

Common Name: CRYSTAL SIMPLE GREEN

Manufacturer: SUNSHINE MAKERS

MSDS Revision Date: 8/1/2006

Grainger Item Number(s): 3UP37, 3UP38, 3UP39, 3UP40

Manufacturer Model Number(s):

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MATERIAL SAFETY DATA SHEET: CRYSTAL SIMPLE GREEN(R*)

ALSO FOR: SIMPLE GREEN(R*) SAFETY TOWELS

VERSION NO.: 4013

ISSUE DATE: AUGUST 2006

I. PRODUCT & COMPANY INFORMATION



PRODUCT NAME: CRYSTAL SIMPLE GREEN(R*)

OTHER NAMES:

CRYSTAL SIMPLE GREEN(R*) - SPECIALIZED CLEANER / DEGREASER
SIMPLE GREEN(R*) SAFETY TOWELS (FLUID ONLY)

COMPANY NAME:

SUNSHINE MAKERS, INC.
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WEBSITE: WWW.SIMPLEGREEN.COM

USE OF PRODUCT:

A SPECIALIZED CLEANER AND DEGREASER FOR USE IN THE INDUSTRIAL AND INSTITUTIONAL WORKPLACE. (SIMPLE GREEN(R*) SAFETY TOWELS CONTAIN DILUTED CRYSTAL SIMPLE GREEN(R*).)

II. INGREDIENT INFORMATION



THE ONLY INGREDIENT OF CRYSTAL SIMPLE GREEN(R*) WITH ESTABLISHED EXPOSURE LIMITS IS UNDILUTED 2-BUTOXYETHANOL (<6%) (BUTYL) CELLOSOLVE; CAS NO. 111-76-2: THE ACGIH TLV-TWA IS: 20 PPM (97 MG/M3.)

THE QUANTITY OF 2-BUTOXYETHANOL IN SIMPLE GREEN SAFETY TOWELS IS <1%.

BASED UPON CHEMICAL ANALYSIS, CRYSTAL SIMPLE GREEN(R*) 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.

ALL COMPONENTS OF CRYSTAL SIMPLE GREEN(R*) ARE LISTED ON THE TSCA CHEMICAL SUBSTANCE INVENTORY.

III. HAZARDS IDENTIFICATION



UN NUMBER: NOT REQUIRED

DANGEROUS GOODS CLASS: NONHAZARDOUS

NJ TRADE SECRET REGISTRATION NUMBERS:

80100235-5000P
80100235-5001P
80100235-5002P
80100235-5003P
80100235-5004P
80100235-5005P
80100235-5006P
80100235-5007P
80100235-5008P
80100235-5009P

HAZARD RATING (NFPA/HMIS):

HEALTH 1*
REACTIVITY 0
FIRE 0
SPECIAL 0

NFPA:

1
0
0
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 CRYSTAL SIMPLE GREEN(R) ARE REGULATED OR LISTED AS CANCER AGENTS BY FEDERAL OSHA, NTP, OR IARC.

IV. FIRST AID MEASURES



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 LAUNDRER 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.

V. FIRE FIGHTING MEASURES



CRYSTAL SIMPLE GREEN(R*) IS STABLE, NOT FLAMMABLE, AND WILL NOT BURN.

FLASH POINT/AUTO-IGNITION: NOT FLAMMABLE.

FLAMMABILITY LIMITS: NOT FLAMMABLE.

EXTINGUISHING MEDIA:

NOT FLAMMABLE/NONEXPLOSIVE. NO SPECIAL PROCEDURES REQUIRED.

SPECIAL FIRE FIGHTING PROCEDURES: NONE REQUIRED.

VI. ACCIDENTAL RELEASE MEASURES



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.

VII. HANDLING, STORAGE & TRANSPORT INFORMATION



NO SPECIAL PRECAUTIONS ARE REQUIRED. THIS PRODUCT IS NON-HAZARDOUS FOR STORAGE AND TRANSPORT ACCORDING TO THE U.S. DEPARTMENT OF TRANSPORTATION REGULATIONS. CRYSTAL SIMPLE GREEN(R*) REQUIRES NO SPECIAL LABELING OR

PLACARDING TO MEET U.S. DEPARTMENT OF TRANSPORTATION REQUIREMENTS.

UN NUMBER: NOT REQUIRED

DANGEROUS GOODS CLASS: NONHAZARDOUS

VIII. EXPOSURE CONTROLS



EXPOSURE LIMITS:

THE CRYSTAL SIMPLE GREEN(R*) FORMULATION PRESENTS NO HEALTH HAZARDS TO THE USER WHEN USED ACCORDING TO LABEL DIRECTIONS FOR ITS INTENDED PURPOSES. MILD SKIN AND EYE IRRITATION IS POSSIBLE (PLEASE SEE EYE CONTACT AND SKIN CONTACT IN SECTION IV.).

VENTILATION:

NO SPECIAL VENTILATION IS REQUIRED DURING USE. LARGE-SCALE USES INDOORS SHOULD PROVIDE AN INCREASED RATE OF AIR EXCHANGE.

HUMAN HEALTH EFFECTS OR RISKS FROM EXPOSURE:

ADVERSE EFFECTS ON HUMAN HEALTH ARE NOT EXPECTED FROM CRYSTAL SIMPLE GREEN(R*), BASED UPON TWENTY YEARS OF USE OF SIMPLE GREEN WITHOUT REPORTED ADVERSE HEALTH INCIDENCE IN DIVERSE POPULATION GROUPS, INCLUDING EXTENSIVE USE BY INMATES OF U.S. FEDERAL PRISONS IN CLEANING OPERATIONS.

CRYSTAL SIMPLE GREEN(R*) IS A MILD EYE IRRITANT; MUCOUS MEMBRANES MAY BECOME IRRITATED BY CONCENTRATE-MIST.

CRYSTAL SIMPLE GREEN(R*) IS NOT LIKELY TO IRRITATE THE SKIN IN THE MAJORITY OF USERS. REPEATED DAILY APPLICATION TO THE SKIN WITHOUT RINSING, OR CONTINUOUS CONTACT OF CRYSTAL SIMPLE GREEN(R*) 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 CRYSTAL SIMPLE GREEN(R*).

IX. 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 EXCEPT DURING LARGE-SCALE SPRAY APPLICATIONS WHERE SPRAY MIST LEVELS ARE HIGH.

WORK AND HYGIENIC PRACTICES:

WASH OR RINSE HANDS BEFORE TOUCHING EYES OR CONTACT LENSES. FOLLOW STANDARD HYGIENIC PRACTICES FOR HANDLING CLEANING AGENTS.

X. PHYSICAL AND CHEMICAL PROPERTIES



APPEARANCE/ODOR: CLEAR LIQUID

SPECIFIC GRAVITY: 1.020

pH OF CONCENTRATE: 9.35

EVAPORATION: >1 (BUTYL ACETATE = 1)

BOILING POINT: 100.6 DEG. C (212 DEG. F)

FREEZING POINT: -9 DEG. C (16 DEG. F)

IF PRODUCT FREEZES, IT WILL RECONSTITUTE WITHOUT LOSS OF EFFICACY WHEN BROUGHT BACK TO ROOM TEMPERATURE AND AGITATED.

VAPOR PRESSURE:

18 MMHg @ 20 DEG. C

23.5 MMHg @ 26 DEG. C

VAPOR DENSITY: 1.3 (AIR = 1)

DENSITY: 8.5 LBS./GALLON

VOC COMPOSITE PARTIAL PRESSURE: 0 MMHg @ 20 DEG. C

VOLATILE ORGANIC COMPOUNDS (VOCS):

0 G/L PER ASTM METHOD 3960-90. PER EPA METHOD 24, VOCS ARE 5.9% AND PRODUCT MUST BE DILUTED AT LEAST 1 PART OF WATER TO 1 PART SIMPLE GREEN(R*) IN ORDER TO MEET CARB 2005 VOC REGULATIONS - OR 1 PART SIMPLE GREEN TO 3 PARTS WATER TO MEET SCAQMD RULE 1171 & RULE 1122 AND BAAQMD REGULATION 8-16 VOC REQUIREMENTS FOR SOLVENT CLEANING OPERATIONS.

SAFETY TOWEL VOCS: PER EPA METHOD 24, VOCS ARE 0.5%.

SAFETY TOWEL pH: 8.1 - 8.8

WATER SOLUBILITY: CRYSTAL SIMPLE GREEN(R*) IS COMPLETELY SOLUBLE IN WATER.

DETECTION:

CRYSTAL SIMPLE GREEN(R*) AND SIMPLE GREEN(R*) SAFETY TOWELS HAVE A CHARACTERISTIC ODOR THAT IS NOT INDICATIVE OF ANY HAZARDOUS SITUATION.

XI. STABILITY AND REACTIVITY INFORMATION



NONREACTIVE. CRYSTAL SIMPLE GREEN(R*) IS STABLE, EVEN UNDER FIRE CONDITIONS, AND WILL NOT REACT WITH WATER OR OXIDIZERS. HAZARDOUS POLYMERIZATION WILL NOT OCCUR.

XII. TOXICOLOGICAL INFORMATION



THE INFORMATION AND CONCLUSIONS CITED IN THIS SECTION ARE BASED ON DATA AND TESTING OF SIMPLE GREEN(R*). THE DATA ARE DIRECTLY APPLICABLE TO CRYSTAL SIMPLE GREEN(R*) BECAUSE BOTH FORMULATIONS ARE VIRTUALLY IDENTICAL, EXCEPT FOR FRAGRANCE AND COLOR.

NONHUMAN TOXICITY:

ACUTE MORTALITY STUDIES:

ORAL LD50 (RAT): >5.0 G/KG BODY WEIGHT

DERMAL LD50 (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(R*) (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(R*) 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.

XIII. BIODEGRADABILITY AND ENVIRONMENTAL TOXICITY INFORMATION



BIODEGRADABILITY:

LIKE SIMPLE GREEN(R*), CRYSTAL SIMPLE GREEN(R*) 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. PER OECD CLOSED BOTTLE TEST, CRYSTAL SIMPLE GREEN(R*) MEETS OECD AND EPA RECOMMENDATIONS FOR READY BIODEGRADABILITY.

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:

CRYSTAL SIMPLE GREEN(R*) IS CONSIDERED PRACTICALLY NON-TOXIC PER EPA'S AQUATIC TOXICITY SCALE.

XIV. DISPOSAL CONSIDERATIONS



CRYSTAL SIMPLE GREEN(R*) 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.

XV. OTHER INFORMATION



CONTAINERS:

CRYSTAL SIMPLE GREEN(R*) RESIDUES CAN BE COMPLETELY REMOVED BY RINSING WITH WATER; THE CONTAINER MAY BE RECYCLED OR APPLIED TO OTHER USES.

CONTACT POINT:

SUNSHINE MAKERS, INC., RESEARCH AND DEVELOPMENT DIVISION: 562-795-6000.

NATIONAL STOCK NUMBERS:

PART#	NSN	SIZE
19024	7930-01-418-1151	24 OZ. SPRAY (12/CS)
19128	7930-01-418-1152	1 GAL. (6/CS)
19005	7930-01-418-1153	5 GAL.
19055	7930-01-418-1155	55 GAL.

SIMPLE GREEN SAFETY TOWEL PART NUMBERS:

PART # SIZE

13353 5-COUNT POUCH (50/CS)

13351 75-COUNT CANISTER (6/CS)

NOTICE:

ALL INFORMATION APPEARING HEREIN IS BASED UPON DATA OBTAINED BY THE MANUFACTURER AND RECOGNIZED TECHNICAL SOURCES. JUDGMENTS AS TO THE SUITABILITY OF INFORMATION HEREIN FOR PURCHASER'S PURPOSES ARE NECESSARILY PURCHASER'S RESPONSIBILITY. THEREFORE, ALTHOUGH REASONABLE CARE HAS BEEN TAKEN IN THE PREPARATION OF THIS INFORMATION, SUNSHINE MAKERS, INC. OR ITS DISTRIBUTORS EXTENDS NO WARRANTIES, MAKES NO REPRESENTATIONS AND ASSUMES NO RESPONSIBILITY AS TO THE SUITABILITY OF SUCH INFORMATION FOR APPLICATION TO PURCHASER'S INTENDED PURPOSES OR FOR CONSEQUENCES OF ITS USE.