

----- MATERIAL SAFETY DATA SHEET -----

Raabe

HOLE-IN-WHITE GOLF CUP TURF WHITENER

RAABE CORPORATION
 THE PRECISION COLOR COMPANY
 P.O. BOX 1090
 MENOMONEE FALLS, WI 53052-1090
 N92 W14701 ANTHONY AVE.
 MENOMONEE FALLS, WI 53051-1630
 800-966-7580
 414-255-9500
 FAX: 414-255-0684

6. AMORPHOUS PRECIPITATED SILICA
 CAS#: 112926-00-8
 PCT BY WT: 1.000
 EXPOSURE LIMIT:
 ACGIH TLV-TWA: 10 mg/m3
 ACGIH TLV-STEL: No Info

7. TITANIUM DIOXIDE
 CAS#: 13463-67-7
 PCT BY WT: 14.0000
 EXPOSURE LIMIT:
 ACGIH TLV-TWA: 10 mg/m3
 ACGIH TLV-STEL: No Info
 OSHA PEL-TWA: 10 mg/m3
 COMPANY: N.E.

8. XYLENE
 CAS#: 1330-20-7
 PCT BY WT: 12.0000
 LEL: 1.00
 EXPOSURE LIMIT:
 ACGIH TLV-TWA: 100 ppm
 ACGIH TLV-STEL: 150 ppm
 OSHA PEL-TWA: 100 ppm
 COMPANY: N.E.

9. ACETONE
 CAS#: 67-64-1
 PCT BY WT: 19.0000
 VAPOR PRESSURE: 185.000 MMHG @ 68 DEG F
 LEL: 2.60
 EXPOSURE LIMIT:
 ACGIH TLV-TWA: 750 ppm
 ACGIH TLV-STEL: 1000 ppm
 OSHA PEL-TWA: 750 ppm
 OSHA PEL-STEL: 1000 ppm
 COMPANY: N.E.

10. PROPYLENE GLYCOL METHYL ETHER ACETATE
 CAS#: 108-65-6
 PCT BY WT: 2.000
 VAPOR PRESSURE: 3.700 MMHG @ 68 DEG F
 LEL: 1.30
 EXPOSURE LIMIT:
 ACGIH TLV-TWA: Not Established
 ACGIH TLV-STEL: Not Established

This product contains one or more reported carcinogens or suspected carcinogens which are noted NTP, IARC, or OSHA-Z in the other limits recommended column.

----- SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION -----

CHEMICAL PRODUCT IDENTIFICATION:
 PRODUCT CODE: 01504 034750 604
 PRODUCT NAME: Hole-In-White Golf Cup Turf Whitener
 PRODUCT CLASS: Aerosol Product
 MSDS PREPARATION DATE: 01-16-98
 MANUFACTURER IDENTIFICATION: RAABE CORPORATION
 PO BOX 1090
 MENOMONEE FALLS WI 53052
 CUSTOMER IDENTIFICATION: HOLE-IN-WHITE
 P.O. BOX 3839, AMITY STATION
 BETHANY, CT 06524
 EMERGENCY TELEPHONE NUMBERS:
 24 HOURS A DAY - CALL CHEMTREC: 800-424-9300
 INTERNATIONAL CALLS TO CHEMTREC: 703-527-3887
 8 AM TO 4:30 PM CENTRAL TIME: 414-255-9500

----- SECTION 2 - COMPOSITION, INFORMATION ON INGREDIENTS -----

1. ALIPHATIC PETROLEUM DISTILLATE:
 CAS#: 64742-89-8
 PCT BY WT: 5.0000
 LEL: .90
 EXPOSURE LIMIT:
 ACGIH TLV-TWA: 300 ppm
 ACGIH TLV-STEL: No Infor
2. BENTONITE CLAY:
 CAS#: 12188-66-2
 PCT BY WT: .9150
 LEL: 100.00
 EXPOSURE LIMIT:
 ACGIH TLV-TWA: 0.1 mg/m3
 ACGIH TLV-STEL: No Info
3. ETHYL BENZENE
 CAS#: 100-41-4
 PCT BY WT: 2.0000
 LEL: 1.20
 EXPOSURE LIMIT:
 ACGIH TLV-TWA: 100 ppm
 ACGIH TLV-STEL: 125 ppm
4. N-BUTANE
 CAS#: 106-97-8
 PCT BY WT: 8.0000
 VAPOR PRESSURE: 879.100 MMHG @ 68 DEG F
 LEL: 1.80
 EXPOSURE LIMIT:
 ACGIH TLV-TWA: 800 ppm
 ACGIH TLV-STEL: No Info
 OSHA PEL-TWA: 800 ppm
 COMPANY: N.E.
5. PROPANE:
 CAS#: 74-98-6
 PCT BY WT: 17.0000
 VAPOR PRESSURE: 5585.200 MMHG @ 68 DEG F
 LEL: 2.20
 EXPOSURE LIMIT:
 ACGIH TLV-TWA: 1000 ppm
 ACGIH TLV-STEL: No Information

----- SECTION 3 - HAZARDS IDENTIFICATION -----

EMERGENCY OVERVIEW: Harmful if swallowed. Harmful if inhaled. Causes eye irritation. Causes skin irritation. Vapors irritating to eyes and respiratory tract. Extremely flammable liquid and vapor. Vapors may cause flash fire or explosion. Extremely flammable aerosol. Contents under pressure.

POTENTIAL HEALTH EFFECTS:
 EYE: May cause severe eye irritation.
 SKIN: May cause skin irritation.
 INHALATION: Exposure to high concentrations of vapors may cause dizziness, breathing difficulty, headaches or respiratory irritation. Extremely high concentrations may cause drowsiness, staggering, confusion, unconsciousness, coma or death. Liquid or vapor may be irritating to skin, eyes, throat or lungs. Prolonged inhalation of dusts containing free silica may result in the development of a disabling pulmonary fibrosis (lung disease) known as silicosis. Intentional misuse by deliberately concentrating and inhaling the contents of this product can be harmful or fatal.
 INGESTION: Moderately toxic. May cause stomach discomfort, nausea, vomiting, diarrhea, and narcosis. Aspiration of material into the lungs if swallowed or if vomiting occurs can cause chemical pneumonitis which can be fatal.

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CHRONIC EFFECTS:

CHRONIC OVEREXPOSURE TO A COMPONENT OR COMPONENTS IN THIS MATERIAL HAS BEEN FOUND TO CAUSE THE FOLLOWING EFFECTS IN LABORATORY ANIMALS: Kidney damage; Eye damage; Liver damage; Anemia.

CHRONIC OVEREXPOSURE TO A COMPONENT OR COMPONENTS IN THIS PRODUCT HAS BEEN SUGGESTED AS A CAUSE OF THE FOLLOWING EFFECTS IN HUMANS: Cardiac abnormalities

Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

Rats exposed to titanium dioxide dust at 250 mg/m3 developed lung cancer, however, such exposure levels are not attainable in the workplace with this material.

Contains crystalline silica which may cause cancer based on animal data. IARC indicates there is sufficient evidence for carcinogenicity of crystalline silica in experimental animals.

SECTION 4 - FIRST AID MEASURES

EYE CONTACT: Immediately flush eyes with plenty of water. Get medical attention, if irritation persists. Flush with large quantities of water for 15 minutes.

SKIN CONTACT: Wash thoroughly with soap and water and seek medical attention. Remove contaminated clothing. Launder contaminated clothing before reuse.

INHALATION: For inhalation overexposure move person to fresh air. If breathing stops, apply artificial respiration and seek medical attention.

INGESTION: Since this product may contain materials which can cause lung damage if aspirated into the lungs, the decision whether to induce vomiting or not must be made by a physician after careful consideration of all materials ingested.

NOTE TO PHYSICIAN:

SECTION 5 - FIRE FIGHTING MEASURES

FIRE AND EXPLOSIVE PROPERTIES OF THE PRODUCT:

FLASHPOINT: Less Than -25 deg F

EXPLOSION LEVELS:

LOW: .90

HIGH: 13.10

FLAMMABILITY LIMITS:

LOWER: N/A

HIGHER: N/A

EXTINGUISHING MEDIA: Use Dry Chemical, Carbon Dioxide or Chemical Foam.

FIRE-FIGHTING PROCEDURES AND EQUIPMENT: Keep containers tightly closed. Isolate from heat, sparks, and open flame. Closed containers may explode when exposed to extreme heat. Contents under pressure. Do not use or store near sources of heat, sparks or open flame. Keep away from any source of heat such as sunlight, heaters or stoves that could cause the container to burst. Do not puncture or incinerate. Do not crush or place in a garbage compactor. Do not store above 120 degrees F. Aerosol containers may explode when exposed to extreme heat. Product vapors are heavier than air and may travel a long distance to a source of ignition and flash back. Full protective equipment including self-contained breathing apparatus to avoid inhalation of vapors should be used. Water spray should not be used except to keep down vapors or cool closed containers to prevent build-up of pressure. If water is used, fog nozzles are preferred.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

CLEAN-UP AND CONTAINMENT: Remove all sources of ignition. Avoid heat, sparks, flames and anything which could cause fire. Ventilate area of spill and adjacent low lying areas. Avoid breathing solvent vapors. Remove with inert absorbant materials and non-sparking tools.

SECTION 7 - HANDLING AND STORAGE

HANDLING: Wash hands thoroughly after handling.

STORAGE: Store in a cool dry area with ventilation suitable for storing materials shown in Section 2. Keep away from heat, sparks and flame. Store in a cool place away from direct sunlight or any source of ignition. Do not store at temperatures above 120 degrees F.

SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION

ENGINEERING CONTROLS: Sufficient ventilation, in volume and pattern, should be provided to keep air contamination below current applicable OSHA permissible exposure limit or ACGIH's TLV limit.

RESPIRATORY PROTECTION: If workplace exposure limits are exceeded for any component (see section 2 for hazardous components and exposure limits), a NIOSH/OSHA approved respirator suitable for components listed is recommended.

SKIN PROTECTION: Chemical resistant plastic or rubber gloves recommended for prolonged or repeated contact.

EYE PROTECTION: Chemical goggles with side shields or face shield recommended if contact with the eyes is likely.

OTHER PROTECTIVE EQUIPMENT: Appropriate impervious clothing is recommended if prolonged or repeated contact is likely.

HYGIENIC PRACTICES: Wash hands before eating or smoking. Smoke in designated areas only.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

VAPOR PRESSURE: 5585.200 mm Hg @ 20 deg C

VAPOR DENSITY: N/A

BOILING RANGE:

LOWER: 1.00 deg F

HIGHER: 999.00 deg F

SPECIFIC GRAVITY: .9010

FORMULA WEIGHT PER VOLUME: 7.50090 lb/gal

VOC (Calculated, LB/GAL): 4.0310

VOC PERCENT BY WEIGHT: 41.825

EVAPORATION RATE: 7.7000 (n-Butyl Acetate = 1)

VISCOSITY: N/A

SECTION 10 - STABILITY AND REACTIVITY

CONDITIONS TO AVOID: Avoid contact with heat, sparks, and open flame. Product may explode if heated. Keep cool, avoid exposure to heat.

INCOMPATIBILITIES: Strong oxidizing agents.

DECOMPOSITION: Thermal decomposition may produce carbon dioxide, carbon monoxide, and unidentifiable organic materials.

POLYMERIZATION: No hazardous polymerization will occur under normal conditions.

STABILITY: The product is stable under normal storage conditions.

SECTION 11 - TOXICOLOGICAL INFORMATION

No specific information is available. Please refer to Section 3 for available information on potential health effects.

SECTION 12 - ECOLOGICAL INFORMATION

No specific ecological information is available for this product.

SECTION 13 - DISPOSAL CONSIDERATIONS

WASTE DISPOSAL: Place in closed containers. Dispose of product in accordance with local, county, state, and federal regulations.

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SECTION 14 - TRANSPORT INFORMATION

DOMESTIC GROUND SHIPMENT OF PAINT AEROSOLS AND ALL LIQUID PAINT PRODUCTS IN CONTAINERS OF 1 QUART OR LESS: Consumer Commodity, ORM-D

DOMESTIC AIR SHIPMENT OF PAINT AEROSOLS AND ALL LIQUID PAINT IN CONTAINERS OF 1 QUART OR LESS: Consumer Commodity, Class 9, ID 8000, Miscellaneous Label

INTERNATIONAL AIR SHIPMENTS OF PAINT AEROSOLS: Aerosols, Flammable, N.O.S. Class 2.1, UN 1950, Flammable Gas Label

INTERNATIONAL AIR SHIPMENT OF LIQUID PAINT IN CONTAINERS OF 1 QUART OR LESS: Paint, Class 3, UN 1263, Flammable Liquid Label

ALL SHIPMENTS OF LIQUID PAINT IN CONTAINERS OF MORE THAN 1 QUART: Paint, Class 3, UN 1263, Packing Group II, Flammable Liquid Label

See 49 CFR 172.101, Hazardous Materials Table 1 for more information on shipping hazardous materials on land.

See IATA Dangerous Goods Regulations for more details on shipping hazardous materials by air.

SECTION 15 - REGULATORY INFORMATION

SARA 313 INFORMATION: THIS PRODUCT CONTAINS THE FOLLOWING SUBSTANCES SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF TITLE III OF THE SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 AND 40 CFR PART 372:

BENTONITE CLAY:
CAS#: 12188-66-2
PCT BY WT: .9150

ETHYL BENZENE:
CAS# 100-41-4
PCT BY WT: 1.8300

XYLENE:
CAS#: 1330-20-7
PCT BY WT: 12.1550

FEDERAL REGULATIONS:
TOXIC SUBSTANCES CONTROL ACT: The chemical substances in this product are listed on the TSCA Section 8 inventory.

STATE REGULATIONS:

INTERNATIONAL REGULATIONS:
CANADA: The chemical substances in this product are listed on the Canadian Domestic Substances List.

SECTION 16 - OTHER INFORMATION

HMIS RATINGS:
HEALTH: 2*
FLAMMABILITY: 4
REACTIVITY: 0
PERSONAL PROTECTION: G

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COMPAS Code: 38270050