



ZEP Manufacturing Company  
 Acuity Specialty Products Group, Inc.  
 P.O. Box 2015  
 Atlanta, GA 30301  
 1-877-I-BUY-ZEP (428-9937)  
 www.zep.com

# Material Safety Data Sheet

## and Safe Handling and Disposal Information

### Section 1. Chemical Product and Company Identification

**Product name** CHERRY BOMB  
**Product Use** Liquid Hand Cleaner  
**Product Code** 0951  
**Date of issue** 05/21/01 **Supersedes**  
**Emergency Telephone Numbers** For MSDS Information:  
 Acuity Specialty Products Group, Inc.  
 Compliance Services 1-877-I-BUY-ZEP (428-9937)

**For Medical Emergency**  
 INFOTRAC:  
 (877) 541-2016 Toll Free - All Calls Recorded

**For a Transportation Emergency**  
 CHEMTREC:  
 (800) 424-9300 - All Calls Recorded  
 In the District of Columbia (202) 483-7616

Printing date: 04/13/06

**Prepared by** Compliance Services Group  
 Acuity Specialty Products Group  
 1420 Seaboard Industrial Blvd.  
 Atlanta, GA 30318

### Section 2. Composition, Information on Ingredients

Name of Hazardous Ingredients	CAS #	% by Weight	Exposure Limits
ODORLESS ALIPHATIC NAPHTHA; heavy alkylate petroleum naphtha; odorless mineral spirits	64741-65-7	20-30	OSHA PEL (United States). TWA: 500 ppm 8 hour(s). ACGIH TLV (United States). TWA: 100 ppm 8 hour(s).

### Section 3. Hazards Identification

**Acute Effects** **Routes of Entry** Ingestion.  
**Skin** No known acute effects of this product resulting from skin contact.  
**Eyes** Slightly hazardous in case of eye contact (irritant). Inflammation of the eye is characterized by redness, watering, and itching.  
**Inhalation** Inhalation not likely under normal use conditions.  
**Ingestion** May be harmful if swallowed.

#### HMIS

Health	0
Physical Hazard	0
Reactivity	0
Personal Protection	N/A

**NOTE:** MSDS data pertains to the product as delivered in the original shipping container(s). Risk of adverse health effects are lessened by following all prescribed safety precautions, including use of proper personal protective equipment.

**Carcinogenic Effects** Ingredients: Not listed as carcinogen by OSHA, NTP or IARC.

**Chronic Effects** Prolonged or repeated contact may dry skin and cause irritation.

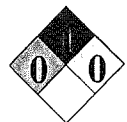
See Toxicological Information (section 11)

### Section 4. First Aid Measures

**Eye Contact** In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation occurs.  
**Skin Contact** Rinse with plenty of running water. Get medical attention if irritation develops.  
**Inhalation** If inhaled, remove to fresh air. Get medical attention if symptoms appear.  
**Ingestion** Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If affected person is conscious, give plenty of water to drink. Get medical attention immediately.

### Section 5. Fire Fighting Measures

**Flash Point** Closed cup: >93.3°C (200°F) **Flammable Limits** Not determined.  
 (Tagliabue.)  
**Flammability** Structure inhibits combustibility of solvent.  
**Fire Hazard** None.  
**Fire-Fighting Procedures** None.



**Section 6. Accidental Release Measures**

**Spill Clean up** Absorb with an inert material and place in an appropriate waste disposal container. To clean the floor and all objects contaminated by this material, use detergent. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

**Section 7. Handling and Storage**

**Handling** Avoid contact with eyes.

**Storage** Keep container tightly closed. Keep container in a cool, well-ventilated area. Store between 40°F - 120°F.

**Section 8. Exposure Controls, Personal Protection****Personal Protection****Protective Clothing (Pictograms)**

**Eyes** No special protection is required.

**Body** No special protective clothing is required.

**Respiratory** No special protection is required.

**Section 9. Physical and Chemical Properties**

**Physical State** Viscous liquid.

**Color** Red.

**pH** 7.0 - 8.0

**Odor** Cherry

**Boiling Point** Not determined.

**Vapor Pressure** Not determined.

**Specific Gravity** 0.96 (Water = 1)

**Vapor Density** Not determined.

**Solubility** Emulsifies in water.

**Evaporation Rate** Not determined.

**VOC (Consumer)** 0 (g/l).

**Section 10. Stability and Reactivity**

**Stability and Reactivity** The product is stable.

**Incompatibility** Reactive with oxidizing agents.

**Hazardous Polymerization** Will not occur.

**Hazardous Decomposition Products** When heated to decomposition it emits toxic fumes.

**Section 11. Toxicological Information**

**Toxicity to Animals** Odorless Aliphatic Naphtha:

ORAL (LD50): Acute: >18800 mg/kg [Rat].

**Section 12. Ecological Information**

**Ecotoxicity** Not available.

**Biodegradable/OECD** Not available.

**Section 13. Disposal Considerations**

**Waste** Waste must be disposed of in accordance with federal, **Waste Stream** Code: - (None.)

**Information** state and local environmental control regulations.

**Classification:** - (Non-hazardous waste)

**Consult your local or regional authorities.**

**Section 14. Transport Information**

**Proper shipping name** Not applicable.

**DOT Classification** Not a DOT controlled material (United States).

**UN number** Not regulated.

**NOTE:** DOT classification applies to most package sizes. For specific container size classifications or for size exceptions, refer to the Bill of Lading with your shipment.

**Section 15. Regulatory Information**

**U.S. Federal Regulations** SARA 313 toxic chemical notification and release reporting:  
No products were found.

Clean Water Act (CWA) 311: No products were found.

Clean air act (CAA) 112 regulated toxic substances: No products were found.

All Components of this product are listed or exempt from listing on TSCA inventory.

**Section 16. Other Information**

*To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein.*

*Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution.*

*Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.*

**RECEIVED**

APR 14 2006

RAUHORN ELECTRIC INC.  
BY \_\_\_\_\_



ZEP Manufacturing Company  
 Acuity Specialty Products Group, Inc.  
 P.O. Box 2015  
 Atlanta, GA 30301  
 1-877-I-BUY-ZEP (428-9937)

# Material Safety Data Sheet

## and Safe Handling and Disposal Information

### Section 1. Chemical Product and Company Identification

**Product name** ZEP FREEZE  
**Product Use** Gum and Candle Wax Remover  
**Product Code** 0240  
**Date of issue** 09/16/04 **Supersedes** 03/13/02

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**Emergency For MSDS Information:**  
**Telephone Numbers** Acuity Specialty Products Group, Inc.  
 Compliance Services 1-877-I-BUY-ZEP (428-9937)

**For Medical Emergency**  
 INFOTRAC:  
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**Prepared by** Compliance Services Group  
 Acuity Specialty Products Group  
 1420 Seaboard Industrial Blvd.  
 Atlanta, GA 30318

Printing date: 04/13/06

### Section 2. Composition, Information on Ingredients

Name of Hazardous Ingredients	CAS #	% by Weight	Exposure Limits
1,1,1,2 - TETRAFLUOROETHANE; HFC-134a	811-97-2	>90	Not established

### Section 3. Hazards Identification

**Acute Effects** **Routes of Entry** Dermal contact. Inhalation.

**Skin** Hazardous in case of skin contact (irritant). Direct contact may cause irritation and redness. Dermal contact with a rapidly evaporating liquid could result in frosting of the tissues or frostbite.

**Eyes** Hazardous in case of eye contact (irritant). Inflammation of the eye is characterized by redness, watering, and itching. Contact with rapidly expanding gas may cause burns or frostbite.

**Inhalation** Hazardous in case of inhalation. Avoid breathing vapors of this product. Over-exposure by inhalation may cause respiratory irritation. Can cause central nervous system depression.

**Ingestion** Unlikely in this form.

#### HMIS

Health	1
Physical Hazard	0
Reactivity	0
Personal Protection	B

**Carcinogenic Effects** Ingredients: Not listed as carcinogen by OSHA, NTP or IARC.

**Chronic Effects** The substance may be toxic to heart. Repeated or prolonged exposure to the substance can produce target organs damage. Inhalation of spray mists or vapors may cause central nervous system depression characterized by headache, dizziness, nausea, stupor, weakness and/or numbness and tingling in the extremities (medical term - peripheral neuropathy).

See Toxicological Information (section 11)

### Section 4. First Aid Measures

**Eye Contact** Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

**Skin Contact** In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if irritation develops.

**Inhalation** If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

**Ingestion** Since the product is a gas and that it is mostly probable that it will be inhaled more than ingested, please consider first to look at the preventive measures in case of inhalation.

**Section 5. Fire Fighting Measures**

**Flash Point** Not applicable. **Flammable Limits** Not applicable.

**Flammability** Non-flammable gas.

**Fire Hazard** CONTENTS UNDER PRESSURE. Cool containing vessels with water jet in order to prevent pressure build-up, autoignition or explosion.

**Fire-Fighting Procedures** Use an extinguishing agent suitable for surrounding fires. Fire-fighters should wear proper protective equipment.

**Section 6. Accidental Release Measures**

**Spill Clean up** Unlikely in this form. The vapour/gas is heavier than air and will spread along the ground. Ensure ventilation is adequate if there is a risk of aerosol formation or vapor build-up.

**Section 7. Handling and Storage**

**Handling** Keep away from heat, sparks and flame. Avoid breathing gas. Avoid contact with eyes, skin and clothing. Keep container closed. Do not enter storage areas and confined spaces unless adequately ventilated. Use only with adequate ventilation. Do not puncture or incinerate. Apply this product only as specified on the label.

**Storage** CONTENTS UNDER PRESSURE. Do not puncture or incinerate container. Keep away from heat, sparks and flame. Keep away from heat and direct sunlight. Keep container in a cool, well-ventilated area. Store between 40°F - 120°F (4.4°C - 49°C). Keep out of the reach of children.

**Section 8. Exposure Controls, Personal Protection****Personal Protection****Protective Clothing (Pictograms)**

**Eyes** Safety glasses.

**Body** Wear appropriate protective clothing to prevent skin contact.  
Recommended: Nitrile gloves. Neoprene gloves. Rubber gloves.

**Respiratory** Avoid breathing gas. Wear appropriate respirator when ventilation is inadequate.

**Section 9. Physical and Chemical Properties**

**Physical State** Gas. (Aerosol.) **Color** Clear. Colorless.

**pH** Not applicable **Odor** Ethereal. (Slight.)

**Boiling Point** <-18°C (-0.4°F) **Vapor Pressure** 760 mmHg

**Specific Gravity** 1.21 (Water = 1) **Vapor Density** <1 (Air = 1)

**Solubility** Not applicable **Evaporation Rate** >1 compared to Ether (anhydrous)

**VOC (Consumer)** 0 (g/l).

**Section 10. Stability and Reactivity**

**Stability and Reactivity** The product is stable.

**Incompatibility** Reactive with oxidizing agents, metals, alkalis.

**Hazardous Polymerization** Will not occur.

**Hazardous Decomposition Products** carbon oxides (CO, CO<sub>2</sub>), hydrogen fluoride, hydrogen chloride, Chlorine.

**Section 11. Toxicological Information**

**Toxicity to Animals** Not available.

**Section 12. Ecological Information**

**Ecotoxicity** Not available.

**Biodegradable/OECD** Not available.

**Section 13. Disposal Considerations**

**Waste** Waste must be disposed of in accordance with federal, state and local environmental control regulations. **Waste Stream** Non-regulated waste

**Information**

Consult your local or regional authorities.

**Section 14. Transport Information**

**Proper shipping name** 1,1,1,2-tetrafluoroethane

**DOT Classification** 2.2 **UN number** 3159

**Section 15. Regulatory Information**

**U.S. Federal Regulations** SARA 313 toxic chemical notification and release reporting:  
No products were found.

Clean Water Act (CWA) 311: No products were found.

Clean air act (CAA) 112 regulated toxic substances: No products were found.

**Section 16. Other Information**

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution.

Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

# MATERIAL SAFETY DATA SHEET

## FORMULA #3360-0

ITEMS USING THIS FORMULA = 3320, 3320H, 3321, 3324, 3364, 3360, 8860

QUICK IDENTIFIER (In Plant Common Name) <b>"THE WORKS" PROFESSIONAL DRAIN OPENER</b>	CAS NUMBER	<b>MIXTURE</b>
MANUFACTURER'S NAME <b>LIME-O-SOL CO.</b>	FOR EMERGENCY ASISTANCE, CALL CHEMTREC	
	EMERGENCY TELEPHONE NUMBER	<b>1-800-424-9300</b>
	NON-EMERGENCY NUMBER	<b>1-800-262-8200</b>
ADDRESS <b>P.O. BOX 395, ST. RD. 4, ASHLEY IN 46705</b>	DATE PREPARED	<b>11-4-97</b>

### HEALTH HAZARD DATA

ACUTE OVEREXPOSURE	<b>SLIGHT EYE AND SKIN IRRITANT</b>
CHRONIC OVEREXPOSURE	<b>NONE KNOWN</b>
SYMPTOMS OF EXPOSURE (Routes of Entry)	
1. Inhalation - NONE KNOWN 2. Eyes - MAY CAUSE PAIN AND SEVERE IRRITATION 3. Dermal (skin) - MAY CAUSE SLIGHT IRRITATION 4. Ingestion - MAY CAUSE INTERNAL BURNS	
RECOMMENDED FIRST AID TREATMENT	
<b>EYE CONTACT REQUIRES FLUSHING WITH WATER FOR THIRTY MINUTES. CONTACT A PHYSICIAN IMMEDIATELY. SKIN REQUIRES WASHING WITH SOAP AND WATER. IF INGESTED DO NOT INDUCE VOMITING BUT GIVE LARGE AMOUNTS OF WATER OR MILK AND TRANSFER TO A MEDICAL FACILITY.</b>	

### HAZARDOUS INGREDIENTS

PRINCIPAL COMPONENTS	% RANGE	ACGIH/TLV	OSHA PEL	Other Limits
<b>HYDROCHLORIC ACID</b>	<b>10 - 20</b>	<b>5 PPM</b>	<b>N/A</b>	<b>N/A</b>
<b>H<sub>2</sub>O AND OTHER NON-HAZARDOUS COMPONENTS</b>	<b>80 - 100</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>

**PHYSICAL DATA**

BOILING POINT	212°F	LIQUID DENSITY (lbs/gallon)	8.91
VAPOR PRESSURE	N/A	SPECIFIC GRAVITY (H <sub>2</sub> O = 1)	1.068
SOLUBILITY IN WATER	SOLUBLE	FREEZING POINT	< 32° F
APPEARANCE AND ODOR	LIGHT YELLOW LIQUID WITH PUNGENT FRAGRANCE		

**FIRE AND EXPLOSION HAZARD DATA**

FLASH POINT (METHOD USED) _____ N/A _____ °F _____ °C	AUTO IGNITION TEMPERATURE	N/A	FLAMMABLE LIMITS % BY VOLUME LEL N/A UEL _____
Note:			
EXTINGUISHING MEDIA	ANY		
SPECIAL FIRE FIGHTING PROCEDURES	NONE		
UNUSUAL FIRE AND EXPLOSION HAZARDS	NONE		

**REACTIVITY DATA**

STABILITY Stable <input checked="" type="checkbox"/> _____ Unstable _____	CONDITIONS TO AVOID	CONTACT WITH METALS
INCOMPATIBILITY (Materials to avoid)	AVOID CONTACT WITH CORROSIVE MATERIALS AND OTHER HOUSEHOLD CLEANERS	
HAZARDOUS DECOMPOSITION PRODUCTS	NONE	
HAZARDOUS POLYMERIZATION May Occur _____ Will Not Occur <input checked="" type="checkbox"/> _____		

**SPILL OR LEAK PROCEDURES**

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED <b>SMALL QUANTITIES MAY BE FLUSHED WITH WATER OR WIPED UP WITH ABSORBENT. LARGE SPILLS REQUIRE DISPOSAL ACCORDING TO LOCAL ORDINANCE.</b>
WASTE DISPOSAL METHOD <b>DOMESTIC TRASH</b>

## SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (Will Vary By Use and Conditions)		NONE REQUIRED IF USED AS DIRECTED			
VENTILATION	ADEQUATE	LOCAL	N/A	SPECIAL	N/A
		MECHANICAL (Gen.)	N/A	OTHER	N/A
PROTECTIVE GLOVES RUBBER GLOVES					
EYE PROTECTION SAFETY GLASSES/GOGGLES					
OTHER PROTECTIVE EQUIPMENT RUBBER APRON IF USED IN LARGE QUANTITIES					

## SPECIAL PRECAUTIONS\*

SPECIAL LABELING INFORMATION	HMS rating	H - 2 F - 0 R - 0
SPECIAL HANDLING RECOMMENDATIONS		
AVOID CONTACT WITH EYES AND SKIN		
SPECIAL STORAGE RECOMMENDATIONS		
N/A		
SPECIAL PACKAGING RECOMMENDATIONS		
N/A		

\* Various Government agencies (i.e., Department of Transportation, Occupational Safety and Health Administration, Food and Drug Administration and others) may have specific regulations concerning the transportation, handling, storage or use of this product which may not be contained herein. The customer or user of this product should be familiar with these regulations.

# MATERIAL SAFETY DATA SHEET

## FORMULA # 3391-0

ITEMS USING THIS FORMULA = 3304, 3308-5, 3355, 3371,  
3373, 3373BP, 3390, 3390TR, 3391, 3395

QUICK IDENTIFIER (In Plant Common Name) <b>"THE WORKS" TUB &amp; SHOWER CLEANER</b>	CAS NUMBER	<b>MIXTURE</b>
MANUFACTURER'S NAME LIME-O-SOL CO.	FOR EMERGENCY ASSISTANCE, CALL CHEMTREC EMERGENCY TELEPHONE NUMBER 1-800-424-9300 NON-EMERGENCY NUMBER 1-800-262-8200	
ADDRESS P.O. BOX 395, ST. RD. 4, ASHLEY IN 46705	DATE PREPARED	11-4-97

### HEALTH HAZARD DATA

ACUTE OVEREXPOSURE	MAY IRRITATE EYES
CHRONIC OVEREXPOSURE	NONE KNOWN
SYMPTOMS OF EXPOSURE (Routes of Entry)	
1. Inhalation - NONE KNOWN 2. Eyes - MAY CAUSE SLIGHT IRRITATION 3. Dermal (skin) - NONE 4. Ingestion - NONE	
RECOMMENDED FIRST AID TREATMENT	
EYE CONTACT REQUIRES FLUSHING WITH WATER FOR FIFTEEN MINUTES.	

### HAZARDOUS INGREDIENTS

PRINCIPAL COMPONENTS	% RANGE	ACGIH/TLV	OSHA PEL	Other Limits
GLYCOLIC ETHER (EB)	2 - 6	1 mg/m <sup>3</sup> TWA	N/A	N/A
NEODOL 1-7	1 - 2	N/A	N/A	N/A
GLYCOLIC ACID	2 - 8	N/A	N/A	N/A
CITRIC ACID	1 - 5	N/A	N/A	N/A
H <sub>2</sub> O AND OTHER NON-HAZARDOUS COMPONENTS	60 - 90	N/A	N/A	N/A



### PHYSICAL DATA

BOILING POINT	212°F	LIQUID DENSITY (lbs/gallon)	8.66
VAPOR PRESSURE	N/A	SPECIFIC GRAVITY (H <sub>2</sub> O = 1)	1.038
SOLUBILITY IN WATER	SOLUBLE	FREEZING POINT	< 32° F
APPEARANCE AND ODOR		CLEAR LIQUID WITH FLORAL FRAGRANCE	

### FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (METHOD USED) N/A °F _____ °C	AUTO IGNITION TEMPERATURE N/A	FLAMMABLE LIMITS % BY VOLUME LEL N/A UEL _____
Note:		
EXTINGUISHING MEDIA	ANY	
SPECIAL FIRE FIGHTING PROCEDURES	NONE	
UNUSUAL FIRE AND EXPLOSION HAZARDS	NONE	

### REACTIVITY DATA

STABILITY Stable <input checked="" type="checkbox"/> _____ Unstable _____	CONDITIONS TO AVOID NONE KNOWN
INCOMPATIBILITY (Materials to avoid)	NOT RECOMMENDED FOR WOOD SURFACES
HAZARDOUS DECOMPOSITION PRODUCTS	NONE KNOWN
HAZARDOUS POLYMERIZATION May Occur _____ Will Not Occur <input checked="" type="checkbox"/> _____	

### SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED SMALL QUANTITIES MAY BE FLUSHED WITH WATER OR WIPED UP WITH ABSORBENT. LARGE SPILLS REQUIRE DISPOSAL ACCORDING TO LOCAL ORDINANCE.
WASTE DISPOSAL METHOD DOMESTIC TRASH

## SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (Will Vary By Use and Conditions)		NONE REQUIRED IF USED AS DIRECTED			
VENTILATION	ADEQUATE	LOCAL	N/A	SPECIAL	N/A
		MECHANICAL (Gen.)	N/A	OTHER	N/A
PROTECTIVE GLOVES RECOMMENDED FOR PROLONGED USE					
EYE PROTECTION SAFETY GLASSES/GOGGLES					
OTHER PROTECTIVE EQUIPMENT NONE					

## SPECIAL PRECAUTIONS\*

SPECIAL LABELING INFORMATION	HMIS rating	H - 1 F - 0 R - 0
SPECIAL HANDLING RECOMMENDATIONS		
NONE		
SPECIAL STORAGE RECOMMENDATIONS		
N/A		
SPECIAL PACKAGING RECOMMENDATIONS		
N/A		

\* Various Government agencies (i.e., Department of Transportation, Occupational Safety and Health Administration, Food and Drug Administration and others) may have specific regulations concerning the transportation, handling, storage or use of this product which may not be contained herein. The customer or user of this product should be familiar with these regulations.

## MATERIAL SAFETY DATA SHEET: SIMPLE GREEN®

### SUNSHINE MAKERS, INC.

RESEARCH AND DEVELOPMENT DIVISION  
15922 Pacific Coast Highway  
Huntington Harbour, CA 92649 USA  
Telephone: 800-228-0709 • 310-795-6000

Version: No. 1005  
Issue Date: March, 1996

**SUPERSEDES ANY PREVIOUS VERSIONS**  
Page 1 of 4

For 24-hour emergency, call Chem-Tel, Inc.: 800-255-3924

### PRODUCT IDENTIFICATION

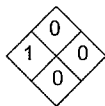
Other Names: Simple Green®  
Simple Green®-Industrial Cleaner and Degreaser

UN Number: Not required

Dangerous Goods Class: Nonhazardous

#### Hazard Rating (NFPA/HMIS)

Health = 1\*      Reactivity = 0  
Fire = 0          Special = 0



#### Rating Scale

0 = minimal      1 = slight  
2 = moderate    3 = serious  
4 = severe

\*Mild eye irritant, non-mutagenic and non-carcinogenic. None of the ingredients in Simple Green® are regulated or listed as potential cancer agents by Federal OSHA, NTP, or IARC.

Use: An all purpose cleaner and degreaser used undiluted or diluted in water for direct, spray, and dip tank procedures.

### SAFE HANDLING INFORMATION

#### Fire/Explosion Hazard

Simple Green® is nonflammable, stable, and will not burn.  
Flash Point/Auto-Ignition: Not relevant.  
Extinguishing Media: Nonflammable/nonexplosive. No special procedures required.

Special Fire Fighting Procedures: None required.

#### Reactivity Data

Nonreactive. Simple Green® is stable, even under fire conditions, and will not react with water or oxidizers.  
Hazardous polymerization will not occur.

#### Storage and Transport

No special precautions are required. This product is non-hazardous for storage and transport according to the U.S. Department of Transportation Regulations.

Simple Green® requires no special labeling or placarding to meet U.S. Department of Transportation requirements.

#### Spills and Disposal

Spill or Leakage Procedures: Recover usable material by convenient method; residual may be removed by wipe or wet mop. If necessary, unrecoverable material may be washed to drain with large quantities of water.

Waste Disposal: Simple Green® is fully water soluble and biodegradable and will not harm sewage-treatment microorganisms if disposal by sewer or drain is necessary. Dispose of in accordance with all applicable local, state, and federal laws.

Simple Green® MSDS No. 1005

Page 2 of 4

### SUNSHINE MAKERS, INC.

### PRECAUTIONS FOR USE

**Exposure Limits:** The Simple Green® formulation presents no health hazards to the user, other than mild eye irritancy.

**Ventilation:** No special ventilation is required during use.

#### Personal Protection

Precautionary Measures: No special requirements under normal use conditions.

Eye Protection: Caution, including reasonable eye protection, should always be used to avoid eye contact where splashing may occur.

Skin Protection: No special precautions required; rinse completely from skin after contact.

Respiratory Protection: No special precautions required.

Work and Hygienic Practices: No special requirements. Wash or rinse hands before touching eyes or contact lenses.

### SYMPTOMS OF OVEREXPOSURE AND FIRST AID TREATMENT

Eye contact: Reddening may develop. Immediately rinse the eye with large quantities of cool water; continue 10-15 minutes or until the material has been removed; be sure to remove contact lenses, if present, and to lift upper and lower lids during rinsing. Get medical attention if irritation persists.

Skin contact: Minimal effects, if any; rinse skin with water, rinse shoes and launder clothing before reuse. Reversible reddening may occur in some dermal-sensitive users; thoroughly rinse area and get medical attention if reaction persists.

Swallowing: Essentially non-toxic. Give several glasses of water to dilute; do not induce vomiting. If stomach upset occurs, consult physician.

Inhalation: Non-toxic. Exposures to concentrate-mist may cause mild irritation of nasal passages or throat; remove to fresh air. Get medical attention if irritation persists.

### INGREDIENT INFORMATION

The only ingredient of Simple Green® with established exposure limits is undiluted 2-butoxyethanol (<6%) (Butyl Cellosolve; CAS No. 111-76-2): the OSHA PEL and ACGIH TLV is 25 ppm (skin).  
**Note, however, that Butyl Cellosolve is only one of the raw material ingredients that undergo processing and dilution during the manufacture of Simple Green®. Upon completion of the manufacturing process, Simple Green® does not possess the occupational health risks associated with exposure to undiluted Butyl Cellosolve.** Verification of this is contained in the independent test results detailed under "Toxicity Information" on Page 3 of this MSDS.

The Butyl Cellosolve in Simple Green® is part of a chemical category (glycol ethers) regulated by the Emergency Planning and Community Right-to-Know Act (SARA, Title III, section 313); therefore, a reporting requirement exists. **Based upon chemical analysis, Simple Green® contains no known EPA priority pollutants, heavy metals, or chemicals listed under RCRA, CERCLA, or CWA. Analysis by TCLP (Toxicity Characteristic Leaching Procedure) according to RCRA revealed no toxic organic or inorganic constituents.**

RECEIVED

JUN 12 1998

RAUHORN ELECTRIC INC.  
BY                     

SUNSHINE MAKERS, INC.

Simple Green® MSDS No. 1005

Page 3 of 4

**TOXICITY INFORMATION****Human Health Effects or Risks from Exposure**

Adverse effects on human health are not expected from Simple Green®, based upon seventeen years of use without reported adverse health incidence in diverse population groups, including extensive use by inmates of U.S. Federal prisons in cleaning operations.

Simple Green® is a mild eye irritant; mucous membranes may become irritated by concentrate-mist.

Simple Green® is not likely to irritate the skin in the majority of users. Repeated daily application to the skin without rinsing, or continuous contact of Simple Green® on the skin may lead to temporary, but reversible, irritation.

**Medical Conditions Aggravated by Exposure**

No aggravation of existing medical conditions is expected; dermal-sensitive users may react to dermal contact by Simple Green®.

**Nonhuman Toxicity****Acute Mortality Studies:**

Oral LD<sub>50</sub> (rat): >5.0 g/kg body weight  
Dermal LD<sub>50</sub> (rabbit): >2.0 g/kg body weight

**Dermal Irritation:** Only mild, but reversible, irritation was found in a standard 72-hr test on rabbits. A value of 0.2 (non-irritating) was found on a scale of 8.

**Eye Irritation:** With or without rinsing with water, the irritation scores in rabbits at 24 hours did not exceed 15 (mild irritant) on a scale of 110.

**Subchronic dermal effects:** No adverse effects, except reversible dermal irritation, were found in rabbits exposed to Simple Green (up to 2.0 g/kg/day for 13 weeks) applied to the skin of 25 males and 25 females. Only female body weight gain was affected. Detailed microscopic examination of all major tissues showed no adverse changes.

**Fertility Assessment by Continuous Breeding:** The Simple Green® formulation had no adverse effect on fertility and reproduction in CD-1 mice with continuous administration for 18 weeks, and had no adverse effect on the reproductive performance of their offspring.

**BIODEGRADABILITY AND ENVIRONMENTAL TOXICITY INFORMATION****Biodegradability:**

Simple Green® is readily decomposed by naturally occurring microorganisms. The biological oxygen demand (BOD), as a percentage of the chemical oxygen demand (COD), after 4, 7, and 11 days was 56%, 60%, and 70%, respectively.

In a standard biodegradation test with soils from three different countries, Butyl Cellosolve reached 50% degradation in 6 to 23 days, depending upon soil type, and exceeded the rate of degradation for glucose which was used as a control for comparison.

**Environmental Toxicity Information:**

Simple Green® is nontoxic to any of the following marine and estuarine test animals at concentrations below 200 mg/L (0.02%). The Simple Green® concentrations that are likely to be lethal to 50% of the exposed organisms are summarized in the following table:

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**LC<sub>50</sub> in mg/L (ppm)**

	48-hour	96-hour
<b>Marine Fish:</b>		
Mud minnow ( <i>Fundulus heteroclitus</i> )	1690	1574
Whitebait ( <i>Galaxias maculatus</i> )	210	210
<b>Marine/Estuarine Invertebrates:</b>		
Brine Shrimp ( <i>Artemia salina</i> )	610	399
Grass Shrimp ( <i>Palaemonetes pugio</i> )	270	220
Green-lipped Mussel ( <i>Perna canaliculus</i> )	220	220
Mud Snail ( <i>Potamopyrgus estuarinus</i> )	410	350

**OTHER INFORMATION****Physical Description and Properties**

Appearance/odor: Translucent green liquid with characteristic sassafras odor.

Flashpoint: Nonflammable

Flammability Limits: Nonflammable

Vapor Pressure: 17 mm Hg @ 20 °C  
22 mm Hg @ 25 °C

VOC Composite Partial Pressure: 0.006 mm Hg @ 20 °C

Water Solubility: Completely soluble in water. The higher salt concentrations in marine ecosystems will lead to complexes with Simple Green that may become visible at ratios above one part Simple Green® to 99 parts seawater.

Detection: Simple Green® has a characteristic sassafras odor that is **not** indicative of any hazardous situation.

Boiling Point: 110 °C (231 °F)  
Freezing Point: -9 °C (16 °F)  
Specific Gravity: 1.0257  
pH: 9.5  
Vapor Density: 1.3 (air = 1)  
Volatile Organic Compounds: 7.96 g/L

**Additional Data**

Ash Content: At 600 °F: 1.86% by weight.

Nutrient Content: Nitrogen: <1.0% by weight (fusion and qualitative test for ammonia).  
Phosphorus: 0.3% by formula.  
Sulfur: 0.6% by weight (barium chloride precipitation method).

**General Information**

**Containers:** Simple Green® residues can be completely removed by rinsing with water; the container may be recycled or applied to other uses.

**Electrical Wiring Compatibility:** Polyimide insulated wiring is not affected by exposure to Simple Green®. After immersion in Simple Green® for 14 days at 74°F, the 61 cm piece of polyimide insulated wire passed a one minute dielectric proof test at 2500 volts (ASTM D-149).

**Contact Point:** Sunshine Makers, Inc., Director of Research and Development: 310-795-6000.

**\*\*\* NOTICE \*\*\***

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