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MATERIAL SAFETY DATA SHEET

BIRCHWOOD CASEY
PERMA BLUE® LIQUID GUN BLUE PB22

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DATE REVISED: 02-17-05
REVISION MSDS No.2

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: BIRCHWOOD CASE PERMA BLUE® LIQUID GUN BLUE
MANUFACTURED BY: BIRCHWOOD LABORATORIES, INCORPORATED
7900 Fuller Road
Eden Prairie, MN 55344 USA
Product Information Telephone Number: (952) 937-7900 (8:00-4:00pm CST)
Fax Number: (952) 937-7979
www.birchwoodcasey.com

24 HOUR TRANSPORTATION EMERGENCY NUMBER: CHEMTREC 800-424-9300 U.S. & CANADA
703-527-3887 INTERNATIONAL (Collect)

2. COMPOSITION / INFORMATION ON INGREDIENTS

DESCRIPTION	CAS NUMBER	WEIGHT PERCENT	EXPOSURE LIMITS
Selenious Acid – H_2SeO_3	7783-00-8	<3	0.2 mg/m ³ (as Se) ^a
Cupric Sulfate – $\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$	7758-99-8	<3	1 mg/m ³ (as Cu) ^{a,b}
Nitric Acid – HNO_3	7697-37-2	<3	5 mg/m ³ ^c
Water – H_2O	7732-18-5	>91	Not Established

^a OSHA Transition and Final Limits, ACGIH Limit

^b OSHA (as Cu, dust or mist)

^c STEL 10 mg/m³

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: Odorless blue liquid. Irritating or burning to eyes and skin.

EYE CONTACT: Irritation or possible burns upon direct contact.

SKIN CONTACT: Irritation and possible sensitization with certain individuals.

INGESTION: Irritation and possible burns to the gastrointestinal tract. Other possible symptoms include nausea, vomiting, abdominal pain, and difficulty breathing.

INHALATION: Toxic fumes not generated normally. If sprayed, breathing mists can cause nose and throat irritation, headache, dizziness, nausea, and difficulty breathing.

CHRONIC: Not established.

4. FIRST AID MEASURES

EYE CONTACT: Flush immediately with clean water. Continue for at least 15 minutes. Consult a physician.

SKIN CONTACT: Remove contaminated clothing to avoid prolonged contact. Wash affected areas with soap and water.

INGESTION: If victim is conscious, induce vomiting. Never administer anything by mouth to an unconscious person. If breathing is difficult, give oxygen. Seek medical attention.

INHALATION (mist): Remove from exposure. Provide air if breathing difficult. Seek medical attention if necessary.

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5. FIRE FIGHTING MEASURES**FLAMMABLE PROPERTIES**

FLASHPOINT: None

METHOD USED: Not applicable

FLAMMABLE LIMITS:

LFL: Not applicable

UFL: Not applicable

EXTINGUISHING MEDIA: Water-based product. Non-flammable

FIRE & EXPLOSION HAZARDS: None.

SPECIAL FIRE FIGHTING PROCEDURES: None (non-flammable)

6. ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Review current local, state and federal laws, codes, statutes, and regulations to determine appropriate agencies to be notified, and the conditions under which they are to be notified. Wear recommended protective equipment. Recover as much free liquid as possible and collect in acid-resistant container. Use absorbent to pick up residue. Avoid discharging liquid directly into a sewer or surface waters. CERCLA Reportable Quantity is 10 lb. for Selenious Acid (approximately 88 gallons of product).

WASTE DISPOSAL METHOD: Review current local, state and federal laws, codes, statutes and regulations to determine current status and appropriate disposal method for the ingredients listed in Section 2. Waste and its solutions are assigned EPA Hazardous Waste Number D010. The wastes can be disposed of through a licensed waste disposal company.

7. HANDLING AND STORAGE: Store in acid-resistant containers. Keep containers covered when not in use. Avoid storing with cyanides, water-reactive substances and strong reducing agents. Wear protective equipment when handling product.

8. SPECIAL PROTECTION INFORMATION

NOTE: The product itself does not produce hazardous fumes or vapors. Consequently, no ventilation or respiratory protection is required under normal operating conditions. However, if the product is applied in a way that produces mists or aerosols, then appropriate ventilation and respiratory protection is recommended.

RESPIRATORY PROTECTION (type): Air-supplied respirator or self-contained breathing apparatus if misting is likely.

PROTECTIVE GLOVES (type): Rubber or plastic.

LOCAL EXHAUST VENTILATION (rate): To keep mists below TLV.

EYE PROTECTION: (type): Glasses, goggles or face shield.

MECHANICAL VENTILATION (rate): No information

OTHER PROTECTIVE EQUIPMENT: As appropriate to operation to guard against contamination of clothing and prolonged or repeated skin contact.

SPECIAL VENTILATION: Equipment for collection of mists if sprayed.

9. PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT: >212°F

SPECIFIC GRAVITY: (water = 1): 1.034

VAPOR PRESSURE: No data

VOLATILE BY VOLUME: None (except water)

VAPOR DENSITY: (air = 1): <1

EVAPORATION RATE: (Ethyl Ether = 1): <1

SOLUBILITY IN WATER: Complete

APPEARANCE & ODOR: Odorless blue liquid

pH (100%): 1.0
pH (10%): 1.7

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10. STABILITY AND REACTIVITY

STABILITY: Stable.

CONDITIONS TO AVOID: None known.

INCOMPATIBILITY (materials to avoid): Cyanides, water-reactive substances, most metals, strong reducing agents.

HAZARDOUS DECOMPOSITION PRODUCTS: Reaction with organics and strong reducing agents can produce organoselenides and hydrogen selenide.

HAZARDOUS POLYMERIZATION: Will not occur.

11. TOXICOLOGICAL INFORMATION

1. The Registry of Toxic Effects of Chemical Substances cites experimental evidence toxic effects of selenites and various copper compounds. The implications of the experimental data for human exposure is uncertain.
 2. With regards to carcinogenesis in animals, the status of selenium is not established according to IARC (the International Agency for Research on Cancer). Other animal or epidemiological studies suggest that selenium may have anti-carcinogenic effects.
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12. ECOLOGICAL INFORMATION

Information not available.

13. DISPOSAL CONSIDERATIONS

Any disposal practice must be in compliance with local, state, and federal laws and regulations. Contact the appropriate agency for specific information. Treatment, transport, storage and disposal of hazardous waste must be carried out by a licensed facility or waste hauler.

14. TRANSPORT INFORMATION**D.O.T. HAZARDOUS MATERIALS DESCRIPTION AND PROPER SHIPPING NAME:**

(49CFR 172.101): Corrosive Liquid, Acidic, Inorganic, N.O.S. / 8 / UN3264/P.G. II (Selenious & Nitric Acid).
Exceptions: 49CFR 173.154.

15. REGULATORY INFORMATION

OSHA HAZARD COMMUNICATION RULE 29 CFR 1910.1200: Refer to Section 2.

TSCA (TOXIC SUBSTANCES CONTROL ACT): Components of this product are listed on the TSCA Inventory.

CERCLA (Comprehensive Response compensation and Liability Act, 40 CFR 117, 302:

Refer to Section 6 (Accidental Release Measures).

SARA TITLE III (Superfund Amendments and Authorization Act):

Section 313 Reportable Ingredients: Selenious Acid, Cupric Sulfate Phosphoric Acid.

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16. OTHER INFORMATION

NATIONAL FIRE PROTECTION ASSOCIATION CODES (NFPA):

HEALTH: 2 FLAMMABILITY: 0
REACTIVITY: 0

HAZARDOUS MATERIAL IDENTIFICATION SYSTEM (HMIS):

HEALTH: 2 FLAMMABILITY: 0
REACTIVITY: 0 PERSONAL PROTECTION: C

The data here is for hazard communication to our employees, our customers and their employees, and authorized regulatory agencies. For the intended purpose, this MSDS (Material Safety data Sheet) may be duplicated or the data transcribed to an alternative form.

NOTE: The information contained herein is provided in good faith and is believed to be correct as of the date hereof. However, Birchwood Laboratories, Inc. makes no representation as to the comprehensiveness or accuracy of the information. It is expected that individuals receiving the information will exercise their independent judgment in determining its appropriateness for a particular period. Accordingly, Birchwood Laboratories, Inc. will not be responsible for damages of any kind resulting from the use of or reliance upon such information. NO REPRESENTATIONS, OR WARRANTIES, EITHER EXPRESSED OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER NATURE ARE MADE HEREUNDER TO WHICH THE INFORMATION REFERS. The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment.

Revised – Section 14

Changed 02-17-05

FOR ASSISTANCE WITH PLACING ORDERS:

- Product Pricing / Payment Terms
- Shipping and Tracing of Shipments
- Sales Rep Locations

Call our Sales Department (952) 937-7933
Or 1-800-328-6156 or Fax (952) 937-7979

FOR PRODUCT USAGE ASSISTANCE

- Questions on Operation of Products
- Solving Finishing Problems
- Operator Safety and Pollution Control

Call our Customer Service Desk Department (952) 937-7916
Or 1-800-328-6156 or Fax (952) 937-7979