glazed ceramic, fiberglass, and plastic, porcelain lining, stainless steel, enameled surfaces, finished woodwork, Formica®, vinyl and plastic upholstery.

General Use Directions:

Directions For Use: It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

Refer to ready-to-use MSDS for personal protective equipment (PPE) recommendations.

Dispense this product using the 3m™ Twist 'n Fill™ System dispenser into a properly labeled container.

DISINFECTION/VIRUCIDAL*/ FUNGICIDAL/MOLD AND MILDEW CONTROL DIRECTIONS: Apply ready-to-use solution with a cloth, mop, or sponge to thoroughly wet the surface. Treated surfaces must remain wet for 10 minutes. Wipe dry with a cloth, sponge, mop or allow to air dry.

Note: For spray applications, use a coarse spray. Spray 6-8 inches from surface, rub with brush, sponge or cloth. Do not breathe spray.

Rinse all surfaces that come in contact with food such as countertops, appliances, tables and stovetops with potable water before reuse. This product should not be used to clean utensils, glassware and dishes. For heavily soiled areas, a preliminary cleaning is recommended. For mold and mildew, repeat when mildew growth returns.

This product is not for use on medical device surfaces.

Toilet Bowl and Urinal Disinfectant/Cleaner Directions: Remove gross filth prior to disinfection. Empty toilet bowl or urinal and apply ready-to-use product to exposed surfaces and under the rim with a cloth, mop, sponge or mechanical spray. Brush or swab thoroughly, especially under the rim. Allow to stand for 10 minutes and flush.

For Cleaning and Deodorizing: Apply ready-to-use solution to hard nonporous surfaces, thoroughly wetting surfaces with a cloth, mop, sponge or sprayer. Wipe dry with a clean cloth, sponge or mop or allow surface to air dry.

KILLS HIV ON PRE-CLEANED ENVIRONMENTAL SURFACES/OBJECTS PREVIOUSLY SOILED WITH BLOOD/BODY FLUIDS in health care settings or other settings in which there is an expected likelihood of soiling of inanimate surfaces/objects with blood or body fluids, and in which the surfaces/objects likely to be soiled with blood or body fluids can be associated with the potential for transmission of Human Immunodeficiency Virus Type 1 (HIV-1) (associated with AIDS).

Special instructions for cleaning and decontamination against HIV-1 on surfaces/objects soiled with blood/body fluids:

Personal Protection: Clean up should always be done wearing protective latex gloves, gowns, masks and eye protection.

Cleaning Procedure: Blood and other body fluids containing HIV must be thoroughly cleaned from surfaces and objects before application of this product.

Contact Time: Leave surface wet for 10 minutes.

Disposal of Infectious Material: Blood, body fluids, cleaning materials and clothing should be autoclaved and disposed of according to local regulations for infectious waste disposal.

Efficacy:

This product is effective against the following organisms:
Pseudomonas aeruginosa
Staphylococcus aureus
Staphylococcus aureus (Methicillin Resistant – MRSA)
Staphylococcus aureus (Vancomycin Intermediate Resistant - VISA)
Salmonella cholerasuis
Streptococcus pneumoniae
Enterococcus faecalis (including Vancomycin-Resistant-VRE)
Enterobacter aerogenes
Escherichia coli (E. Coli)
Trichophyton mentagrophytes (athlete's foot fungus)
Aspergillus niger
*HIV-1 (AIDS virus)
*Influenza Type A2/Japan
*Influenza Type B/Hong Kong

Product Specifications:
(Typical Values)

Concentrate:
1. pH: 1
2. Flashpoint: N/A
3. Solubility in water: Complete
4. Specific Gravity: 1.1
5. Viscosity: <100 cps
6. Boiling Point: >95° F
7. Fragrance: Floral
8. Appearance: Green liquid

Ready-to-Use:
1. pH: 3
2. Flash Point: N/A
3. Solubility in Water: Complete
4. Specific Gravity: 1.0
5. Viscosity: <100 cps
6. Boiling Point: Approx. 212° F
7. Fragrance: Floral
8. Appearance: Green liquid

Precaution Summary:

Concentrate:
Eye Contact: Corrosive to the eyes
Suggested First Aid: Immediately flush eyes with large amounts of water for at least 15 minutes.

Skin Contact: Corrosive to skin
Suggested First Aid: Remove contaminated clothing and shoes. Immediately flush skin with large amounts of water for at least 15 minutes.
Get immediate medical attention. Wash contaminated clothing and clean shoes before reuse.

Inhalation: Upper respiratory irritant
Suggested First Aid: Remove person to fresh air. If signs/symptoms develop, get medical attention.

Ready-to-Use:
Eye Contact: Mild eye irritant
Suggested First Aid: Flush eyes with large amounts of water.

Skin Contact: Mild skin irritant
Suggested First Aid: Wash affected area with soap and water.

Inhalation: Upper respiratory irritant
Suggested First Aid: Remove person to fresh air.

Note:
Refer to product Material Safety Data Sheets (MSDS: 06-1683-9, 06-2132-6) for specific health hazard, first aid and precautionary information.

3M Branch Sales Offices

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11151 Calaska Circle
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Building and Commercial Services Division
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01/08 DMR# 60039

3M

Material Safety Data Sheet

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: 3M(TM) BATHROOM DISINFECTANT CLEANER (CONCENTRATE) (Product No. 4, Twist 'n Fill(tm) System)
MANUFACTURER: 3M
DIVISION: Commercial Care Division

ADDRESS: 3M Center
St. Paul, MN 55144-1000

EMERGENCY PHONE: 1-800-364-3577 or (651) 737-6501 (24 hours)

Issue Date: 07/21/2005
Supercedes Date: 04/21/2005

Document Group: 06-1683-9

Product Use:
Specific Use: Bathroom Cleaner Concentrate

SECTION 2: INGREDIENTS

Ingredient	C.A.S. No.	% by Wt
1-OCTYL-2-PYRROLIDINONE	2687-94-7	15 - 40
HYDROXYACETIC ACID	79-14-1	10 - 30
WATER	7732-18-5	10 - 30
MALIC ACID	6915-15-7	10 - 30
FRAGRANCE	Mixture	<3
TRANS-3,7-DIMETHYL-2,6-OCTADIENOL	106-24-1	<2
ETHYL ALCOHOL	64-17-5	0.5 - 1.5
METHOXYACETIC ACID	625-45-6	0.1 - 1
N-NITROSODIMETHYLAMINE	62-75-9	< 0.05
BENZYL-C12-16-ALKYLDIMETHYL AMMONIUM CHLORIDES	68424-85-1	2.00
OCTYLDECYLDIMETHYLAMMONIUM CHLORIDE	32426-11-2	1.50
DIDECYL DIMETHYL AMMONIUM CHLORIDE	7173-51-5	0.90
DIOCTYL DIMETHYL AMMONIUM CHLORIDE	5538-94-3	0.60

SECTION 3: HAZARDS IDENTIFICATION

3.1 EMERGENCY OVERVIEW

Specific Physical Form: Liquid
Odor, Color, Grade: Green color with floral fragrance.
General Physical Form: Liquid
Immediate health, physical, and environmental hazards: May cause chemical eye burns. May cause allergic skin reaction. May cause chemical skin burns. May cause chemical gastrointestinal burns. Contains a chemical or chemicals which can cause cancer. May cause target organ effects. Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

3.2 POTENTIAL HEALTH EFFECTS

Eye Contact:
Corrosive (Eye Burns): Signs/symptoms may include cloudy appearance of the cornea, chemical burns, severe pain, tearing, ulcerations, significantly impaired vision or complete loss of vision.

Skin Contact:
Corrosive (Skin Burns): Signs/symptoms may include localized redness, swelling, itching, intense pain, blistering, ulceration, and tissue destruction.

Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

Inhalation:
Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

May be absorbed following inhalation and cause target organ effects.

Ingestion:
Gastrointestinal Corrosion: Signs/symptoms may include severe mouth, throat and abdominal pain; nausea; vomiting; and diarrhea; blood in the feces and/or vomitus may also be seen.

May be absorbed following ingestion and cause target organ effects.

Target Organ Effects:
Central Nervous System (CNS) Depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness.

Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

Carcinogenicity:
NOTE: This product contains ethanol. In IARC published Monograph No. 44, entitled, "Alcohol Drinking", the carcinogenicity of ethanol was determined based on chronic exposure to ethanol through human consumption of alcoholic beverages. This is not an expected effect during the foreseeable use of this product. Contains a chemical or chemicals which can cause cancer.

Ingredient	C.A.S. No.	Class Description	Regulation
ETHYL ALCOHOL	64-17-5	Group 1	International Agency for Research on Cancer
N-NITROSODIMETHYLAMINE	62-75-9	Group 2A	International Agency for Research on Cancer
N-NITROSODIMETHYLAMINE	62-75-9	Anticipated human carcinogen	National Toxicology Program Carcinogens
N-NITROSODIMETHYLAMINE	62-75-9	Cancer hazard	OSHA Carcinogens

3.3 POTENTIAL ENVIRONMENTAL EFFECTS

A 3M Product Environmental Data Sheet (PED) is available.

A conservative assessment indicates this product presents a low environmental risk. Components released to the environment through use and disposal are expected to have insignificant environmental impacts.

SECTION 4: FIRST AID MEASURES

4.1 FIRST AID PROCEDURES

The following first aid recommendations are based on an assumption that appropriate personal and industrial hygiene practices are followed.

Eye Contact: Immediately flush eyes with large amounts of water for at least 15 minutes. Get immediate medical attention.

Skin Contact: Remove contaminated clothing and shoes. Immediately flush skin with large amounts of water for at least 15 minutes. Get immediate medical attention. Wash contaminated clothing and clean shoes before reuse.

Inhalation: Remove person to fresh air. If signs/symptoms develop, get medical attention.

If Swallowed: Do not induce vomiting. Give victim two glasses of water. Never give anything by mouth to an unconscious person. Get immediate medical attention.

4.2 NOTE TO PHYSICIANS

Measures against circulatory shock, respiratory depression, and convulsion may be needed.

Probable mucosal damage may contraindicate the use of gastric lavage.

SECTION 5: FIRE FIGHTING MEASURES

5.1 FLAMMABLE PROPERTIES

Flash Point	*Not Applicable*
OSHA Flammability Classification:	Not Applicable

5.2 EXTINGUISHING MEDIA

Material will not burn.

5.3 PROTECTION OF FIRE FIGHTERS

Special Fire Fighting Procedures: Nonflammable.

Unusual Fire and Explosion Hazards: Material will not burn.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Accidental Release Measures: Refer to other sections of this MSDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment. Call 3M-HELPS line (1-800-364-3577) for more information on handling and managing the spill. Evacuate unprotected and untrained personnel from hazard area. The spill should be cleaned up by qualified personnel. Ventilate the area with fresh air. Contain spill. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a toxic, corrosivity or flammability hazard. Collect as much of the spilled material as possible. Clean up residue with a dilute solution (approximately 1 to 5%) of soda ash (sodium carbonate) or baking soda (sodium bicarbonate) in water. Collect the resulting residue containing solution. Place in a metal container approved for use in transportation by appropriate authorities. The container must be lined with polyethylene plastic or contain a plastic drum liner made of polyethylene. Cover, but do not seal for 48 hours. Dispose of collected material as soon as possible.

In the event of a release of this material, the user should determine if the release qualifies as reportable according to local, state, and federal regulations.

SECTION 7: HANDLING AND STORAGE

7.1 HANDLING

Keep out of the reach of children. This product is not intended to be used without prior dilution as specified on the product label. Avoid breathing of vapors, mists or spray. Avoid skin contact. Avoid eye contact with vapors, mists, or spray. Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Do not use on marble.

7.2 STORAGE

Do not store containers on their sides. Store away from areas where product may come into contact with food or pharmaceuticals. Keep container in well-ventilated area. Store away from strong bases.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 ENGINEERING CONTROLS

NOTE: When used as directed and diluted and dispensed with a TWIST 'n FILL(TM) Chemical Dispenser, special ventilation is not required. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below Occupational Exposure Limits and/or control mist, vapor, or spray. If ventilation is not adequate, use respiratory protection equipment.

8.2 PERSONAL PROTECTIVE EQUIPMENT (PPE)

8.2.1 Eye/Face Protection

Avoid eye contact with vapors, mists, or spray. NOTE: When used as directed and diluted and dispensed with a TWIST 'n FILL(TM) Chemical Dispenser, eye contact with the concentrate is not expected to occur.

If the product is not used with the Twist 'n Fill system or if there is an accidental release, the following eye protection is recommended: Indirect Vented Goggles, Full Face Shield.

8.2.2 Skin Protection

Avoid skin contact. NOTE: When used as directed and diluted and dispensed with a TWIST 'n FILL(TM) Chemical Dispenser, skin contact with the concentrate is not expected to occur.

If the product is not used with the Twist 'n Fill system or if there is an accidental release, select and use gloves and/or protective clothing to prevent skin contact based on the results of an exposure assessment. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible materials. Gloves made from the following material is recommended: Butyl Rubber, Nitrile.

8.2.3 Respiratory Protection

Avoid breathing of vapors, mists or spray. NOTE: When used as directed and diluted and dispensed with a TWIST 'n FILL(TM) Chemical Dispenser, respiratory protection is not required.

If the product is not used with the Twist 'n Fill system or if there is an accidental release, select one of the following NIOSH approved respirators based on airborne concentration of contaminants and in accordance with OSHA regulations: Fullface air-purifying respirator with organic vapor/acid gas cartridges. Consult the current 3M Respiratory Selection Guide for additional information or call 1-800-243-4630 for 3M technical assistance.

8.2.4 Prevention of Swallowing
Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water.

8.3 EXPOSURE GUIDELINES

Ingredient	Authority	Type	Limit	Additional Information
ETHYL ALCOHOL	ACGIH	TWA	1000 ppm	Table A4
ETHYL ALCOHOL	OSHA	TWA	1000 ppm	Table Z-1
HYDROXYACETIC ACID	CMRG	TWA	10 mg/m3	
N-NITROSODIMETHYLAMINE	ACGIH	TWA	No exposure	No Exposure Should be Allowed; Skin Notation*;Table A3

* Substance(s) refer to the potential contribution to the overall exposure by the cutaneous route including mucous membrane and eye, either by airborne or, more particularly, by direct contact with the substance. Vehicles can alter skin absorption.

SOURCE OF EXPOSURE LIMIT DATA:
ACGIH: American Conference of Governmental Industrial Hygienists
CMRG: Chemical Manufacturer Recommended Guideline
OSHA: Occupational Safety and Health Administration
AIHA: American Industrial Hygiene Association Workplace Environmental Exposure Level (WEEL)

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Specific Physical Form:	Liquid
Odor, Color, Grade:	Green color with floral fragrance.
General Physical Form:	Liquid
Flash Point	*Not Applicable*
Boiling point	> 95 °F
Vapor Pressure	15 psia - 40 psia [@ 131 °F]
Specific Gravity	Approximately 1.12 [*Ref Std:* WATER=1]
pH	Approximately 0.9 - 1.5
Solubility in Water	Complete
Volatile Organic Compounds	1 % - 5 % [*Test Method:* calculated per CARB title 2]
VOC Less H2O & Exempt Solvents	12.58 g/l - 62.88 g/l [*Test Method:* calculated per CARB title 2]
Viscosity	Approximately 100 centipoise

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable.

Materials and Conditions to Avoid: Strong bases. Additional Information: DO NOT USE ON MARBLE OR MARBLE PRODUCTS.

Hazardous Polymerization: Hazardous polymerization will not occur.

Hazardous Decomposition: Under recommended usage conditions, hazardous decomposition products are not expected. Hazardous decomposition products may occur as a result of oxidation, heating, or reaction with another material.

SECTION 11: TOXICOLOGICAL INFORMATION

Please contact the address listed on the first page of the MSDS for Toxicological Information on this material and/or its components.

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

A 3M Product Environmental Data Sheet (PED) is available.

CHEMICAL FATE INFORMATION

A 3M Product Environmental Data Sheet (PED) is available.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Method: Incinerate in a permitted hazardous waste incinerator in the presence of a combustible material. As a disposal alternative, dispose of waste product in a permitted hazardous waste facility.

EPA Hazardous Waste Number (RCRA): D002 (Corrosive)

Since regulations vary, consult applicable regulations or authorities before disposal.

SECTION 14: TRANSPORT INFORMATION

ID Number	UPC	ID Number	UPC
70-0705-2685-3	00-48011-19154-1	70-0705-2686-1	00-48011-19155-8
70-0705-4315-5	00-48011-19204-3	70-0705-4316-3	00-48011-19205-0
70-0705-4904-6	00-48011-19308-8	70-0705-8964-6	00-48011-19967-7
70-0707-1409-5	00-48011-20797-6	70-0708-3905-8	00-48011-23903-8
70-0708-3992-6	00-48011-19204-3	70-0709-9000-0	00-48011-29615-4
70-0710-0961-0	00-48011-23903-8	70-0711-6337-5	00-48011-34887-7
70-0711-9216-8	00-48011-19204-3		

Please contact the emergency numbers listed on the first page of the MSDS for Transportation Information for this material.

SECTION 15: REGULATORY INFORMATION

US FEDERAL REGULATIONS

311/312 Hazard Categories:

Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No Immediate Hazard - Yes Delayed Hazard - Yes

STATE REGULATIONS

CALIFORNIA PROPOSITION 65

Ingredient	C.A.S. No.	Classification
N-NITROSODIMETHYLAMINE	62-75-9	**Carcinogen

** WARNING: contains a chemical which can cause cancer.

CHEMICAL INVENTORIES

The components of this product are in compliance with the chemical notification requirements of TSCA.

All applicable chemical ingredients in this material are listed on the European Inventory of Existing Chemical Substances (EINECS), or are exempt polymers whose monomers are listed on EINECS.

The components of this material are in compliance with the new chemical notification requirements for the Korean Existing Chemicals Inventory.

The components of this product are listed on the Australian Inventory of Chemical Substances.

All the components of this product are listed on China's Inventory of Chemical Substances.

The components of this product are listed on the Canadian Domestic Substances List.

INTERNATIONAL REGULATIONS

This MSDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: OTHER INFORMATION

NFPA Hazard Classification

Health: 3 **Flammability:** 0 **Reactivity:** 0 **Special Hazards:** None
Acid/Base: Acid **Corrosive:** Yes

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

HMIS Hazard Classification

Health: 3 **Flammability:** 0 **Reactivity:** 0 **Protection:** X - See PPE section.

Hazardous Material Identification System (HMIS®) hazard ratings are designed to inform employees of chemical hazards in the workplace. These ratings are based on the inherent properties of the material under expected conditions of normal use and are not intended for use in emergency situations. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint and Coatings Association (NPCA).

Revision Changes:
Section 2: Ingredient table was modified.

DISCLAIMER: The information in this Material Safety Data Sheet (MSDS) is believed to be correct as of the date issued. 3M MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR COURSE OF PERFORMANCE OR USAGE OF TRADE. User is responsible for determining whether the 3M product is fit for a particular purpose and suitable for user's method of use or application. Given the variety of factors that can affect the use and application of a 3M product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluate the 3M product to determine whether it is fit for a particular purpose and suitable for user's method of use or application.

3M provides information in electronic form as a service to its customers. Due to the remote possibility that electronic transfer may have resulted in errors, omissions or alterations in this information, 3M makes no representations as to its completeness or accuracy. In addition, information obtained from a database may not be as current as the information in the MSDS available directly from 3M.

3M MSDSs are available at www.3M.com

3M™ Bathroom Cleaner
(Product No. 4, Twist 'n Fill™ System)

SUMMARY OF EXPECTED ENVIRONMENTAL IMPACT

Note: This product does not have environmental data as formulated. The information on this document is a compilation of data for the individual components.

IMPACT OF PRODUCT USE

The use of this product is expected to have a low environmental risk. All major components of this product are expected to be readily biodegradable. As such, components not totally degraded by wastewater treatment are likely to eventually degrade in the environment. This product has components that have the potential to bioconcentrate in aquatic organisms. Toxicity effects and potential to bioconcentrate are likely to be rapidly removed from aerobic environments that support biodegradation. The ready-to-use product is not expected to exhibit adverse environmental effects on aquatic environments through intended use and proper disposal.

IMPACT OF ACCIDENTAL SPILLS:

Accidental discharge of five gallons (19 liters) or less of 3M™ Bathroom Cleaner (Ready-to-Use or Concentrate) into sewer systems is not expected to have a significant environmental impact.

An accidental spill of 3M™ Bathroom Cleaner (Concentrate) directly into the environment is expected to have limited environmental impact because:

a. Packaging of the concentrate in sealed individual two-liter containers significantly reduces the likelihood of large-volume spills; and

b. Most components of this product are expected to degrade in natural aerobic environments and are not expected to bioaccumulate; however, direct water discharges of concentrate spills may be harmful to aquatic life.

IMPACT OF PACKAGING:

The packaging of this product is expected to have a low impact on the environment. Packaging complies with CONEG requirements.

The two-liter bottle is made of HDPE plastic and is recyclable where suitable facilities exist. The cap must be removed prior to recycling. Alternatively, the empty bottle and cap may be landfilled or incinerated.

The carton is made from cardboard having a minimum 45% post-consumer recycled content. The carton may be recycled where suitable facilities exist. Alternatively, the carton may be landfilled or incinerated.

Literature pertaining to this product, either as part of the packaging or distributed otherwise, has a recycled content as stated on the literature itself and may be recycled in accordance with local regulations.

FURTHER ENVIRONMENTAL INFORMATION

Technical documentation for the above summary is available on request. Call 1-800-626-8578 and ask to speak with the Commercial Care Division Regulatory Specialist.

General Purpose Cleaner Concentrate 8H/8L

"This product meets Green Seal's environmental standard for industrial and institutional cleaners based on its reduced human and aquatic toxicity and reduced smog production potential."

Technical Data

January 2008 Version 2

Description:

3M™ General Purpose Cleaner is a concentrated product to be diluted and dispensed using the 3M™ Twist 'n Fill™ Cleaning Chemical Management System.

Ready-to-use 3M™ General Purpose Cleaner is formulated to clean floors, walls and most other non-porous surfaces.

Special Features:

- Automatic dispensing eliminates measuring and mixing and ensures accurate dilutions
- Green Seal GS-37 Environmental Certification
- Cleans most washable surfaces
- Very effective floor cleaner
- Clean scent
- No-rinse formula

Applications:

- Floors
- Walls
- Most non-porous surfaces

Packaging:

2-liter bottle
6 bottles per case
Each 2-liter bottle yields
35 ready-to-use gallons

General Use Directions:

Refer to ready-to-use MSDS for personal protective equipment (PPE) recommendations.

Dispense 3M™ General Purpose Cleaner Concentrate with cold water using the 3M™ Twist 'n Fill™ Cleaning Chemical Dispenser into a properly labeled container or mop bucket.

1. Apply the cleaner with a trigger spray bottle, brush or sponge.
2. Scrub and dry the surface with a hand pad, cloth or sponge.
3. For floors, cleaner may be used with a mop and bucket or auto scrubber. Note: floors may be slippery when wet.
4. Sweep or dust mop the floor.
5. Properly locate caution signs for wet floor conditions.
6. For light soil, damp mop the floor and allow it to dry.
7. For embedded soil, scrub using a swing machine or auto scrubber equipped with the appropriate 3M™ floor pad.
8. If not using an auto scrubber, pick up dirty solution with a wet vacuum or mop.
9. Damp mop with clean solution and let dry. No rinse is required.

Product Specifications:

(Typical Values)

Concentrate:

1. pH: 10-11
2. Flash Point: 180°F
3. Solubility in Water: Complete
4. Specific Gravity: 1.0
5. Viscosity: <50cps
6. Boiling Point: > 200°F
7. Appearance: Bright, clear red liquid
8. Fragrance: Citrus

Ready-to-Use:

1. pH: 9-10
2. Flash Point: N/A
3. Solubility in Water: Complete
4. Specific Gravity: 1.0
5. Viscosity: <50cps
6. Boiling Point: > 200°F
7. Appearance: Clear, pink liquid
8. Fragrance: Citrus

Precautionary Summary:

Concentrate:

Eye Contact: Moderate Eye Irritant

Suggested First Aid: Flush eyes with large amounts of water.

Skin Contact: Moderate Skin Irritant

Suggested First Aid: Remove contaminated clothing and shoes. Immediately flush skin with large amounts of water.

Inhalation: May cause respiratory tract irritation

Suggested First Aid: Remove person to fresh air.

Waste Disposal Method:

Incinerate in an industrial or commercial facility in the presence of a combustible material. As a disposal alternative, dispose of waste product in a facility permitted to accept chemical waste. Rinse empty container with water and recycle.

Ready-to-Use:

Eye Contact: Mild Eye Irritant

Suggested First Aid: Flush eyes with large amounts of water.

Skin Contact: Mild Skin Irritant

Suggested First Aid: Wash affected area with soap and water.

Inhalation: May cause respiratory tract irritation

Suggested First Aid: Remove person to fresh air.

Note:

Refer to product Material Safety Data Sheets (MSDS: 22-8391-9) for specific health hazard, first aid and precautionary information for the concentrate product. Refer to product Material Safety Data Sheets (MSDS: 23-2841-7) for the ready-to-use product.)

3M Branch Sales Offices

ANCHORAGE
11151 Calaska Circle
Anchorage, AK 99515
Telephone: 907/522-5200
Facsimile 907/522-1645

HONOLULU
4443 Malaai Street
Honolulu, HI 96818
Mail to: P.O. Box 30048
Honolulu, HI 96820
Telephone: 808/422-2721
Facsimile 808/422-9557

CONTINENTAL UNITED STATES
Customer Service Department
3M Center Building 235-2E-81
St. Paul, MN 55144-1000
Order Entry 1-800-852-9722
Facsimile 1-800-447-0408

CANADA
1840 Oxford Street East
London, Ontario, Canada
N5V 3G2
Mail to: P.O. Box 5757
London, Ontario, Canada
N6A 4T1
Telephone: 800/364-3577
Facsimile: 800/479-4453

Important:
The information provided in this report is believed to be reliable; however, due to the wide variety of intervening factors, 3M does not warrant that the results will necessarily be obtained. All details concerning product specifications and terms of sale are available from 3M.

3M Building and Commercial Services Division

St. Paul, MN 55144-1000
1-800-852-9722
www.3M.com/Commcare

1/08 DMR# 60054

Non-Acid Disinfectant Bathroom Cleaner Concentrate 15

Technical Data

November 2007 V 2

Description:

3M™ Non-Acid Disinfectant Bathroom Cleaner is a concentrated product to be diluted and dispensed using the 3M™ Twist 'n Fill™ Cleaning Chemical Management System. Using the 3M™ Twist 'n Fill™ Cleaning Chemical Management System will result in 1 ounce of concentrate per gallon of use-solution.

3M™ Non-Acid Disinfectant Bathroom Cleaner is a one step neutral disinfectant that is effective against a broad spectrum of bacteria, is virucidal* (including HIV-1, HIV-2 HBV and NCV) and inhibits the growth of mold and mildew and their odors when used as directed. This product is a no rinse neutral pH disinfectant cleaner that disinfects, cleans and deodorizes in one labor saving step.

Active Ingredients:
Octyl decyl dimethyl ammonium chloride 3.255%
Dioctyl dimethyl ammonium chloride 1.628%
Didecyl dimethyl ammonium chloride 1.628%
Alkyl (50% C14, 40% C12, 10% C16), dimethyl benzyl ammonium chloride 4.339%

EPA Registration:
EPA Reg. No. 1839-166-10350

Applications:
3M™ Non-Acid Disinfectant Bathroom Cleaner when used as directed, is formulated to disinfect the following hard, non-porous, inanimate environmental surfaces: floors, walls, metal, stainless steel, glazed porcelain, glazed ceramic tile and plastic surfaces artificial turf surfaces, vanity tops, shower stalls, bathtubs and cabinets. For larger areas such as operating rooms and patient care facilities, this product is designed to provide both general cleaning and disinfecting.

Packaging:

2-liter bottle
6 bottles per case

Each 2-liter bottle makes 61 Use-solution gallons of cleaner (typical)

Directions for Use:

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

This product is not to be used as a terminal sterilant/high level disinfectant on any surface or instrument that (1) is introduced directly into the human body, either into or in contact with the bloodstream or normally sterile areas of the body, or (2) contacts intact mucous membranes but which does not ordinarily penetrate the blood barrier or otherwise enter normally sterile areas of the body.

DISINFECTION: To disinfect inanimate, hard non-porous surfaces, dispense this product using the 3M™ Twist 'n Fill™ Dispenser into a properly labeled container.

Apply solution with a mop, cloth, sponge, hand pump trigger sprayer or low pressure coarse sprayer so as to wet all surfaces thoroughly. Allow to remain wet for 10 minutes, then remove excess liquid. For sprayer applications, spray 6-8 inches from surface, rub with brush, sponge or cloth. Do not breathe spray mist.

For heavily soiled areas, a pre-cleaning step is required. Prepare a fresh solution for each use.

Non-Acid Toilet Bowl Disinfection/Cleaner Directions:
Remove gross filth prior to disinfection.

From use-solution: Empty toilet bowl or urinal and apply use-solution to exposed surfaces and under the rim, allow to stand for 10 minutes and flush.

VIRUCIDAL ACTIVITY: This product, when used on environmental, inanimate, hard, non-porous surfaces exhibits effective virucidal* activity. For heavily soiled areas, a pre-cleaning step is required. Apply solution with a cloth, mop, sponge, hand pump trigger sprayer or low pressure coarse sprayer so as to wet all surfaces thoroughly. Allow the surface to remain wet for 10 minutes, then remove excess liquid.

MILDEWSTAT: To control mold and mildew (such as aspergillus niger) and the odors they cause on pre-cleaned, hard, non-porous inanimate surfaces, use this product as dispensed. Apply solution with a cloth, mop, sponge, or hand pump trigger sprayer making sure to wet all surfaces completely. Let air dry. Prepare a fresh solution for each use. Repeat application at weekly intervals or when mildew growth appears.

FUNGICIDAL ACTIVITY: As dispensed, this product is fungicidal against pathogenic fungi trichophyton mentagrophytes (athlete's foot fungus) and candida albicans. Apply solution with a cloth, mop, sponge, or trigger sprayer to hard non-porous surfaces found in bathrooms, shower stalls, locker rooms, exercise facilities or other clean, hard non-porous surfaces commonly contacted by bare feet. Allow the surface to remain wet for 10 minutes, then remove excess liquid. Diluted product should be applied daily or more frequently with heavy facility use.

GENERAL CLEANING: Apply this product to soiled area with a mop, cloth, sponge, hand pump trigger sprayer or hand pump trigger sprayer. Thoroughly wet soiled surface and scrub as necessary.

KILLS HIV-1, HIV-2, HBV and HCV ON PRECLEANED ENVIRONMENTAL SURFACES/OBJECTS PREVIOUSLY SOILED WITH BLOOD/BODY FLUIDS in health care settings or other settings in which there is an expected likelihood of soiling of surfaces/objects with blood or body fluids, and in which the surfaces/objects likely to be soiled with blood or body fluids can be associated with the potential for transmission of human immuno-deficiency virus Type 1 and Type 2 (HIV-1 and HIV-2) (associated with AIDS), Hepatitis B Virus (HBV), and Hepatitis C Virus (HCV).

SPECIAL INSTRUCTIONS FOR CLEANING AND DECONTAMINATION AGAINST HIV-1, HIV-2, HBV, and HCV OF SURFACES/OBJECTS SOILED WITH BLOOD/BODY FLUIDS.

PERSONAL PROTECTION: When handling items soiled with blood or body fluids, use disposable latex gloves, gowns, masks, or eye coverings.

CLEANING PROCEDURE: Blood and other body fluids must be thoroughly cleaned from surfaces and objects before application of this product.

CONTACT TIMES: Allow surface to remain wet for 10 minutes.

DISPOSAL OF INFECTIOUS MATERIALS: Blood and other body fluids should be autoclaved and disposed of according to local regulations for infectious waste.

Efficacy tests have demonstrated that 3M™ Non-Acid Disinfectant Bathroom Cleaner is an effective bactericide and *virucide against the listed organisms in water up to 400 ppm hardness (as $CaC0_3$) in the presence of organic soil (5% blood serum). This product is effective fungicide against the listed fungi in water up to 200 ppm hardness (as $CaCo_3$) in the presence of organic soil (5% blood serum)

Bactericidal Activity: As dispensed, this product demonstrates effective disinfectant activity against the organisms:

- Bordetella bronchiseptica
- Corynebacterium ammoniagenes
- Enterobacter aerogenes
- Enterobacter cloacae
- Enterobacter cloacae (clinical isolate)
- Enterococcus faecalis
- Enterococcus faecalis (clinical isolate)
- Escherichia coli
- Escherichia coli (clinical isolate)
- Fusobacterium necrophorum
- Klebsiella pneumoniae subsp. pneumoniae
- Lactobacillus casei subsp. rhamnosus
- Listeria monocytogenes
- Pasteurella multocida
- Proteus mirabilis ATCC 9921
- Proteus mirabilis ATCC 25933
- Proteus vulgaris
- Pseudomonas aeruginosa
- Salmonella enterica
- Salmonella choleraesuis subsp. choleraesuis serotype paratyphi B
- Salmonella choleraesuis subsp. choleraesuis serotype typhi
- Salmonella choleraesuis subsp. choleraesuis serotype typhimurium
- Salmonella choleraesuis subsp. choleraesuis serotype pullorum
- Serratia marcescens
- Shigella flexneri Type 2b
- Shigella dysenteriae
- Shigella sonnei
- Staphylococcus aureus
- Staphylococcus aureus (clinical isolate)
- Methicillin resistant Staphylococcus aureus (MRSA)
- Vancomycin ietermediate resistant Staphylococcus aureus (VISA)
- Community Associated Methicillin resistant Staphylococcus aureus (CA-MRSA) NRS 123 Genotype USA 400
- Community Associated Methicillin resistant Staphylococcus aureus (CA-MRSA) NRS 384 Genotype USA 300
- Staphylococcus epidermidis
- Staphylococcus epidermidis (clinical isolate)
- Streptococcus pyogenes (clinical – Flesh Easting Strain BIRD M3)
- Streptococcus pyogenes Group A
- Vancomysin resistant Enterococcus faecalis (VRE)
- Xanthamonas maltophilia (clinical isolate)

***VIRUCIDAL ACTIVITY:** This product when used on environmental, inanimate, hard, non-porous surfaces exhibits effective virucidal activity against:

- Avian Influenza A Virus
- Bovine rhinotracheitis
- Bovine Viral Diarrhea Virus (BVDV)
- Canine distemper virus
- Feline leukemia
- Feline picornavirus
- Hepatitis B Virus (HBV)
- Hepatitis C Virus (HCV)
- Herpes simplex type 1 (causative agent of fever blisters)
- Herpes simplex type 2 (genital)
- HIV-1
- HIV-2
- Human Coronavirus (ATCC VR-740, Strain 229E)
- Influenza Type A2/Hong Kong
- Pseudorabies
- Rotavirus
- SARS associated Coronavirus
- Vaccinia

Fungicidal Activity:
At the 1 ounce per gallon dilution, this product is fungicidal against the pathogenic fungi:

- Trichophyton mentagrophytes (athletes foot fungus)
- Candida albicans

Mildewstat

- Aspergillus niger

Product Specifications:
(Typical Values)
Concentrate:
1. pH: 6.8
2. Flash Point: > 200° F
3. Solubility in Water: Complete
4. Specific Gravity: 1.0
5. Viscosity: < 100 cps
6. Appearance: Clear, green liquid
7. Fragrance: Fresh

Use-Solution:
1. pH: 7
2. Flash Point: N/A
3. Solubility in Water: Complete
4. Specific Gravity: 1.0
5. Viscosity: <100 cps
6. Appearance: Clear, colorless to light green liquid
7. Fragrance: Mild

Precaution Summary:
Concentrate:
Eye Contact: Corrosive to the eyes.
Skin Contact: Corrosive to skin.
Inhalation: Irritation to nose and throat.

Ready-to-Use:
Eye Contact: Mild eye irritant.
Skin Contact: Mild skin irritant after prolonged contact.
Inhalation: Irritation to nose and throat.

Note:
Refer to product Material Safety Data Sheets (MSDS: 18-2340-0, 18-2342-6) for specific health hazard, first aid and precautionary information.

3M Branch Sales Offices

ANCHORAGE
11151 Calaska Circle
Anchorage, AK 99515
Telephone: 907/522-5200
Facsimile 907/522-1645

HONOLULU
4443 Malaai Street
Honolulu, HI 96818
Mail to: P.O. Box 30048
Honolulu, HI 96820
Telephone: 808/422-2721
Facsimile 808/422-9557

CANADA
1840 Oxford Street East
London, Ontario, Canada
N5V 3G2
Mail to: P.O. Box 5757
London, Ontario, Canada
N6A 4T1
Telephone: 800/364-3577
Facsimile: 800/479-4453

CONTINENTAL UNITED STATES
Customer Service Department
3M Center Building 235-2E-81
St. Paul, MN 55144-1000
Order Entry 1-800-852-9722
Facsimile 1-800-447-0408

Important:
The information provided in this report is believed to be reliable; however, due to the wide variety of intervening factors, 3M does not warrant that the results will necessarily be obtained. All details concerning product specifications and terms of sale are available from 3M.

3M
Building and Commercial Services Division
St. Paul, MN 55144-1000
1-800-852-9722
www.3M.com/commcare

DMR #60061 (70-0710-3757-9 Rev. A)

Material Safety Data Sheet

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: 3M(TM) NON-ACID DISINFECTANT BATHROOM CLEANER CONCENTRATE (Product No. 15, Twist 'n Fill(tm) System)
MANUFACTURER: 3M
DIVISION: Building & Commercial Services Division

ADDRESS: 3M Center
St. Paul, MN 55144-1000

EMERGENCY PHONE: 1-800-364-3577 or (651) 737-6501 (24 hours)

Issue Date: 06/15/2007
Supercedes Date: 09/13/2005

Document Group: 18-2340-0

Product Use:
Intended Use: Disinfectant

SECTION 2: INGREDIENTS

Ingredient	C.A.S. No.	% by Wt
WATER	7732-18-5	60 - 90
ETHOXYLATED C12-C15 ALCOHOLS	68131-39-5	3 - 7
BENZYL-C12-16-ALKYLDIMETHYL AMMONIUM CHLORIDES	68424-85-1	4.339
OCTYLDECYLDIMETHYLAMMONIUM CHLORIDE	32426-11-2	3.255
ETHYL ALCOHOL	64-17-5	1 - 5
TETRASODIUM ETHYLENEDIAMINETETRAACETATE	64-02-8	1 - 5
DIDECYLDIMETHYLAMMONIUM CHLORIDE	7173-51-5	1.628
DIOCTYL DIMETHYL AMMONIUM CHLORIDE	5538-94-3	1.628

SECTION 3: HAZARDS IDENTIFICATION

3.1 EMERGENCY OVERVIEW

Specific Physical Form: Liquid
Odor, Color, Grade: Clear, green, fresh fragrance.
General Physical Form: Liquid
Immediate health, physical, and environmental hazards: May cause chemical eye burns. May cause chemical skin burns. May

cause chemical gastrointestinal burns. Contains a chemical or chemicals which can cause cancer. May cause target organ effects. Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

3.2 POTENTIAL HEALTH EFFECTS

Eye Contact:
Corrosive (Eye Burns): Signs/symptoms may include cloudy appearance of the cornea, chemical burns, severe pain, tearing, ulcerations, significantly impaired vision or complete loss of vision.

Skin Contact:
Corrosive (Skin Burns): Signs/symptoms may include localized redness, swelling, itching, intense pain, blistering, ulceration, and tissue destruction.

Inhalation:
Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

May be absorbed following inhalation and cause target organ effects.

Ingestion:
Gastrointestinal Corrosion: Signs/symptoms may include severe mouth, throat and abdominal pain; nausea; vomiting; and diarrhea; blood in the feces and/or vomitus may also be seen.

May be absorbed following ingestion and cause target organ effects.

Target Organ Effects:
Central Nervous System (CNS) Depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness.

Prolonged or repeated exposure may cause:

Liver Effects: Signs/symptoms may include loss of appetite, weight loss, fatigue, weakness, abdominal tenderness and jaundice.

Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

Carcinogenicity:
Contains a chemical or chemicals which can cause cancer.

NOTE: This product contains ethanol. In IARC published Monograph No. 44, entitled, "Alcohol Drinking", the carcinogenicity of ethanol was determined based on chronic exposure to ethanol through human consumption of alcoholic beverages. This is not an expected effect during the foreseeable use of this product.

Ingredient	C.A.S. No.	Class Description	Regulation
ETHYL ALCOHOL	64-17-5	Group 1	International Agency for Research on Cancer

3.3 POTENTIAL ENVIRONMENTAL EFFECTS

A 3M Product Environmental Data Sheet (PED) is available.

This product is a disinfectant; it is toxic to microorganisms. Care must be taken to avoid improper disposal or release to the environment. When properly handled, use of this product is expected to have minimal environmental impact.

SECTION 4: FIRST AID MEASURES

4.1 FIRST AID PROCEDURES

The following first aid recommendations are based on an assumption that appropriate personal and industrial hygiene practices are followed.

Eye Contact: Immediately flush eyes with large amounts of water for at least 15 minutes. Get immediate medical attention.

Skin Contact: Remove contaminated clothing and shoes. Immediately flush skin with large amounts of water for at least 15 minutes. Get immediate medical attention. Wash contaminated clothing and clean shoes before reuse.

Inhalation: Remove person to fresh air. If signs/symptoms develop, get medical attention.

If Swallowed: Do not induce vomiting. Give victim two glasses of water. Never give anything by mouth to an unconscious person. Get immediate medical attention.

4.2 NOTE TO PHYSICIANS

Probable mucosal damage may contraindicate the use of gastric lavage.

Measures against circulatory shock, respiratory depression, and convulsion may be needed.

SECTION 5: FIRE FIGHTING MEASURES

5.1 FLAMMABLE PROPERTIES

Flash Point	>=200 ºF [*Test Method:* Closed Cup]
Flammable Limits - LEL	*No Data Available*
Flammable Limits - UEL	*No Data Available*
OSHA Flammability Classification:	Class IIIB Combustible Liquid

5.2 EXTINGUISHING MEDIA

Use fire extinguishers with class B extinguishing agents (e.g., dry chemical, carbon dioxide).

5.3 PROTECTION OF FIRE FIGHTERS

Special Fire Fighting Procedures: Wear full protective equipment (Bunker Gear) and a self-contained breathing apparatus (SCBA).

Unusual Fire and Explosion Hazards: Non-flammable: ordinary combustible material.

Note: See STABILITY AND REACTIVITY (SECTION 10) for hazardous combustion and thermal decomposition information.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Accidental Release Measures: Observe precautions from other sections. Call 3M- HELPS line (1-800-364-3577) for more information on handling and managing the spill. Ventilate the area with fresh air. Contain spill. For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Collect as much of the spilled material as possible. Clean up residue with water. Collect the resulting residue containing solution. Place in a closed container approved for transportation by appropriate authorities. Dispose of collected material as soon as possible.

In the event of a release of this material, the user should determine if the release qualifies as reportable according to local, state, and federal regulations.

SECTION 7: HANDLING AND STORAGE

7.1 HANDLING

Keep out of the reach of children. This product is not intended to be used without prior dilution as specified on the product label. Avoid breathing of vapors, mists or spray. Avoid skin contact. Avoid eye contact with vapors, mists, or spray. Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water.

7.2 STORAGE

Do not store containers on their sides. Store away from acids.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 ENGINEERING CONTROLS

Use in a well-ventilated area. NOTE: When used as directed and diluted and dispensed with a TWIST 'n FILL(TM) Chemical Dispenser, special ventilation is not required.

8.2 PERSONAL PROTECTIVE EQUIPMENT (PPE)

8.2.1 Eye/Face Protection

Avoid eye contact with vapors, mists, or spray. NOTE: When used as directed and diluted and dispensed with a TWIST 'n FILL(TM) Chemical Dispenser, eye contact with the concentrate is not expected to occur.

If the product is not used with the Twist 'n Fill system or if there is an accidental release, the following eye protection is recommended: Full Face Shield, Indirect Vented Goggles.

8.2.2 Skin Protection

Avoid skin contact. NOTE: When used as directed and diluted and dispensed with a TWIST 'n FILL(TM) Chemical Dispenser, skin contact with the concentrate is not expected to occur.

If the product is not used with the Twist 'n Fill system or if there is an accidental release, select and use gloves and/or protective clothing to prevent skin contact based on the results of an exposure assessment. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible materials. Gloves made from the following material is recommended: Butyl Rubber, Neoprene, Nitrile Rubber. The following protective clothing material(s) are recommended: Apron - Neoprene.

8.2.3 Respiratory Protection

Avoid breathing of vapors, mists or spray. NOTE: When used as directed and diluted and dispensed with a TWIST 'n FILL(TM) Chemical Dispenser, respiratory protection is not required.

If the product is not used with the Twist 'n Fill system or if there is an accidental release, select one of the following NIOSH approved respirators based on airborne concentration of contaminants and in accordance with OSHA regulations: Half facepiece or

fullface air-purifying respirator with organic vapor cartridges and N95 particulate prefilters. Consult the current 3M Respiratory Selection Guide for additional information or call 1-800-243-4630 for 3M technical assistance.

8.2.4 Prevention of Swallowing
Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water.

8.3 EXPOSURE GUIDELINES

Ingredient	Authority	Type	Limit	Additional Information
ETHYL ALCOHOL	ACGIH	TWA	1000 ppm	Table A4
ETHYL ALCOHOL	OSHA	TWA	1000 ppm	Table Z-1

SOURCE OF EXPOSURE LIMIT DATA:
ACGIH: American Conference of Governmental Industrial Hygienists
CMRG: Chemical Manufacturer Recommended Guideline
OSHA: Occupational Safety and Health Administration
AIHA: American Industrial Hygiene Association Workplace Environmental Exposure Level (WEEL)

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Specific Physical Form:	Liquid
Odor, Color, Grade:	Clear, green, fresh fragrance.
General Physical Form:	Liquid
Flash Point	>=200 ºF [*Test Method:* Closed Cup]
Flammable Limits - LEL	*No Data Available*
Flammable Limits - UEL	*No Data Available*
Boiling point	Approximately 210 ºF
Density	1.0
Vapor Pressure	<=27 psia [@ 131 ºF]
Specific Gravity	Approximately 1.01 [*Ref Std:* WATER=1]
pH	Approximately 6.8
Solubility in Water	Complete
Hazardous Air Pollutants	*No Data Available*
Volatile Organic Compounds	1 5 % weight [*Test Method:* calculated per CARB title 2]
Percent volatile	65 - 100 %
VOC Less H2O & Exempt Solvents	46.15 - 230.76 g/l [*Test Method:* calculated per CARB title 2]
Viscosity	<=100 centipoise

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable.

Materials and Conditions to Avoid: None known

Hazardous Polymerization: Hazardous polymerization will not occur.

Hazardous Decomposition or By-Products

Substance	Condition
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion
Hydrogen Chloride	During Combustion
Ammonia	During Combustion
Oxides of Nitrogen	During Combustion

SECTION 11: TOXICOLOGICAL INFORMATION

Please contact the address listed on the first page of the MSDS for Toxicological Information on this material and/or its components.

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

A 3M Product Environmental Data Sheet (PED) is available.

CHEMICAL FATE INFORMATION

A 3M Product Environmental Data Sheet (PED) is available.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Method: Incinerate in an industrial or commercial facility in the presence of a combustible material. Combustion products will include HCl. Facility must be capable of handling halogenated materials.
As a disposal alternative, dispose of waste product in a facility permitted to accept chemical waste.

EPA Hazardous Waste Number (RCRA): Not regulated

Since regulations vary, consult applicable regulations or authorities before disposal.

SECTION 14:TRANSPORT INFORMATION

ID Number	UPC	ID Number	UPC
70-0711-6231-0	00-48011-20787-7	70-0711-6232-8	00-48011-23898-7
70-0711-6234-4	00-48011-34833-9	70-0711-6339-1	00-48011-34889-1

Please contact the emergency numbers listed on the first page of the MSDS for Transportation Information for this material.

SECTION 15: REGULATORY INFORMATION

US FEDERAL REGULATIONS

311/312 Hazard Categories:

Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No Immediate Hazard - Yes Delayed Hazard - Yes

FIFRA

Status	Registration Number
Registered	1839-166-10350

STATE REGULATIONS

CHEMICAL INVENTORIES

The components of this product are in compliance with the chemical notification requirements of TSCA.

All applicable chemical ingredients in this material are listed on the European Inventory of Existing Chemical Substances (EINECS), or are exempt polymers whose monomers are listed on EINECS.

The components of this material are in compliance with the new chemical notification requirements for the Korean Existing Chemicals Inventory.

The components of this product are listed on the Australian Inventory of Chemical Substances.

All the components of this product are listed on China's Inventory of Chemical Substances.

The components of this product are in compliance with notification requirements in the Philippines.

The components of this product are listed on the Canadian Domestic Substances List.

INTERNATIONAL REGULATIONS

This MSDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: OTHER INFORMATION

NFPA Hazard Classification

Health: 3 **Flammability:** 1 **Reactivity:** 0 **Special Hazards:** None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

HMIS Hazard Classification

Health: 3 **Flammability:** 1 **Reactivity:** 0 **Protection:** X - See PPE section.

Hazardous Material Identification System (HMIS®) hazard ratings are designed to inform employees of chemical hazards in the workplace. These ratings are based on the inherent properties of the material under expected conditions of normal use and are not intended for use in emergency situations. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint and Coatings Association (NPCA).

Revision Changes:
Section 1: Product use information was modified.
Section 8: Skin protection comment was modified.
Section 1: Division name was modified.
Copyright was modified.
Section 3: Immediate skin hazard(s) was modified.
Section 3: Potential effects from skin contact information was modified.
Section 3: Potential effects from ingestion information was modified.
Section 7: Storage information was modified.
Section 8: Engineering controls information was modified.
Section 4: First aid for skin contact - decontamination - was modified.
Section 4: First aid for skin contact - medical assistance - was modified.
Section 4: First aid for ingestion (swallowing) - decontamination - was modified.
Section 4: First aid for ingestion (swallowing) - medical assistance - was modified.
Section 3: Carcinogenicity phrase was modified.
Section 3: Immediate other hazard(s) was modified.
Section 2: Ingredient table was modified.
Section 15: Inventories information was modified.
Section 3: Immediate ingestion hazard(s) was added.
Section 9: Density information was added.
Section 16: NFPA hazard classification for corrosivity was deleted.

3M MSDSs are available at www.3M.com

3M™ Non-Acid Disinfectant Bathroom Cleaner (Product No. 15, Twist 'n Fill™ System)

SUMMARY OF EXPECTED ENVIRONMENTAL IMPACT

Note: This product does not have environmental data as formulated. The information on this document is a compilation of data for the individual components.

IMPACT OF PRODUCT USE

The use of this product is expected to have a low environmental risk. Most of the major components of this product are expected to be readily biodegradable. As such, components not totally degraded by wastewater treatment are likely to eventually degrade in the environment. This product has components that have the potential to bioconcentrate in aquatic organisms. Toxicity effects and potential to bioconcentrate are likely to be rapidly removed from aerobic environments that support biodegradation. The ready-to-use product is not expected to exhibit adverse environmental effects on aquatic environments through intended use and proper disposal.

IMPACT OF ACCIDENTAL SPILLS:

Accidental discharge of five gallons (19 liters) or less of 3M™ Non-Acid Disinfectant Bathroom Cleaner (Ready-to-Use or Concentrate) into sewer systems is expected to have minimal environmental impact.

An accidental spill of 3M™ Non-Acid Disinfectant Bathroom Cleaner (Concentrate) directly into the environment is expected to have limited environmental impact because:

a. Packaging of the concentrate in sealed individual two-liter containers significantly reduces the likelihood of large-volume spills; and

b. Most components of this product are expected to degrade in natural aerobic environments and are not expected to bioaccumulate; however, direct water discharges of concentrate spills may be harmful to aquatic life.

IMPACT OF PACKAGING:

The packaging of this product is expected to have a low impact on the environment. Packaging complies with CONEG requirements.

The two-liter bottle is made of HDPE plastic and is recyclable where suitable facilities exist. The cap must be removed prior to recycling. Alternatively, the empty bottle and cap may be landfilled or incinerated.

The carton is made from cardboard having a minimum 45% post-consumer recycled content. The carton may be recycled where suitable facilities exist. Alternatively, the carton may be landfilled or incinerated.

Literature pertaining to this product, either as part of the packaging or distributed otherwise, has a recycled content as stated on the literature itself and may be recycled in accordance with local regulations.

FURTHER ENVIRONMENTAL INFORMATION

Technical documentation for the above summary is available on request. Call 1-800-626-8578 and ask to speak with the Commercial Care Division Regulatory Specialist.

Informative Bulletin

GRAFFITI REMOVER SAC

A Soy And Corn Biobased Product
Designed to Remove Tough Marks and Stains

PRODUCT DESCRIPTION:
Graffiti Remover SAC is a ready-to-use BioRenewables product based on a biobased solvent, which is naturally derived from agricultural ingredients. A combination of soybean and corn esters, this efficient solvent blend helps to replace hazardous, toxic and environmentally harmful products in the workplace. A safer solvent alternative to petroleum based solvents. Graffiti Remover SAC is translucent yellow in color and has a non-offensive odor.

Why Biobased?
There have been several Government initiatives over the past five years in an attempt to reduce our nation's dependency on foreign energy and increase support for our agricultural industry. The Farm Security and Rural Investment Act (FSRIA) addresses biobased products and defines them as commercial or industrial products that are composed, in whole or significant part, of biological products or renewable domestic agricultural materials or forestry materials. Therefore, industrial raw materials, such as surfactants and solvents are now being produced from renewable plant or animal resources, which are typically biodegradable, friendlier to the environment and supportive of the agricultural industry. The federal government has mandated, through the FSRIA, that federal agencies purchase biobased products whenever possible.

Biobased Formula Seal
Graffiti Remover SAC is certified by a third party to contain 53% biobased material. The testing was performed by an outside, USDA approved, laboratory to insure the biobased content of Graffiti Remover SAC. The biobased seal, found on product labels and literature, allows end users to easily identify the biobased content in each BioRenewables product. This seal guarantees the percentage of

ingredients that are made from renewable resources.

SURFACE SAFE ON:

- Glazed Tile
- Stainless Steel
- Desk Tops
- Fiberglass
- Metal
- Marble
- Chrome
- Aluminum
- Glass
- Formica®
- Lexan®
- Porcelain

VERSATILE AND EFFECTIVE:
Graffiti Remover SAC is a versatile formula that works against tough marks and stains. The formula is powerful enough to remove typical graffiti markings: paint, marker, ink, crayon and pencil. It will also take away scuff marks, wax residue and adhesive with ease. Graffiti Remover SAC also cleans the soiled surface marred by graffiti, eliminating the need for a second cleaning step. When removing marks from stainless steel, Graffiti Remover SAC does an outstanding job cleaning and polishing the surface.

A PLEASANT AND EASY TO USE PRODUCT
This BioRenewables product requires no diluting; simply spray onto surface from the RTU bottle. This method of application helps to eliminate employee confusion, incorrect dilutions and chemical spills. Graffiti Remover SAC is pleasant to work with and produces minimal fumes compared to other graffiti removal products. Meets VOC specifications for graffiti removers.

DIRECTIONS FOR USE:
Some individuals may be sensitive to ingredients in this product. Before using, read product label and MSD sheet. If questions remain, consult your employer or a physician.

NOT INTENDED FOR USE ON PAINTED SURFACES OR LAQUER

COATED BRASS OR METAL. MAY REMOVE PAINT FROM WALL OR OTHER SURFACE.

1. Spray Graffiti Remover SAC evenly onto surface to be cleaned.
2. Let product penetrate soil for 2-5 minutes. Agitate with a sponge, brush or cloth. Difficult marks may require extra contact time or repeat applications.
3. If necessary, rinse thoroughly.

SPECIFICATION DATA:
Specific Gravity – 0.834@ 24°C/75°F
Density – 6.94 lbs./gal.
pH – n/a
Flash Point (Tag Closed Cup) – 64°C/147°F
Viscosity – water thin
Color – translucent yellow
Stability –
a. Shelf @ 24°C/75°F – one year minimum
b. Accelerated @ 49°C/120°F – 60 days minimum
c. Freeze/Thaw – will withstand a minimum of one cycle
Phosphate free
Biodegradable
VOC Compliant

PACKAGING:
Graffiti Remover SAC is packaged in PET Resin RTU Quart Bottles, 12 per case. Each package includes 3 Solvent Resistant Trigger Sprayers. Also available in Gallons, 4 per case. Standard label copy is available in English, Spanish and French. Secondary labels are also available.

Be sure to read all Directions, Precautionary and First Aid Statements on product labels before use of this or any Spartan product. Material Safety Data Sheets for all Spartan products are available from your authorized Spartan distributor or by visiting www.spartanchemical.com.

GUARANTEE:
Spartan's modern manufacturing and laboratory control insure uniform quality. If dissatisfied with performance of product, any unused portion may be returned for credit within one year of date of manufacture. Use product as directed and read all precautionary statements.

Some material may require special handling or application. Please refer to the appropriate Material Safety Data Sheet, literature and label.

Informative Bulletin

CLEAN BY PEROXY ALL PURPOSE CLEANER

All-Purpose Hydrogen Peroxide Based Cleaner

This product meets Green Seal's environmental standard for industrial and institutional cleaners based on its reduced human and aquatic toxicity and reduced smog production potential.

WOOLSAFE approved maintenance products for wool and wool-rich products.

PRODUCT DESCRIPTION

Clean by Peroxy is a proprietary surfactant blend combined with hydrogen peroxide. This all-purpose cleaner is environmentally compatible and formulated using environmentally conscious raw materials to quickly remove everyday soils, including greasy residues.

The product is pale blue with a fresh spring rain fragrance. Clean by Peroxy is a unique combination of modern day surfactants and hydrogen peroxide blended to form a product with effervescent cleaning action.

Green Seal Certified

This All-Purpose Cleaner meets Green Seal's GS-37 Standard for Industrial and Institutional Cleaners. Clean by Peroxy is an environmentally compatible All-Purpose Cleaner formulated using environmentally conscious raw materials to quickly remove everyday soils and greasy residues.

Clean by Peroxy, is formulated without:

•Alcohols •Glycol ethers •Caustics •Ozone depleting compounds •High pH	•Ammonia •Chlorine bleach •Quats •Alkylphenol ethoxylates •D-limonene

…And, Clean by Peroxy:

- Is non-combustible
- Does not contribute to the production of photochemical smog, tropospheric

ozone, or poor indoor air quality.
- Will not contribute to eutrophication
- Available only in a concentrated formula in a recyclable container

The Famous Brown Bottle
The familiar little brown bottle of H2O2 has been a mainstay in American households for decades. It has a wide variety of applications ranging from an antiseptic medicinal treatment, stain spotting agent, and home hair-care.

Oxidization Cleaning Action & Odor Control
The combination of hydrogen peroxide with modern day surfactants is an effective cleaning solution. Hydrogen peroxide, when used as an oxidizer, controls odors. Its oxidizing properties react with various sulfur and ammonia containing compounds, breaking them down and neutralizing the unpleasant odors.

Bubbling Clean with Effervescence
Hydrogen peroxide is a powerful oxidizer that reacts with organic soils to form effervescent bubbles, which actually lift dirt away from the surface. Since these bubbles aid in physically removing dirt from a surface, they eliminate the need for hard scrubbing.

One Product Does the Job of Many
Clean by Peroxy All-Purpose Cleaner is a unique product that will effectively clean windows, mirrors, floors, walls, restrooms, kitchens, tile and grout. With it's one product simplicity, Clean by Peroxy minimizes SKUs, inventory, and employee training as well as reducing product confusion.

Oxidize Clean Tile and Grout
The unique effervescent bubbling action of Clean by Peroxy acts quickly to scrub away dirt, grease and grime found in grout and on glazed ceramic tiles.

No Damaging D-limonene / Orange Oil Concerns / VOC Free
With the absence of butyl, alcohol, d-limonene/orange oil, Clean by Peroxy All-Purpose Cleaner is VOC free and will not add to the total VOC count in facilities. The omission of d-limonene/orange oil also eliminates concerns of plastic damage and streaking on glazed tiles, ceramics and glass.

Organic Degradation Composition
The active ingredient in Clean by Peroxy All-Purpose Cleaner has a degradation profile that breaks down into oxygen and water, which improves the safety of this cleaner to a respectable yet effective level. It is non- viscous, biodegradable, phosphate free and is easily waste treatable.

Wastewater Treatment Friendly
This all-purpose cleaner will not tie up heavy metals. The no-chelating agent

formula of Clean by Peroxy All Purpose Cleaner is less likely to pick up heavy metals during the cleaning application, so used cleaning solution is more easily treated in wastewater treatment facilities. The All-Purpose Cleaner will not add residue or cause problems with filterability in wastewater treatment systems.

No SARA Section 313 Reportable Ingredients
Clean by Peroxy does not contain any hazardous ingredients listed under SARA (Superfund Amendments Reauthorization Act) Section 313. There is no need to report use of Clean by Peroxy All-Purpose Cleaner to the EPA (Environmental Protection Agency) or registered SARA coordinator.

DIRECTIONS FOR USE:

ALWAYS PRE-TEST FOR COLORFASTNESS IN AN INCONSPICOUS AREA BEFORE USE.

DO NOT USE CLEAN BY PEROXY ON MARBLE AND OTHER ACID SENSITIVE SURFACES. DO NOT USE WITH METAL PAIL OR DRUM PUMPS.

DISPENSING
The **Clean by Peroxy Chemical Management System** is shipped, preset, to dispense product at a basic assortment of dilution ratios. Use additional metering tips in order to obtain different dilutions if desired. Additional metering tips are enclosed with the unit. If additional tips are needed, order Spartan Chemical Company part #9571 Metering Tip Kit. Cold water is recommended for dilution.

Please note your dispenser has been “pretipped” for your convenience in a general dilution range.
Low Flow
- Glass 1:256 (1/2 oz.)
- All Purpose Cleaner 1:32 (4 oz.)
- Heavy Duty Cleaner & Degreaser 1:10 (12 oz.)

High Flow
- Mop/Bucket & Carpet 1:64 (2 oz.)

Should you want to adjust the dilution ratios, please reference the information under the following paragraph (“Standard Gallon Dispensing from the SAM Press & Fill Chemical Management System”).

Standard Gallon Dispensing from the SAM Press & Fill Chemical Management System:
For heavier soils, a higher concentrate of product may be required. Use additional metering tips provided with dispenser to obtain the desired dilution. Cold water is recommended for dilution. Listed below are suggested dilutions for

various tasks and levels of cleaning.

Glass Cleaner
Dilute at 1:256 (1/2 oz.) for everyday glass and mirror cleaning. Spray surface and wipe with a lint free cloth.

Light Duty Cleaning
Dilute at 1:64 to 1:32 (2 oz./gal. to 4 oz./gal) for everyday light duty cleaning. Spray surface and wipe with sponge, brush, mop or other cleaning cloth.

Medium Duty Cleaning
Dilute at 1:32 to 1:20 (4 oz./gal. to 6 oz./gal.) of water. Spray surface and wipe with sponge, brush, mop or other cleaning cloth.

Heavy Duty Cleaning
Dilute at 1:20 to 1:10 (6 oz./gal. to 12 oz./gal.) of water. Spray surface and wipe with sponge, brush, mop or other cleaning cloth.

Mop and Bucket:
For daily damp mopping, dilute 1:128 (1 oz./gal.). Fill bucket. Mop with Clean by Peroxy All-Purpose Cleaner. Pick up soil and excess cleaner with clean mop. Rinse mops frequently and change solution as needed.

*May be used with the Spartan Foam Gun.

Carpet:
Dilute at 1:64. Pre-treat traffic lanes and other heavily soiled areas with Contempo H2O2 Carpet Spotting Solution.

Fill extraction equipment.

Clean the carpet following the machine manufacturer's instructions. Do not over wet carpet. If carpet has been previously shampooed, Spartan's Defoamer may be needed in the recovery tank. After cleaning, brush carpet pile in one direction with carpet pile brush or shag rake. Avoid walking on carpet until thoroughly dry. If furniture is replaced before carpet is dry, place protective pads under legs. When carpet is completely dry, vacuum thoroughly.

NOTE: Due to the variety of carpet materials, it is recommended that carpet is tested with Clean by Peroxy prior to overall cleaning. Using sponge or clean cloth, apply diluted Clean by Peroxy to an inconspicuous area. Use of Clean by Peroxy is not recommended if test area indicates color removal or bleeding, carpet shrinkage or adhesive deterioration.

Note: Cold water is recommended for dilution.

DO NOT MIX WITH OTHER CHEMICALS.

Specification Data:

Specific Gravity – 1.014 @ 24°C/75°F
Density – 8.45 lbs. per gallon
pH (Concentrate) – 2.0 to 3.0
Flash Point - None
Stability -
a. Shelf @ 24°C/75°F – one year minimum
b. Accelerated @ 49°C/120°F – 30 days minimum
c. Freeze/Thaw – Stable, withstands 3 freeze/thaw cycles
d. Miscibility – Complete, in all proportions in both hot and cold water
Phosphate free, Biodegradable

PACKAGING:
Clean by Peroxy All-Purpose Cleaner is packaged in the HDPE (High Density Polyethylene) 55, 30, and 15-gallon drums; 5-gallon pails; and gallons, four per case, and Clean on the Go 2-liters, four per case. 2-liters feature English, Spanish and French labels and are shipped with MSDS in each case. Standard label copy is available in English, Spanish, and French. Ready-to-use labels are also available.

Be sure to read all Directions, Precautionary and First Aid Statements on product labels before use of this or any Spartan product. Material Safety Data Sheets for all Spartan products are available from your authorized Spartan distributor or visit www.spartanchemical.com

GUARANTEE:
Spartan's modern manufacturing and laboratory control insure uniform quality. If dissatisfied with performance of product, any unused portion may be returned for credit within one year of date of manufacture. Use product as directed and read all precautionary statements.

Some materials may require special handling or application. Please refer to the appropriate Material Safety Data Sheet, literature and label.

Informative Bulletin

CLEAN BY PEROXY GREEN SEAL CERTIFICATE

GREEN SEAL

Environmental Certification

Presented to

SPARTAN CHEMICAL COMPANY, INC.

Green Seal, Inc. certifies that the following product complies with or exceeds Green Seal's Environmental Standard for General-Purpose, Bathroom, and Glass Cleaners Used for Industrial and Institutional Purposes (GS-37) and is licensed to use the Green Seal Certification Mark:

Clean by Peroxy

Certified this 11th day of July, 2005.

Mark T. Petruzzi, Vice President of Certification

Informative Bulletin

GREEN SOLUTIONS FLOOR FINISH REMOVER GREEN SEAL CERTIFICATE

Environmental Certification

Presented to

SPARTAN CHEMICAL COMPANY, INC.

Green Seal, Inc. certifies that the following products comply with or exceed Green Seal's Environmental Standard for Floor Care Products: Finishes and Compatible Strippers Used for Industrial and Institutional Purposes (GS-40) and are licensed to use the Green Seal Certification Mark:

Green Solutions Floor Sealer & Finish
Green Solutions Floor Finish Remover

(Specific pack sizes listed in certification letter)

Certified this 17th day of March, 2006.

Mark T. Petruzzi, Vice President of Certification

Informative Bulletin

GREEN SOLUTIONS FLOOR SEALER & FINISH GREEN SEAL CERTIFICATE

Environmental Certification

Presented to

SPARTAN CHEMICAL COMPANY, INC.

Green Seal, Inc. certifies that the following products comply with or exceed Green Seal's Environmental Standard for Floor Care Products: Finishes and Compatible Strippers Used for Industrial and Institutional Purposes (GS-40) and are licensed to use the Green Seal Certification Mark:

Green Solutions Floor Sealer & Finish
Green Solutions Floor Finish Remover

(Specific pack sizes listed in certification letter)

Certified this 17th day of March, 2006.

Mark T. Petruzzi, Vice President of Certification

APPENDIX B

ECOLOGO CERTIFICATION

EcoLogo[CM] Program
Certification Criteria Document

CCD-086
Hand Towels

Introduction

The EcoLogo[CM] Program is designed to support a continuing effort to improve and/or maintain environmental quality by reducing energy and materials consumption and by minimizing the impacts of pollution generated by the production, use and disposal of goods and service.

North Americans, who comprise only seven percent of the world's population, consume nearly half of the world's tissue paper products. Every year, North Americans use about 50 pounds (22.4 kg) of tissue products per person. Pulp and paper mills consume significant quantities of energy and natural resources and may release substances which contaminate water and air in the receiving environment and which enter the solid waste stream. Alternatives are available to manufacturers in the choice of pulp furnish, pulp and paper technology and emission control to mitigate adverse environmental impacts.

Based on a review of currently available life cycle information, the product category requirements will produce an environmental benefit through resource and energy conservation and reductions in harmful emissions to natural water bodies, air and land.

A requirement for a minimum content of recycled material is not specified in this guideline. This parameter has been incorporated into the calculation of resource consumption and solid waste production. Performance in these areas improves as the amount of recycled material increases. Products containing low amounts of recycled material are unlikely to qualify for certification.

Life cycle review is an ongoing process. As information and technology change, the product category requirements will be reviewed and possibly amended.

Notice

Any reference to a standard means to the latest edition of that standard.

The EcoLogo[CM] Program reserves the right to accept equivalent test data for the test methods specified in this document.

Notice of Intent

It is the intent of the EcoLogo[CM] Program to amend this document with a requirement that all primary wood fiber be obtained from forests that are certified as sustainably managed, when an appropriate certification program becomes available.

Interpretation

1. In this criteria document:

"COD" (chemical oxygen demand) means the mass concentration of oxygen equivalent to the amount of dichromate consumed by dissolved and suspended matter when a water sample is treated with that oxidant in accordance with one of the following methods:

- ISO 6060, "Water quality - Determination of the chemical oxygen demand", or
- Method 5220 C or D in "*Standard Methods for the Examination of Water and Wastewater*", 17th Edition, American Public Health Association, American Water Works Association and Water Pollution Control Federation, 1989, Washington, DC;

"chlorine bleaching plant" means a plant in a mill where pulp is bleached by chlorine or chlorine dioxide;

"component pulp" means a pulp that is used in the manufacture of hand towels and that is produced at an off-site facility;

"corporate code of sustainable forest practices" means a statement of practices which has the objective of maintaining environmental, economic, and social values of the forest. The code must specify, at a minimum, harvesting practices, forest regeneration, biodiversity and wildlife protection, soil conservation, watershed protection, and the participation of communities in forest planning;

"effluent" means waste water from a mill, including process water, gas scrubbing water, boiler blow-down water, washdown water, cooling water and leachate from any site at the mill where solid residues generated by any mill are treated or disposed of or where wood chips or hogfuel is stored;

"measurable concentration of 2,3,7,8-TCDD" means a concentration of 2,3,7,8-TCDD that is greater than the level of quantification (10 ppq) when tested using one of the following methods:

- Method 1613 Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution HRGC/HRMS in "Guidelines Establishing Test Procedures for the Analysis of Pollutants"; US Environmental Protection Agency, October 1994, or
- Report EPS 1/RM/19, "Reference Method for the Determination of Polychlorinated Dibenzo-para-dioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) in Pulp Mill Effluents", Environment Canada, 1991;

"measurable concentration of 2,3,7,8-TCDF" means a concentration of 2,3,7,8-TCDF that is greater than the level of quantification (10 ppq) and that when multiplied by 0.1, exceeds 5 ppb, when tested using one of the following methods:

- Method 1613 Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution HRGC/HRMS in "Guidelines Establishing Test Procedures for the Analysis of Pollutants"; US Environmental Protection Agency, October 1994, or
- Report EPS 1/RM/19, "Reference Method for the Determination of Polychlorinated Dibenzo-para-dioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) in Pulp Mill Effluents", Environment Canada, 1991;

"NOEC" (no-observable-effects-concentration) means the highest concentration of a test material to which organisms are exposed, in which the response is found, by some statistical test, not to be different from the control response;

"post-consumer material" means a product which has served its end-use at the consumer level, has been discarded by the consumer, and would, unless diverted, enter the waste stream;

"pre-consumer material" means materials generated by an industrial process that would, unless diverted, enter the waste stream. This includes, but is not limited to, damaged or defective materials, overstock or obsolete inventories from manufacturers, distributors, wholesalers and trimmings from converting processes. It does not include wet or dry broke;

"primary wood fiber" means fiber from wood that has not previously been pulped;

"printed recovered material" means material that has been printed and/or coated and would, unless diverted, enter the waste stream;

"recycled material" means post-consumer material and pre-consumer material. It does not include by-products of an industrial process that can be, and regularly are, used in either the same process, or in a different process, except that proportion which originated as post-consumer material and pre-consumer material. It may include sawdust or planer shavings from sawmill operations; and

"TEF_{sub}" means sublethal toxicity emission factor. It is calculated as $TEF_{sub} = [\log (100/IC_{25\ mean})] \times$ [annual mill effluent flow in m^3] ÷ [annual mill tonnage in ADMT]. Toxicity shall be measured using two different species of divergent taxonomic and ecological ranks. These species should be physiologically and ecologically similar to organisms that reside in North American ecosystems. Listed below are acceptable methods.

- Testing on an aquatic vertebrate species using **one** of the following:
  - EPA-821-R02-012, "Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Estuarine and Marine Organisms" (*Menidia beryllina*), US Environmental Protection Agency, 2002; **or**
  - EPA-600-R95-136, "Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms", US Environmental Protection Agency, 1995; **or**
  - Report EPS 1/RM/22, "Biological Test Method: Test of Larval Growth and Survival Using Fathead Minnows", Environment Canada, 1992.

- Testing on an aquatic invertebrates species using **one** of the following:
  - EPA-821-R02-013, "Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms" (*Ceriodaphnia dubia*), US Environmental Protection Agency, 2002; **or**
  - EPA-600-R95-136, "Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms", US Environmental Protection Agency, 1995; **or**

- Report OECD/OCDE-211, "*Daphnia magna* Reproduction Test", Organization for Economic Cooperation and Development, September 1998; **or**
- Report EPS 1/RM/2, "Biological Test Method: Test of Reproduction and Survival Using the *Cladoceran Ceriodaphnia dubia*", Environment Canada, 1992; **or**
- Report EPS 1/RM/27, "Biological Test Method: Fertilization Assay Using Echinoids (Sea Urchins and Sand Dollars)", Environment Canada, 1992.

Category Definition

2. This category includes all hand towels.

General Requirements

3. To be authorized to carry the EcoLogo[CM], the hand towels must:

   (a) meet or exceed all applicable governmental and industrial safety and performance standards; and

   (b) be manufactured and transported in such a manner that all steps of the process, including the disposal of waste products arising therefrom, will meet the requirements of all applicable governmental acts, by laws and regulations.

   Notice: Hand towels tissue manufactured at facilities operating under any authorization, including transitional authorization to be exempt from any of the requirements of all applicable governmental acts, bylaws and regulations will not be eligible for certification.

Product Specific Requirements

4. To be authorized to carry the EcoLogo[CM] the hand towels must:

   (a) be manufactured so that the total of load points assessed for Resource Consumption, Energy Consumption, COD, $TEF_{sub,}$ and Net Solid Waste as determined from the Table in Appendix 1, does not exceed 4;

   (b) be manufactured so that the effluent from the paper mill or any mill which produces a component pulp, if such mills operate a chlorine bleaching plant, does not contain a measurable concentration of 2,3,7,8-TCDD or a measurable concentration of 2,3,7,8-TCDF; and

   (c) if manufactured from pulp made from primary wood fiber, use only pulp derived from forests that may be demonstrated to be managed under a corporate code of sustainable forest practices.

Verification

5. To verify a claim that a product meets the criteria listed in the document, the EcoLogo[CM] Program will require access, as is its normal practice, to relevant quality control and production records and the right of access to production facilities on an announced basis.

6. Compliance with section 3(b) shall be attested to by a signed statement of the Chief Executive Officer or the equivalent officer of the manufacturer. The EcoLogo[CM] Program shall be advised in writing immediately by the licensee of any non-compliance which may occur during the term of the license. On the occurrence of any non-compliance, the license may be suspended or terminated as stipulated in the license agreement.

Conditions for EcoLogo[CM] Use

7. The EcoLogo[CM] may appear on wholesale or retail packaging, or on the product itself, provided that the product meets the requirements in this guideline.

8. It is recommended that a criteria statement appear with the EcoLogo[CM] whenever the EcoLogo[CM] is used in association with the hand towels. The intent of this statement is to provide clarification as to why the product was certified and to indicate constraints to which the certification is limited. This is to ensure no ambiguity over, or misrepresentation of, the reason(s) for certification.

   The suggested criteria statement wording for this product type is "*Hand Towels*". The licensee may propose other wording for the criteria statement, but any such proposed wording must be approved by the EcoLogo[CM] Program.

9. All licensees and authorized users must comply with the Program's *Guide to Proper Use of the EcoLogo[CM]* regarding the format and usage of the EcoLogo[CM].

10. Any accompanying advertising must conform with the relevant requirements stipulated in this guideline, the license agreement and the Program's *Guide to Proper Use of the EcoLogo[CM]*.

For additional copies of this criteria document or for more information about the EcoLogo[CM] Program, please contact:
TerraChoice Environmental Marketing Inc.
Toll free: 1-800-478-0399, Telephone: (613) 247-1900, Email: ecoinfo@terrachoice.com

Appendix 1: Environmental Parameters and Load Points for Hand Towels

	Load Points				
Parameter	**0**	**1**	**2**	**4**	**8**
Resource consumption (tonnes/tonne)	< 0.05	0.05 to 0.2	0.2 to 0.8	0.8 to 1.1	> 1.1
Energy consumption (GJ/tonne)	< 24	24 to 27	27 to 40	40 to 52	> 52
COD (kg/tonne)	< 5	5 to 15	15 to 40	40 to 60	> 60
TEF_{sub} (units TEFsub)	< 50	50 to 100	100 to 150	150 to 200	> 200
Net solid waste (tonnes/tonne)	<-1.3	-1.3 to -0.6	-0.6 to -0.2	-0.2 to 0.1	> 0.1

The process used to qualify products for EcoLogo[CM] certification in this criteria document is based on a matrix of five environmental parameters, each with a range of values based on actual industry performance. Each level of performance is assigned a load point value. Points are totalled over all parameters. Products with different environmental profiles will be able to qualify for the EcoLogo[CM]. The allowable number of points has been set so that, while tradeoffs between parameters is possible, very poor performance in any one parameter will disqualify a product.

The parameters used to evaluate sanitary paper products for EcoLogo[CM] certification are based on the most significant environmental impacts associated with specific areas of the product life cycle, namely the production and processing of pulp and paper. The parameters relate to resource consumption (materials and energy) and emissions (toxicity and wastes).

The five specific parameters used are described in the following paragraphs:

1. **"Resource Consumption"** is calculated as metric tonnes of resource consumed per metric tonne of sanitary paper produced. It includes all fibrous materials consumed in pulp and paper making (wood and wood chips, manufacturing residues and post-consumer fiber) and non-fibrous additives such as fillers, wet strength agents and sizing which are added to be retained in the finished product. It excludes hog fuel and the combustible organic content of spent pulping liquor that is burned, and all bleaching and process chemicals. Different fiber resource inputs are weighted according to the following factors:
   - post-consumer material 0
   - printed recovered material 0
   - sawdust, planer shavings 0.33
   - pre-consumer material 0.75
   - whole logs 1
   - wood chips 1

2. "Energy Consumption" means the energy used to produce a metric tonne of sanitary paper, including the production of wood chips, major process chemicals, the net energy consumption at pulp and paper mills (energy purchased and generated less sales), and off-site treatment facilities. It excludes energy consumed in mining and forestry operations, all transportation energy, and that portion of the energy derived from combustion of biomass (bark, sawdust, etc.).

3. "Chemical Oxygen Demand (COD)" represents the total organic chemical loading from aqueous effluent per metric tonne of sanitary paper produced. It includes biochemical oxygen demand (BOD) and organic suspended solids.

4. "Sublethal toxicity" is an indicator of the toxicity of mill effluent to aquatic organisms. It is measured in units of toxicity emission factor (TEF_{sub}). Units of TEF_{sub} are added for pulp and paper production for mills that discharge directly to natural water courses. No TEF_{sub} load points are assigned to mills that discharge to an off site treatment facility.

5. "Net Solid Waste" reflects both quantities diverted from and directed to the solid waste stream per metric tonne of sanitary paper produced. It represents the gross weight of solid waste from paper production, including the production of component pulps, less the weight of various types of recovered fiber inputs used in pulp and paper production. The weights are multiplied by a factor for each type of recovered fiber as follows:

- post-consumer material 1
- printed recovered material 1
- sawdust, planer shavings 0.67
- pre-consumer material 0.25
- whole logs 0
- wood chips 0

Note that the use of recovered fiber is credited in the calculation of load points for both the resource utilization and net solid waste parameters. This is due to the fact that sanitary paper products represent the final use of the fiber and, unlike most other types of paper products, are not normally recovered for recycling purposes.

EcoLogo[CM] Program
Certification Criteria Document

CCD-082
Toilet Tissue

Introduction

The EcoLogo[CM] Program is designed to support a continuing effort to improve and/or maintain environmental quality by reducing energy and materials consumption and by minimizing the impacts of pollution generated by the production, use and disposal of goods and service.

North Americans, who comprise only seven percent of the world's population, consume nearly half of the world's tissue paper products. Every year, North Americans use about 50 pounds (22.4 kg) of tissue products per person. Pulp and paper mills consume significant quantities of energy and natural resources and may release substances which contaminate water and air in the receiving environment and which enter the solid waste stream. Alternatives are available to manufacturers in the choice of pulp furnish, pulp and paper technology and emission control to mitigate adverse environmental impacts.

Based on a review of currently available life cycle information, the product category requirements will produce an environmental benefit through resource and energy conservation and reductions in harmful emissions to natural water bodies, air and land.

A requirement for a minimum content of recycled material is not specified in this guideline. This parameter has been incorporated into the calculation of resource consumption and solid waste production. Performance in these areas improves as the amount of recycled material increases. Products containing low amounts of recycled material are unlikely to qualify for certification.

Life cycle review is an ongoing process. As information and technology change, the product category requirements will be reviewed and possibly amended.

Notice

Any reference to a standard means to the latest edition of that standard.

The EcoLogo[CM] Program reserves the right to accept equivalent test data for the test methods specified in this document.

Notice of Intent

It is the intent of the EcoLogo[CM] Program to amend this document with a requirement that all primary wood fiber be obtained from forests that are certified as sustainably managed, when an appropriate certification program becomes available.

Interpretation

1. In this criteria document:

"COD" (chemical oxygen demand) means the mass concentration of oxygen equivalent to the amount of dichromate consumed by dissolved and suspended matter when a water sample is treated with that oxidant in accordance with one of the following methods:

- ISO 6060, "Water quality - Determination of the chemical oxygen demand", or
- Method 5220 C or D in "*Standard Methods for the Examination of Water and Wastewater*", 17th Edition, American Public Health Association, American Water Works Association and Water Pollution Control Federation, 1989, Washington, DC;

"chlorine bleaching plant" means a plant in a mill where pulp is bleached by chlorine or chlorine dioxide;

"component pulp" means a pulp that is used in the manufacture of toilet tissue and that is produced at an off-site facility;

"corporate code of sustainable forest practices" means a statement of practices which has the objective of maintaining environmental, economic, and social values of the forest. The code must specify, at a minimum, harvesting practices, forest regeneration, biodiversity and wildlife protection, soil conservation, watershed protection, and the participation of communities in forest planning;

"effluent" means waste water from a mill, including process water, gas scrubbing water, boiler blow-down water, washdown water, cooling water and leachate from any site at the mill where solid residues generated by any mill are treated or disposed of or where wood chips or hogfuel is stored;

"measurable concentration of 2,3,7,8-TCDD" means a concentration of 2,3,7,8-TCDD that is greater than the level of quantification (10 ppq) when tested using one of the following methods:

- Method 1613 Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution HRGC/HRMS in "Guidelines Establishing Test Procedures for the Analysis of Pollutants"; US Environmental Protection Agency, October 1994, or
- Report EPS 1/RM/19, "Reference Method for the Determination of Polychlorinated Dibenzo-para-dioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) in Pulp Mill Effluents", Environment Canada, 1991;

"measurable concentration of 2,3,7,8-TCDF" means a concentration of 2,3,7,8-TCDF that is greater than the level of quantification (10 ppq) and that when multiplied by 0.1, exceeds 5 ppb, when tested using one of the following methods:

- Method 1613 Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution HRGC/HRMS in "Guidelines Establishing Test Procedures for the Analysis of Pollutants"; US Environmental Protection Agency, October 1994, or
- Report EPS 1/RM/19, "Reference Method for the Determination of Polychlorinated Dibenzo-para-dioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) in Pulp Mill Effluents", Environment Canada, 1991;

"NOEC" (no-observable-effects-concentration) means the highest concentration of a test material to which organisms are exposed, in which the response is found, by some statistical test, not to be different from the control response;

"post-consumer material" means a product which has served its end-use at the consumer level, has been discarded by the consumer, and would, unless diverted, enter the waste stream;

"pre-consumer material" means materials generated by an industrial process that would, unless diverted, enter the waste stream. This includes, but is not limited to, damaged or defective materials, overstock or obsolete inventories from manufacturers, distributors, wholesalers and trimmings from converting processes. It does not include wet or dry broke;

"primary wood fiber" means fiber from wood that has not previously been pulped;

"printed recovered material" means material that has been printed and/or coated and would, unless diverted, enter the waste stream;

"recycled material" means post-consumer material and pre-consumer material. It does not include by-products of an industrial process that can be, and regularly are, used in either the same process, or in a different process, except that proportion which originated as post-consumer material and pre-consumer material. It may include sawdust or planer shavings from sawmill operations; and

"TEF_{sub}" means sublethal toxicity emission factor. It is calculated as TEF_{sub} = [log (100/$IC_{25\ mean}$)] x [annual mill effluent flow in m^3] ÷ [annual mill tonnage in ADMT]. Toxicity shall be measured using two different species of divergent taxonomic and ecological ranks. These species should be physiologically and ecologically similar to organisms that reside in North American ecosystems. Listed below are acceptable methods.

- Testing on an aquatic vertebrate species using **one** of the following:
  - EPA-821-R02-012, "Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Estuarine and Marine Organisms" (*Menidia beryllina*), US Environmental Protection Agency, 2002; **or**
  - EPA-600-R95-136, "Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms", US Environmental Protection Agency, 1995; **or**
  - Report EPS 1/RM/22, "Biological Test Method: Test of Larval Growth and Survival Using Fathead Minnows", Environment Canada, 1992.

- Testing on an aquatic invertebrates species using **one** of the following:
  - EPA-821-R02-013, "Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms" (*Ceriodaphnia dubia*), US Environmental Protection Agency, 2002; **or**
  - EPA-600-R95-136, "Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms", US Environmental Protection Agency, 1995; **or**

- Report OECD/OCDE-211, "*Daphnia magna* Reproduction Test", Organization for Economic Cooperation and Development, September 1998; **or**
- Report EPS 1/RM/2, "Biological Test Method: Test of Reproduction and Survival Using the *Cladoceran Ceriodaphnia dubia*", Environment Canada, 1992; **or**
- Report EPS 1/RM/27, "Biological Test Method: Fertilization Assay Using Echinoids (Sea Urchins and Sand Dollars)", Environment Canada, 1992.

Category Definition

2. This category includes all toilet tissue.

General Requirements

3. To be authorized to carry the EcoLogo^{CM}, the toilet tissue must:

   (a) meet or exceed all applicable governmental and industrial safety and performance standards; and

   (b) be manufactured and transported in such a manner that all steps of the process, including the disposal of waste products arising therefrom, will meet the requirements of all applicable governmental acts, by laws and regulations.

   Notice: Toilet tissue manufactured at facilities operating under any authorization, including transitional authorization to be exempt from any of the requirements of all applicable governmental acts, bylaws and regulations will not be eligible for certification.

Product Specific Requirements

4. To be authorized to carry the EcoLogo^{CM} the toilet tissue must:

   (a) be manufactured so that the total of load points assessed for Resource Consumption, Energy Consumption, COD, $TEF_{sub,}$ and Net Solid Waste as determined from the Table in Appendix 1, does not exceed 4;

   (b) be manufactured so that the effluent from the paper mill or any mill which produces a component pulp, if such mills operate a chlorine bleaching plant, does not contain a measurable concentration of 2,3,7,8-TCDD or a measurable concentration of 2,3,7,8-TCDF; and

   (c) if manufactured from pulp made from primary wood fiber, use only pulp derived from forests that may be demonstrated to be managed under a corporate code of sustainable forest practices.

Verification

5. To verify a claim that a product meets the criteria listed in the document, the EcoLogo[CM] Program will require access, as is its normal practice, to relevant quality control and production records and the right of access to production facilities on an announced basis.

6. Compliance with section 3(b) shall be attested to by a signed statement of the Chief Executive Officer or the equivalent officer of the manufacturer. The EcoLogo[CM] Program shall be advised in writing immediately by the licensee of any non-compliance which may occur during the term of the license. On the occurrence of any non-compliance, the license may be suspended or terminated as stipulated in the license agreement.

Conditions for EcoLogo[CM] Use

7. The EcoLogo[CM] may appear on wholesale or retail packaging, or on the product itself, provided that the product meets the requirements in this guideline.

8. It is recommended that a criteria statement appear with the EcoLogo[CM] whenever the EcoLogo[CM] is used in association with the toilet tissue. The intent of this statement is to provide clarification as to why the product was certified and to indicate constraints to which the certification is limited. This is to ensure no ambiguity over, or misrepresentation of, the reason(s) for certification.

   The suggested criteria statement wording for this product type is "*Toilet Tissue*". The licensee may propose other wording for the criteria statement, but any such proposed wording must be approved by the EcoLogo[CM] Program.

9. All licensees and authorized users must comply with the Program's *Guide to Proper Use of the EcoLogo[CM]* regarding the format and usage of the EcoLogo[CM].

10. Any accompanying advertising must conform with the relevant requirements stipulated in this guideline, the license agreement and the Program's *Guide to Proper Use of the EcoLogo[CM]*.

For additional copies of this criteria document or for more information about the EcoLogo[CM] Program, please contact:
TerraChoice Environmental Marketing Inc.
Toll free: 1-800-478-0399, Telephone: (613) 247-1900, Email: ecoinfo@terrachoice.com

Appendix 1: Environmental Parameters and Load Points for Toilet Tissue

	Load Points				
Parameter	**0**	**1**	**2**	**4**	**8**
Resource consumption (tonnes/tonne)	< 0.05	0.05 to 0.2	0.2 to 0.8	0.8 to 1.1	> 1.1
Energy consumption (GJ/tonne)	< 24	24 to 27	27 to 40	40 to 52	> 52
COD (kg/tonne)	< 5	5 to 15	15 to 40	40 to 60	> 60
TEF_{sub} (units TEFsub)	< 50	50 to 100	100 to 150	150 to 200	> 200
Net solid waste (tonnes/tonne)	<-1.3	-1.3 to -0.6	-0.6 to -0.2	-0.2 to 0.1	> 0.1

The process used to qualify products for EcoLogo[CM] certification in this criteria document is based on a matrix of five environmental parameters, each with a range of values based on actual industry performance. Each level of performance is assigned a load point value. Points are totalled over all parameters. Products with different environmental profiles will be able to qualify for the EcoLogo[CM]. The allowable number of points has been set so that, while tradeoffs between parameters is possible, very poor performance in any one parameter will disqualify a product.

The parameters used to evaluate sanitary paper products for EcoLogo[CM] certification are based on the most significant environmental impacts associated with specific areas of the product life cycle, namely the production and processing of pulp and paper. The parameters relate to resource consumption (materials and energy) and emissions (toxicity and wastes).

The five specific parameters used are described in the following paragraphs:

1. **"Resource Consumption"** is calculated as metric tonnes of resource consumed per metric tonne of sanitary paper produced. It includes all fibrous materials consumed in pulp and paper making (wood and wood chips, manufacturing residues and post-consumer fiber) and non-fibrous additives such as fillers, wet strength agents and sizing which are added to be retained in the finished product. It excludes hog fuel and the combustible organic content of spent pulping liquor that is burned, and all bleaching and process chemicals. Different fiber resource inputs are weighted according to the following factors:
   - post-consumer material 0
   - printed recovered material 0
   - sawdust, planer shavings 0.33
   - pre-consumer material 0.75
   - whole logs 1
   - wood chips 1

2. "Energy Consumption" means the energy used to produce a metric tonne of sanitary paper, including the production of wood chips, major process chemicals, the net energy consumption at pulp and paper mills (energy purchased and generated less sales), and off-site treatment facilities. It excludes energy consumed in mining and forestry operations, all transportation energy, and that portion of the energy derived from combustion of biomass (bark, sawdust, etc.).

3. "Chemical Oxygen Demand (COD)" represents the total organic chemical loading from aqueous effluent per metric tonne of sanitary paper produced. It includes biochemical oxygen demand (BOD) and organic suspended solids.

4. "Sublethal toxicity" is an indicator of the toxicity of mill effluent to aquatic organisms. It is measured in units of toxicity emission factor (TEF_{sub}). Units of TEF_{sub} are added for pulp and paper production for mills that discharge directly to natural water courses. No TEF_{sub} load points are assigned to mills that discharge to an off site treatment facility.

5. "Net Solid Waste" reflects both quantities diverted from and directed to the solid waste stream per metric tonne of sanitary paper produced. It represents the gross weight of solid waste from paper production, including the production of component pulps, less the weight of various types of recovered fiber inputs used in pulp and paper production. The weights are multiplied by a factor for each type of recovered fiber as follows:

- post-consumer material 1
- printed recovered material 1
- sawdust, planer shavings 0.67
- pre-consumer material 0.25
- whole logs 0
- wood chips 0

Note that the use of recovered fiber is credited in the calculation of load points for both the resource utilization and net solid waste parameters. This is due to the fact that sanitary paper products represent the final use of the fiber and, unlike most other types of paper products, are not normally recovered for recycling purposes.

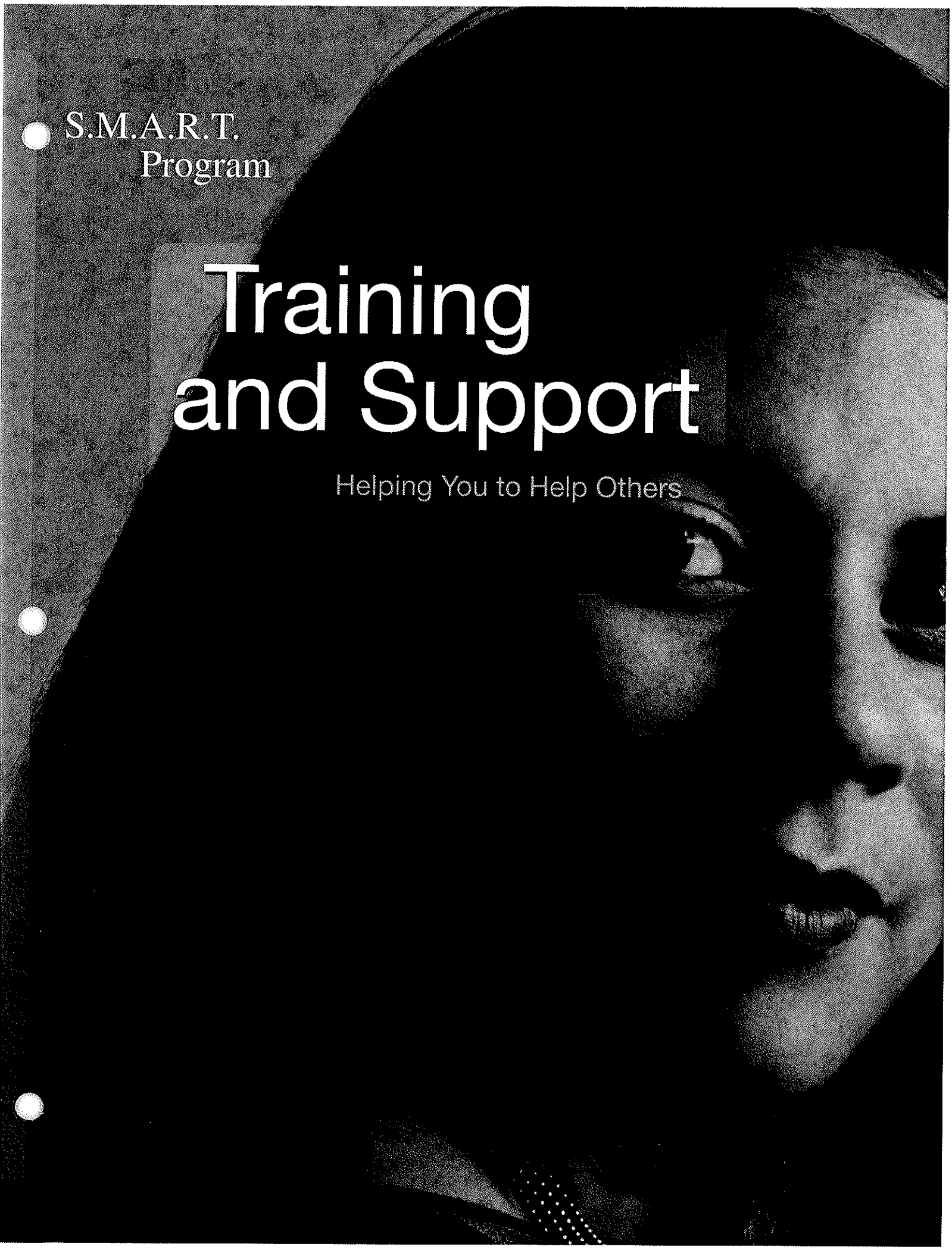
APPENDIX C

3M TRAINING PROCEDURES

S.M.A.R.T.
Program

Training and Support

Helping You to Help Others



What does 3M S.M.A.R.T. mean for YOU AND YOUR EMPLOYEES?

SERVICE - 3M Building & Commercial Services Division offers a wide variety of services to you and your facility. Specialists trained in 3M products and supporting services are available for in-service education, product evaluations, troubleshooting, and technical support.

MAINTENANCE - 3M products, chemicals and equipment can help reduce labor costs and chemical waste, and increase worker competency and performance.

ANALYSIS - Complete cleaning systems and knowledgeable sales professionals help you maintain a well-managed and cost-efficient facility. 3M experts provide assistance in choosing the right products and procedures for hard floor and carpet care, restroom maintenance, and your other cleaning requirements.

RESOURCE - Rely upon 3M's network of people and tools for smart product and equipment decisions. 3M Building & Commercial Services Division participates actively in your industry with your needs as the core of their business.

TRAINING - Educational training programs can help you simplify and standardize your employee training which can help your facility meet industry regulatory requirements.

3M S.M.A.R.T.

Procedure Wizard

The 3M S.M.A.R.T. Procedure Wizard uses industry standards to help you train your employees in the best practices of more than 150 housekeeping procedures. The wizard allows you to customize policies and procedures to fit your facility.

The Procedure Wizard trains step-by-step instructions with clear photos and concise language in both English and Spanish that allow employees to learn quickly and remember more. Procedures can be printed in eight different formats to meet most training requirements or settings.

Customizable illustrated procedures.
Easy-to-use formats.
Step-by-step instructions.

3M S.M.A.R.T.

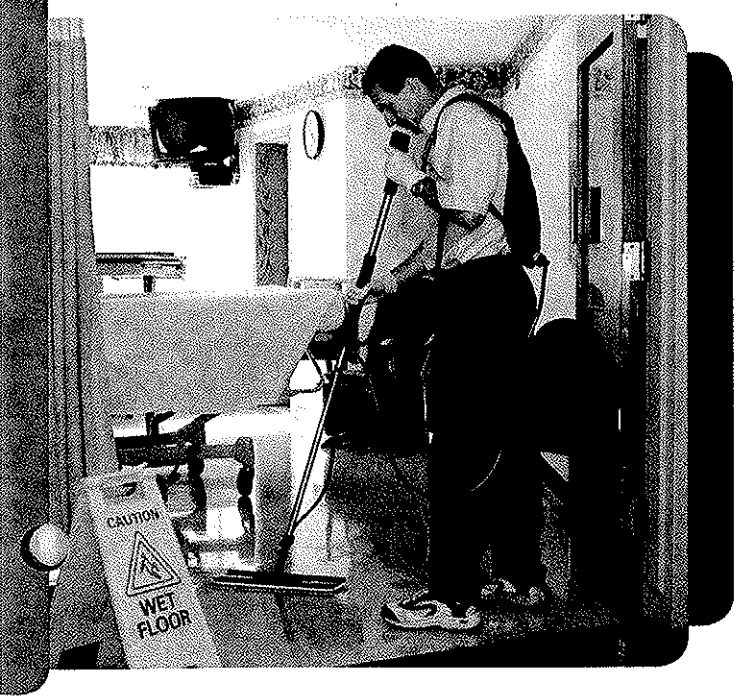
Computer-Based Training

This self-paced computer- based training provides you with 23 customizable modules and assessments in English and Spanish. Employees work at their own speed and are educated about OSHA Right-to Know Hazardous Communications and Infectious Agents. Designed for adult learners, the training features clear visuals, audio narration, and simple text to help motivate and aid learner retention.

3M S.M.A.R.T. Computer-Based Training benefits managers and training instructors by:

- Scheduling employee training.
- Testing employees to help insure competency.
- Tracking and maintaining employee training records.
- Producing reports that document training activities.
- Providing user-friendly features that allow you to create your own courses.

Course 1: Infection Control			
Module 1	Germs	Unit 1	The chain of infection
		Unit 2	Bloodborne pathogens
		Unit 3	Tuberculosis
Module 2	Protecting Yourself	Unit 1	Standard precautions
		Unit 2	Handwashing
		Unit 3	Personal Protective Equipment
		Unit 4	Safe work practices
Module 3	Transmission Based Precautions	Unit 1	General overview
		Unit 2	Airborne precautions
		Unit 3	Droplet precautions
		Unit 4	Contact precautions
Module 4	Your Health/Your Job	Unit 1	What to do if you've been exposed
		Unit 2	Hepatitis B vaccination
		Unit 3	Doing your part
		Unit 4	Getting more information
Course 2: Working with Chemicals			
Module 1	Hazard Communications Standard	Unit 1	Your right to know
		Unit 2	Identifying hazardous chemicals
Module 2	Communication of Hazards	Unit 1	Labels that communicate
		Unit 2	Material safety data sheets
Module 3	How to Protect Yourself	Unit 1	Personal Protective Equipment
		Unit 2	Using chemicals safely
Module 4	Chemical Usage	Unit 1	Disinfectants and general cleaning
		Unit 2	Floor care chemicals



3M S.M.A.R.T.

Video Training Series

This series of videos includes comprehensive training on common, must-know cleaning and maintenance tasks:

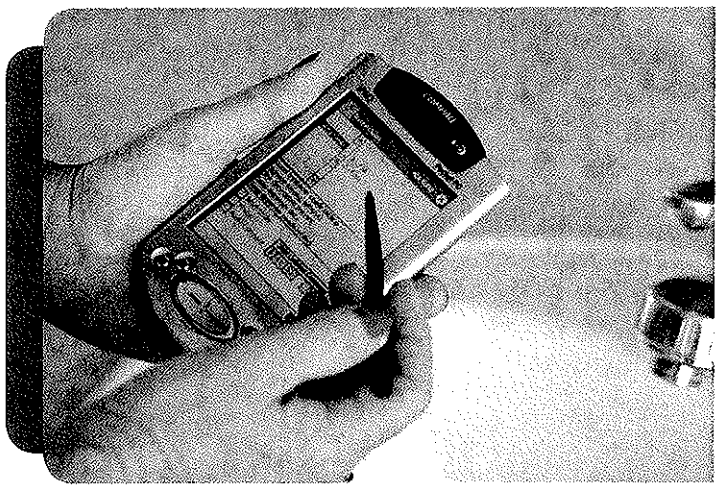
- 3M Hard Floor Care
- 3M Carpet Care
- 3M Restroom Care
- 3M Health Care Cleaning Procedures
- Working Safely in the Health Care Environment
- 3M™ Twist 'n Fill™ System

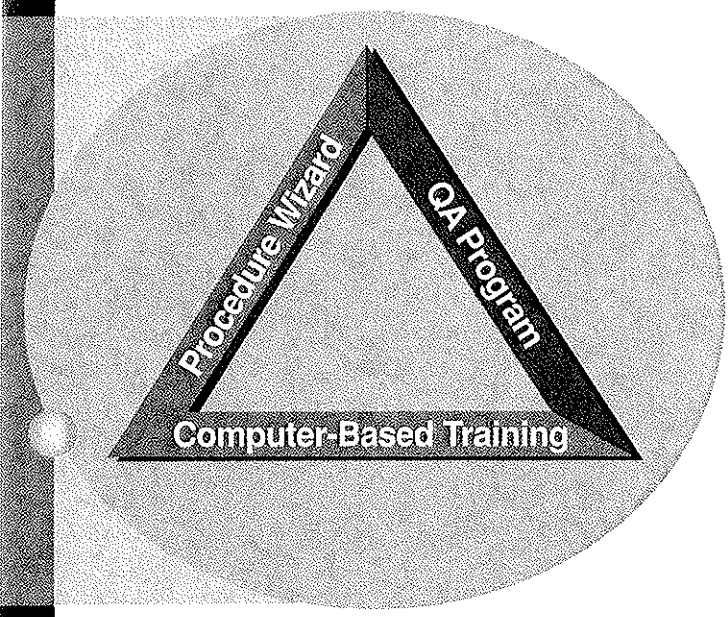
Each video teaches the "why" and "how to" of procedures and best practices. They are all available in English and Spanish, with easy-to-use sections for classroom or instruction-led training.

3M S.M.A.R.T.

QA Program

The 3M S.M.A.R.T. QA Program helps you conduct inspections and provide accurate and precise data on performances you want to measure. This quality assurance software completes the 3M S.M.A.R.T. system. It enables the verification of 3M S.M.A.R.T. Computer-Based Training and the application of 3M S.M.A.R.T. Procedure Wizard best practices.





Why implement 3M S.M.A.R.T QA Program?

- Easy data collection for facility-wide communications.
- Help improve your outcomes as a result of an established baseline against which you can measure.
- Pinpoint areas shown to need improvement.
- Help increase efficiencies through better trained and more satisfied employees.

How does 3M S.M.A.R.T. QA work?

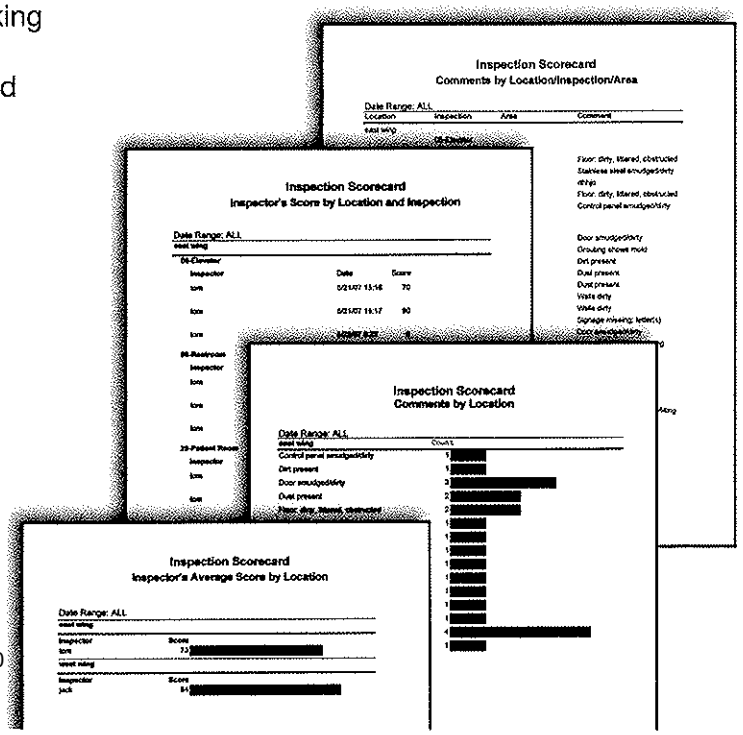
- The inspections are created on a desktop or laptop computer and downloaded to a handheld device.
- The program allows both scheduled and spontaneous inspections.
- Inspection results are uploaded to the desktop computer for database collection and reporting.
- Reports and work orders can be previewed, printed or emailed.

What inspections can be performed?

- More than 100 standard inspection templates.
- Broad range of areas including restroom, parking lot, dock, patient room, and more.
- Infinite capacity for creating facility customized inspections.
- Procedures from 3M S.M.A.R.T. Procedure Wizard can be easily adapted to inspections.

What about reports?

- 14 standard reports.
- Data available in multiple formats.
- Data can be exported to Microsoft® Excel®.
- Print or email results.
- Generate quick and accurate work orders.



3M S.M.A.R.T.
Services

The 3M S.M.A.R.T. training programs offer comprehensive technical support and consulting services. 3M Building & Commercial Services Division provides the Computer-Based Training, Procedure Wizard, and Training Videos as a value-added benefit to facilities who commit to 3M products. With a minimal investment, the QA Program software completes the 3M S.M.A.R.T. system.

Here is how the S.M.A.R.T. services work:

1. 1 hour of FREE set-up assistance.

2. Ongoing support is available Monday through Friday; you may expect your response within one business day. After 15 minutes, service is billed at $25 per 15 minutes.

3. A full portfolio of consulting services is provided to help you maximize your S.M.A.R.T. training programs.Billed at $100 per hour, services include:

- Entering your database of employees for training into the Computer-Based Training program.
- Customizing existing courses and tests for your facility.
- Creating new courses and tests per your needs.
- Customizing procedures for your facility using your photos and logo.
- Working with you to develop a training curriculum and helping you implement it.
- Partnering with you on your select project.
- Design and develop custom QA inspections and reports.

3M can help you maintain a S.M.A.R.T. business with well-trained and satisfied employees who can produce optimal results in a cost-effective manner.

For information on how to acquire the 3M S.M.A.R.T. Services, call the 3M Customer Center at 1-800-557-2249.

To get the name of your nearest distributor, call 1-800-852-9722.

For software support on any of the 3M S.M.A.R.T. training programs, call 1-866-703-7323 or E-mail: help@3msmart.com.

For general assistance, call 1-800-3M-HELPS (1-800-364-3577).

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Printed in U.S.A.

APPENDIX D

CREDIT INTERPRETATION REQUEST

Credit Interpretation Request
Green Cleaning/Housekeeping

Please describe generic requirements and submittals for a green cleaning/housekeeping innovation credit. Note that previous CIRs (e.g., IDc1.1 inquiry dated 6/2/03; and IDc1.4 inquiry dated 1/16/04) provide guidance that is relevant, but customized for particular projects.

Ruling
ENVIRONMENTALLY PREFERABLE CLEANING PRODUCTS AND PRACTICES:
The commitment to environmentally preferable cleaning products and practices is a noteworthy one that complements the IEQ requirements of LEED. Generic requirements for commercial and multi-unit residential buildings are addressed below.

INTENT: Reduce exposure of building occupants and maintenance personnel to potentially hazardous chemical contaminants that adversely impact air quality, occupant well-being, and the environment.

REQUIREMENTS FOR COMMERCIAL BUILDINGS:
To receive an innovation point, the project team will need to demonstrate that a comprehensive green cleaning/housekeeping program is in place with clear performance goals, including:
1. A statement of purpose describing what the policy is trying to achieve from a health and environmental standpoint, focusing on cleaning chemicals and custodial training at a minimum.
2. A contractual or procedural requirement for operations staff to comply with the guidelines, including a written program for training and implementation.
3. A clear set of acceptable performance level standards by which to measure progress or achievement, such as Green Seal standard GS-37 (see www.greenseal.org) or California Code of Regulations, Title 17 Section 94509, VOC standards for cleaning products
4. Documentation of the programs housekeeping policies and environmental cleaning solution specifications, including a list of approved and prohibited chemicals and practices. Demonstrate that the products used in the project are non-hazardous, have a low environmental impact, and meet the criteria set forth in #3 above. Concentrated cleaning products should be utilized when available.

REQUIREMENTS FOR MULTI-UNIT RESIDENTIAL BUILDINGS:
For cleaning and maintenance of common areas, a building owner/manager must comply with the requirements stated above. Additional steps are required to influence housekeeping protocols within residences. Select six major cleaning needs and identify products (compliant with #3, above) that will be supplied to meet these needs. Note that one cleaner may address several cleaning functions. Examples of cleaning needs include, but are not limited to: counter, sink, tub/shower, tile, limescale remover, toilet, hard flooring, laundry detergent, laundry bleach and windows. Provide an estimated 6 month supply of these products to residents, as well as information on how to easily purchase refills and/or replacements. Educate the residents on the green cleaning concepts and products via discussion and written materials upon move-in and periodically thereafter.
Additionally, if the building contains retail tenants, actively educate them on the cleaning products, standards and protocols that are being used in the common areas. Submit a narrative and highlighted supportive documents (e.g., relevant to policy, O&M, communications, products and contracts) as part of your LEED certification submittal.