

# Material Safety Data Sheet

Hazard Rating:	NFPA	CODE TRANSLATION
Health:	3	0 = Minimal Hazard
Flammability:	1	1 = Slight Hazard
Reactivity:	1	2 = Moderate Hazard
Special:	OX	3 = Severe Hazard
		4 = Extreme Hazard

## FORMULA 1596-G

### SECTION I: IDENTIFICATION

Effective Date: 02/22/02

Revised: 06/07/08

Name and Address:

Phone: (610) 775-1505

Emergency Phone: CHEMTREC (800) 424-9300

PROASYS  
318 HENDEL STREET  
SHILLINGTON, PA 19607

Chemical Name: SEE SECTION II

Formula:  $C_5H_6Br_2N_2O_2$

Synonyms: BROMICIDE (DBDMH)

Chemical Family: COOLING WATER BIOCIDES

D.O.T. Shipping Name: OXIDIZING SOLID, N.O.S. (CONTAINS 1,3-DIBROMO-5,5-DIMETHYLHYDANTOIN)

D.O.T. Hazard Class: 5.1

ID No.: UN-1479

Packing Group: PG-II

### SECTION II: INGREDIENTS

A. Hazardous Ingredients	CAS NO.	%	TLV
1,3-DIBROMO-5, 5-DIMETHYL-HYDANTOIN	77-48-5	99.4	NONE ESTAB.
B. Other Ingredients		%	TLV
INERT INGREDIENTS GENERALLY CONSIDERED NON-HAZARDOUS		0.6	NONE ESTAB.

### SECTION III: PHYSICAL PROPERTIES

Melting Point:  $>190^{\circ}C$

Bulk Density: N.E.

Percent Volatile (volume):  $<1\%$

pH (1.0% solution):  $\approx 6.6$

Vapor Pressure (mm Hg): N.A.

Solubility in Water:  $<0.2\%$

Vapor Density (air=1): N.A.

Evaporation Rate (water=1): N.A.

Appearance and Odor: WHITE TO OFF WHITE GRANULES WITH MILD HALOGEN ODOR

N.A. - Not Applicable

N.E. - Not Established

### SECTION IV: FIRE AND EXPLOSION HAZARD DATA

A. Flash Point/Flammability:

Flash Point: N.A.

Flammable Limits in Air: (lower): (N.A.) (upper): N.A.

THIS PRODUCT, IF HEATED BY AN OUTSIDE SOURCE TO TEMPERATURES ABOVE  $394^{\circ}F$ , WILL UNDERGO VIGOROUS SELF-SUSTAINING DECOMPOSITION WITH THE EVOLUTION OF HEAT AND DENSE NOXIOUS GASES.

B. Extinguishing Media: DRY CHEMICAL, WATER SPRAY (FOG), FOAM OR CARBON DIOXIDE

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- C. Special Fire Fighting Procedures: USE NIOSH APPROVED POSITIVE PRESSURE, SELF-CONTAINED BREATHING APPARATUS WHEN ANY MATERIAL IS INVOLVED IN A FIRE. USING A 10% SOLUTION OF SODIUM CARBONATE, THOROUGHLY DECONTAMINATE FIRE FIGHTING EQUIPMENT INCLUDING ALL FIRE FIGHTING APPAREL AFTER INCIDENT.
- D. Unusual Fire or Explosion Hazards: IN LARGE FIRES FUELED BY OTHER MATERIALS, THIS PRODUCT MAY RELEASE HYDROGEN BROMIDE, BROMINE, AND OXIDES OF CARBON.

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### SECTION V: HEALTH HAZARD DATA

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- A. TLV and Source: NONE ESTABLISHED FOR PRODUCT OR INGREDIENTS.
- B. Effects of a Single Overexposure by:
1. Ingestion: MAY BE FATAL IF INGESTED. ACUTE IRRITANT TO GASTROINTESTINAL TRACT. ORAL LD<sub>50</sub> (RATS): 448 mg/kg.
  2. Inhalation: AVOID BREATHING DUST AND/OR FUMES WHICH ARE IRRITATING TO MUCOUS MEMBRANES AND RESPIRATORY TRACT.
  3. Skin Contact: DO NOT GET ON SKIN, CAUSES BURNS. DERMA LD<sub>50</sub> (Rats): >2,000 mg/kg. THE PRODUCT IS CONSIDERED CORROSIVE TO THE SKIN. CONTACT WITH DILUTE SOLUTIONS (<0.1%) IS CONSIDERED NON-IRRITATING, BUT MAY AGGRAVATE EXISTING DERMATITIS.
  4. Eye Contact: DO NOT GET IN EYES, CAUSES BURNS. CAN CAUSE IRREVERSIBLE EYE DAMAGE.
- C. Effects of Repeated Overexposures: OTHER THAN SHORT TERM EFFECTS, NONE KNOWN.
- D. Emergency and First Aid Procedures for:
1. Ingestion: DRINK SEVERAL GLASSES OF WATER. GET IMMEDIATE MEDICAL ATTENTION. DO NOT INDUCE VOMITING OR GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.
  2. Inhalation: REMOVE VICTIM TO FRESH AIR. GET IMMEDIATE MEDICAL ATTENTION. IF BREATHING IS DIFFICULT, HAVE A TRAINED PERSON ADMINISTER OXYGEN. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION.
  3. Skin Contact: WASH THOROUGHLY WITH WATER FOR 15-20 MINUTES FOLLOWED BY SOAP AND WATER. IF IRRITATION OR REDNESS PERSISTS, GET MEDICAL ATTENTION. CHANGE AND LAUNDER CONTAMINATED CLOTHING BEFORE REUSE.
  4. Eye Contact: IMMEDIATELY FLUSH WITH WATER FOR 15-20 MINUTES AND GET MEDICAL ATTENTION. REMOVE CONTACT LENSES, IF PRESENT, AFTER THE FIRST 5 MINUTES, THEN CONTINUE RINSING EYE(S).
  5. Note to Physician: PROBABLE MUCOSAL DAMAGE MAY CONTRAINDICATE THE USE OF GASTRIC LAVAGE. HAVE THE PRODUCT LABEL WHEN CALLING FOR MEDICAL ATTENTION.

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### SECTION VI: PERSONNEL PROTECTION DATA

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- A. Ventilation Requirements: GENERAL ROOM VENTILATION PLUS LOCAL EXHAUST AT POINTS OF EMISSION TO MAINTAIN EXPOSURE BELOW IRRITANT LEVEL DUE TO DUST AND/OR VAPORS.
- B. Respiratory Protection: NIOSH/MSHA APPROVED RESPIRATOR, FOLLOWING IT'S MANUFACTURER'S RECOMMENDATIONS, SHOULD BE USED AS A PRECAUTIONARY MEASURE WHERE AIRBORNE CONTAMINANTS MAY OCCUR.
- C. Eye Protection: WEAR CHEMICAL SAFETY GOGGLES OR SAFETY GLASSES.
- D. Protective Gloves: WEAR CHEMICAL RESISTANT RUBBER GLOVES.
- E. Other Clothing and Equipment: EMERGENCY SHOWER AND EYEWASH FACILITIES SHOULD BE IN CLOSE PROXIMITY. WEAR CLOTHING DESIGNED TO MINIMIZE SKIN CONTACT. LAUNDRY CONTAMINATED CLOTHING AND CLEAN PROTECTIVE EQUIPMENT BEFORE REUSE.

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### SECTION VII: REACTIVITY DATA

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- A. Product Stability: STABLE UNDER NORMAL CONDITIONS. DECOMPOSES @ >190°C.  
Conditions to Avoid: NONE ESTABLISHED.
- B. Incompatible Materials: AVOID CONTACT WITH EASILY OXIDIZABLE MATERIAL; AMMONIA, UREA, OR SIMILAR NITROGEN CONTAINING COMPOUNDS; INORGANIC REDUCING COMPOUNDS; FLOOR SWEEPING COMPOUNDS; CYANURIC ACID CONTAINING COMPOUNDS; CALCIUM HYPOCHLORITE; ALKALIS. AVOID CONTACT WITH ALL OTHER CHEMICALS.
- C. Hazardous Combustion or Decomposition Products: HYDROGEN BROMIDE, BROMINE, AND OXIDES OF CARBON.
- D. Hazardous Polymerization: WILL NOT OCCUR

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### SECTION VIII: ENVIRONMENTAL DATA

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- A. Spill or Leak Procedures: REMOVE ALL SOURCES OF IGNITION. CONTAIN SPILLED MATERIAL. ANY SPILLAGE SHOULD BE CLEANED UP AS SOON AS POSSIBLE. **DO NOT** ADD WATER TO SPILLED MATERIAL. **DO NOT** USE FLOOR SWEEPING COMPOUNDS. USING CLEAN, DRY, DEDICATED EQUIPMENT, SCOOP AND SWEEP UP SPILLED MATERIAL, AND PLACE SWEEPINGS IN A CLEAN DRY CONTAINER AND ISOLATE THE CONTAINER OUTSIDE IN A WELL VENTILATED AREA. DO NOT SEAL THE CONTAINER. FLUSH THE AREA WITH COPIOUS QUANTITIES OF WATER, PREFERABLY TO A SANITARY SEWER OR WASTE TREATMENT FACILITY. DO NOT TRANSPORT DAMP OR WET MATERIAL.
- B. Waste Product Disposal: TO BEST OF MANUFACTURER'S KNOWLEDGE, THIS PRODUCT IS NOT A REGULATED HAZARDOUS WASTE. DISPOSE OF CONTAMINATED PRODUCT. CONSULT APPROPRIATE FEDERAL, STATE AND LOCAL AUTHORITIES TO ASCERTAIN PROPER DISPOSAL PROCEDURES.
- C. Plastic Pail Disposal: TRIPLE RINSE (OR EQUIVALENT). THEN OFFER FOR RECYCLING OR RECONDITIONING, OR PUNCTURE AND DISPOSE OF IN A SANITARY LANDFILL, OR INCINERATION, OR, IF ALLOWED BY STATE AND LOCAL AUTHORITIES, BY BURNING. IF BURNED, STAY OUT OF SMOKE.

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D. Other Environmental Data: THIS PESTICIDE IS TOXIC TO FISH. DO NOT DISCHARGE EFFLUENT CONTAINING THIS PRODUCT INTO LAKES, STREAMS, PONDS, ESTUARIES, OCEANS, OR PUBLIC WATERS UNLESS THIS PRODUCT IS SPECIFICALLY IDENTIFIED AND ADDRESSED IN AN NPDES PERMIT. DO NOT DISCHARGE EFFLUENT CONTAINING THIS PRODUCT INTO SEWER SYSTEMS WITHOUT PREVIOUSLY NOTIFYING THE SEWAGE TREATMENT PLANT AUTHORITY. FOR GUIDANCE CONTACT YOUR STATE WATER BOARD OR REGIONAL OFFICE OF THE EPA.

THE AQUATIC TOXICITY FOR THIS PRODUCT IS LISTED BELOW.

DAPHNIA MAGNA, 48 hour EC <sub>50</sub>	0.70 mg/L
RAINBOW TROUT, 48 hour EC <sub>50</sub>	0.40 mg/L

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### SECTION IX: SPECIAL PRECAUTIONS

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A. Handling and Storage: STORE IN ORIGINAL CONTAINER AND IN A COOL DRY PLACE. KEEP CONTAINERS TIGHTLY CLOSED AND DRY WHEN NOT IN USE. STORE AWAY FROM INCOMPATIBLE MATERIALS. (SEE SECTION VII.) VAPOR SPACE IN A CLOSED CONTAINER MAY CONTAIN A SLIGHT AMOUNT OF CARBON OXIDES AND BROMINE GASES.

**NOTE:** THIS PRODUCT IS A STRONG OXIDIZING AGENT. NEVER ADD WATER TO PRODUCT. ALWAYS ADD PRODUCT TO LARGE QUANTITIES OF WATER. USE **CLEAN, DRY**, DEDICATED UTENSILS AND EQUIPMENT. DO NOT ADD THIS PRODUCT TO ANY DISPENSING DEVICE CONTAINING REMNANTS OF ANY OTHER CHEMICAL PRODUCTS. SUCH USE MAY CAUSE A VIOLENT REACTION LEADING TO FIRE AND EXPLOSION. CONTAMINATION WITH MOISTURE, ORGANIC MATTER OR OTHER CHEMICALS MAY START A CHEMICAL REACTION WITH GENERATION OF HEAT, HAZARDOUS GASES AND POSSIBLE FIRE AND EXPLOSION. IN CASE OF CONTAMINATION OR DECOMPOSITION, DO NOT RESEAL CONTAINER. IF POSSIBLE, ISOLATE CONTAINER IN OPEN AIR OR WELL VENTILATED AREA. IF NECESSARY, FLOOD WITH LARGE VOLUMES OF WATER.

B. Other Precautions: THIS PRODUCT HAS BEEN DESIGNED FOR USE AS A MICROBIOCIDE IN SPECIFIC TYPES

OF COOLING WATER CIRCUITS AND SHOULD BE USED ONLY IN ACCORDANCE WITH THE PRODUCT LABEL AND PRODUCT FEEDING INSTRUCTIONS PROVIDED BY THE TECHNICAL REPRESENTATIVE SERVICING THE FACILITY. IT MAY NOT BE USED FOR THE TREATMENT OF POTABLE WATERS.

**NOTE: IT IS A VIOLATION OF FEDERAL LAW TO USE THIS PRODUCT IN A MANNER INCONSISTENT WITH ITS LABELING. A COPY OF THE PRODUCT'S EPA APPROVED LABEL IS AVAILABLE UPON REQUEST.**

The data contained in this Material Safety Data Sheet has been prepared based upon an evaluation of the ingredients contained in the product, their concentration in the product and potential interactions. The information is offered in good faith and is believed to be accurate. It is furnished to the customer who is urged to study it carefully to become aware of hazards, if any, in the storage, handling, use and disposal of the product; and to insure his employees are properly informed and advised of all safety precautions required. The information is furnished to comply with the "Occupational Safety and Health Act" (OSHA) hazard communication regulation [Rule 29 CFR 1910.1220 (g) (2)]. Use or dissemination of all or part of this information for any other purpose is not permitted.